



Phase Two Environmental Site Assessment 315 Mìwàte Private, West Chaudière Island, Ottawa, Ontario

Client:

Windmill Dream Zibi Ontario Inc.

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Legal Notification

This report was prepared by EXP Services Inc. for the account of **Windmill Dream Zibi Ontario Inc.**

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Executive Summary

EXP Services Inc. (EXP) was retained by Windmill Dream Zibi Ontario Inc. to conduct a Phase Two Environmental Site Assessment (ESA) at 315 Miwàte Private (formerly 4 Booth Street) in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was vacant, however after remedial activities were completed on the north part of the site in 2019, it was paved and became part of the Chaudière Private right of way.

The objective of the Phase Two ESA investigation was to assess the quality of the groundwater conditions within the areas of potential environmental concern (APEC) identified in a Phase One ESA prepared by EXP. The most recent use of the property was for pulp and paper operations, which is a type of industrial property use, and the proposed future property use will be residential and commercial. Consequently, in accordance with Regulation 153/04, as amended, a Record of Site Condition (RSC) must be filed.

The most recent use of the property was industrial land use (historically, a pulp and paper mill was in operation at the site). The proposed future use of the property is residential and commercial. A new building will be constructed at the Phase Two property. The building will have one or two levels of underground parking, ground level commercial space, and upper-level residential units.

The Phase Two property is located in a former industrial area on the west side of Chaudière Island west of Booth Street. The Phase Two property is irregular in shape and has an area of approximately 0.8 hectares. The approximate centroid coordinates are NAD83 18T 443738 m E and 5029828 m N.

The municipal address of the Phase Two property is 315 Miwàte Private, Ottawa, Ontario. The property identification numbers (PIN) are: 04097-0288, 04097-0306, and 04097-0292. The legal description of PIN 04097-0288 is Part Lots 3, 4, north side Head Street, Part Lot 21, south side Chaudière Street, Plan 10, City of Ottawa. The legal description of PIN 04097-0306 is Part of Lots 2, 3, 4, 5, 20, 21, 22, 23, 24, Plan 10, City of Ottawa. The legal description of PIN 04097-0292 is Part Lot 21, south Chaudière Street, Plan 10, City of Ottawa.

Two RSC have been filed for neighbouring properties owned by the same property owner. Specifically, RSC 226108 was filed on October 21, 2019 for the property immediately adjacent to the Phase Two property to the east and south. RSC 228673 was filed on May 21, 2021 for 125 Zaida Eddy Private, which is located on East Chaudière Island.

Refer to Table EX-1 for the Site identification information.

Table EX-1: Site Identification Details

| | |
|---------------------------------------|--------------------------------------|
| Civic Address | 315 Miwàte Private, Ottawa, Ontario |
| Current Land Use | Industrial |
| Proposed Future Land Use | Residential and Commercial |
| Property Identification Number | 04097-0288, 04097-0306, 04097-0292 |
| UTM Coordinates | NAD83 18T 443738 m E and 5029828 m N |
| Site Area | 0.8 hectares |
| Property Owner | Windmill Dream Zibi Ontario Inc. |

The Phase Two property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the Phase Two property, are supplied by a municipal drinking water system provided by the City of Ottawa. Further, the Phase Two property is not located in an area designated in the municipal official plan as a well-head protection area and no properties within the Phase Two study area has a well that is being used or is intended for use as a source of potable water.

Thus, in accordance with Section 35 of Ontario Regulation 153/04, non-potable water standards apply to the Phase Two property.

In accordance with Section 41 of Ontario Regulation 153/04, the Phase Two property is not an environmentally sensitive area. In addition, the Phase Two property is not located within an area of natural significance, and it does not include land that is within 30 metres of an area of natural significance.

The Phase Two property is a shallow soil property as defined in Section 43.1 of the regulation. It is part of Chaudière Island and is within 30 m of the Ottawa River.

Bedrock in the general area of the Phase Two property consists of limestone, dolostone, shale, arkose, and sandstone from the Shadow Lake Formation of the Middle Ordovician period. The bedrock occurs as bare tabular outcrops and includes areas thinly veneered by unconsolidated sediments. The bedrock elevation is approximately 53 metres above sea level (masl).

Soil at the Phase Two property prior to remediation generally consisted of sand and gravel fill material with trace silt and brick debris and some boulders and cobbles. The fill layer ranged in thickness from 0.2 to 1.6 metres. Limestone bedrock underlaid the fill material. All soil was removed from the Phase Two property during the remediation program. Where required, backfill materials consisted of material that was not considered to be soil, as the particle diameter was larger than 2 mm.

The Phase Two property is on Chaudière Island, which is surrounded by the Ottawa River. Groundwater elevations depend on the level of water within the river, but generally range between 42 and 45 masl. The groundwater flow direction was determined to be northeasterly.

EXP notes that groundwater levels depend on the size of the fractures that are intercepted as drilling progresses. Groundwater contour plans were not prepared for post-remediation groundwater levels because it is unlikely that the difference in groundwater elevations in the three monitoring wells is representative of the actual groundwater flow across the site as opposed to the differences in the fractures at each individual location. Groundwater levels can also be influenced by seasonal changes, the presence of subsurface structures, or fill, however based on the presence of the Ottawa River surrounding Chaudière Island, it is unlikely that any of these factors will affect the groundwater flow direction at the Phase Two property.

The hydraulic conductivity in post remedial monitoring well MW21-03 was 6.61×10^{-7} cm/s.

A summary of factors that apply to the Phase Two property is provided in Table EX-2.

Table EX-2: Site Characteristics

| Characteristic | Description |
|---------------------------------|--|
| Minimum Depth to Bedrock | 0.2 metres below ground surface |
| Minimum Depth to Groundwater | 50.95 masl (March 24, 2021) |
| Shallow Soil Property | Yes, bedrock is less than 2.0 mbgs |
| Proximity to water body or ANSI | Approximately 30 m – Ottawa River |
| Soil pH | Surface and sub-surface pH was within applicable ranges prior to remediation and all soil was removed during remediation |
| Soil Texture | Coarse |
| Current Property Use | Industrial |
| Future Property Use | Residential and Commercial |

| | |
|--|--|
| Proposed Future Building | Multi-storey residential, commercial on ground level, one or two levels of underground parking |
| Areas Containing Suspected Fill | All soil that was on the property prior to remediation was fill |

Utilities, including underground hydro, natural gas, water, and sewers, are present on Chaudière Private, part of which is included in the Phase Two property. Since the water table is within the bedrock, the presence of utilities is not expected to affect possible migration of contaminants once buildings are constructed on the Phase Two property.

A multi-storey residential building with commercial at ground level and one or two levels of underground parking is planned for construction on the Phase Two property.

The following on-site potentially contaminating activities (PCA) were identified:

- PCA #9 – Coal Gasification (former coal storage area indicates use of coal as a source of coal gas, which was likely used as a source of heating and/or lighting at the Phase Two property);
- PCA #30 – Importation of fill material of unknown quality (fill material overlying bedrock throughout the Phase Two property);
- PCA # 45 – Pulp, paper and paperboard manufacturing and processing (historic use of the Phase Two property for industrial purposes related to lumber storage and pulp and paper);
- PCA #46 – Rail yards, tracks and spurs (former rail spurs shown in 1948 and 1956 FIP);
- PCA #Other – PCB storage (E.B. Eddy was listed in the PCB Inventory as a major PCB storage site, indicating that the site contained liquid PCB waste in quantities greater than or equal to 1,000 kilograms) and
- PCA #Other – Debris and rubble from fire of 1900 (a fire caused the destruction of every building in the Phase Two study area in 1900. Some of the debris related to the fire was used as backfilling material on the Phase Two property).

The following off-site PCA were identified:

- PCA #1 – Acid and alkali manufacturing, processing and bulk storage (three former acid storage tanks within sulphite mill and storage area on the eastern part of East Chaudière Island);
- PCA #6 – Battery manufacturing, recycling and bulk storage (battery storage area identified in the 1912 fire insurance plan on East Chaudière Island);
- PCA #18 – Electricity generation, transformation and power stations (former powerhouse to the northeast, Hydro Ottawa (and its predecessors) historically occupied the south part of East Chaudière Island for electricity generation, and power generation companies listed on Middle Street);
- PCA #28 – Gasoline and associated products storage in fixed tanks (three former AST on East Chaudière Island, six former AST on West Chaudière Island (east adjacent), two former UST on Albert Island, former diesel pumping station and bunker C UST to the north);
- PCA #34 – Metal fabrication (One or more foundries, manufacturing facilities where metal would be used as a raw material and/or blacksmith shops were listed on Victoria Island);
- PCA #39 – Paints manufacturing, processing and bulk storage (the former paint shop located in the east end of the south building on Albert Island);
- PCA #44 – Port activities, including operation and maintenance of wharves and docks (former wharf adjacent to the Ottawa River on East Chaudière Island);

- PCA #45 – Pulp, paper and paperboard manufacturing and processing (the presence a ground wood pulp mill, beater mill, and sulphite pulp mill on East Chaudière and of a pulp and paper/lumber facility on West Chaudière (paper mill, beater building, and pulp mill));
- PCA #46 – Rail yards, tracks and spurs (former rail spurs were present on the east adjacent property and on East Chaudière Island);
- PCA #55 – Transformer manufacturing, processing and use (five PCB-containing transformers present on East Chaudière Island); and
- PCA #58 – Waste disposal and waste management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners (the waste burner on the property to the adjacent northeast (in the 1912 FIP).

As Albert Island is separated from the Phase Two property by the Ottawa River, none of the off-site PCA identified on Albert Island (PCA # 39 (paint shop) and PCA #28 (two former UST)) resulted in APEC on the Phase Two property.

PCA identified on East Chaudière Island (PCA #1 (former acid storage tanks), PCA #6 (battery storage area), PCA #18 (former Hydro Ottawa facility), PCA #28 (three former AST), PCA #44 (former wharf), PCA #46 (spurs), and PCA #55 (five PCB-containing transformers)) were also determined not to result in APEC on the Phase Two property due to the separation distance and downgradient location from the Phase Two property.

The off-site PCA that were determined to result in APEC on the Phase Two property include PCA #18 (former powerhouse to the northeast), PCA #28 (former diesel pumping station and bunker C UST to the north), PCA #34 (foundries on Victoria Island), and PCA #58 (waste burner on the property to the adjacent northeast).

Ontario Regulation 153/04 defines an APEC as an area on a property where one or more contaminants are potentially present. The following APEC were identified on the Phase Two property, as shown in Table EX-3:

Table EX-3: Areas of Potential Environmental Concern

| Area of Potential Environmental Concern (APEC) | Location of APEC on Phase Two Property | Potentially Contaminating Activity (PCA) | Location of PCA (On-Site or Off-Site) | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|--|--|---|---------------------------------------|---|--|
| #1. The Phase Two property was part of a pulp and paper mill | Entire Phase Two property | #45 – Pulp, Paper and Paperboard Manufacturing and Processing | On-site and Off-Site | Volatile Organic Compounds (VOC), Petroleum Hydrocarbons (PHC), Polycyclic Aromatic Hydrocarbons (PAH), Metals, Polychlorinated Biphenyls (PCB) | Soil and groundwater |
| #2. Fill material is overlying bedrock throughout the Phase Two property | Entire Phase Two property | #30 – Importation of Fill Material of Unknown Quality | On-site | Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), PHC, PAH, Metals | Soil |
| #3. Former owner, E.B. Eddy Company, was listed on the PCB inventory | Entire Phase Two property | #Other – PCB Storage | On-Site | PCB | Soil and groundwater |

| Area of Potential Environmental Concern (APEC) | Location of APEC on Phase Two Property | Potentially Contaminating Activity (PCA) | Location of PCA (On-Site or Off-Site) | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|--|---------------------------------------|-----------------------------------|--|
| #4. A fire that occurred in 1900 destroyed all on-site buildings that existed at the time. Debris and rubble were buried on-site. | Entire Phase Two property | #Other – Debris and Rubble from Fire of 1900 | On-Site | BTEX, PHC, PAH, Metals | Soil and groundwater |
| #5. Foundries were present on Victoria Island, east of the Phase Two property | Entire Phase Two property | #34 – Metal Fabrication | Off-Site | Metals | Soil |
| #6. Former rail spurs | Central part of the Phase Two property, 10 metres on each side of former rail spurs | #46 – Rail yards, tracks and spurs | On-site | VOC, PHC, PAH, Metals, PCB | Soil and groundwater |
| #7. Former coal storage area | Northeast corner of the Phase Two property | #9 – Coal gasification | On-Site | PAH | Soil and groundwater |
| #8. Former bunker C UST and diesel pumping station on the adjacent property to the north | North part of Phase Two property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | Off-Site | PHC, BTEX, PAH, Metals, PCB | Groundwater |
| #9. Coal fired power generation, adjacent property to the northeast | Northeast part of the Phase Two property | #18 – Electricity generation, transformation and power stations | Off-Site | VOC, PHC, PAH | Groundwater |
| #10. Former waste burner located south of a building to the northeast | North part of the Phase Two property | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | Off-Site | PHC, PAH, Metals, PCB | Groundwater |

The site investigative activities consisted of the drilling of boreholes to facilitate the collection of soil samples for visual inspection and chemical analysis. The boreholes were instrumented with monitoring wells to facilitate the collection of groundwater samples.

Prior to the commencement of drilling, the locations of underground public utilities including telephone, natural gas and electrical lines were marked at the subject property by public locating companies. A private utility locating contractor was also retained to clear the individual borehole locations.

In March 2019, the Phase Two property owner retained Tomlinson Development Corporation to install utilities (water, sewer, gas, hydro) for future development along Chaudière Private (formerly Perley Street). From March 5 to 25, 2019, EXP observed excavation activities and took soil samples for characterization of the utility trench which ran along the north boundary of the Phase Two property. Beneath the concrete sidewalk and asphalt roadway, sand and gravel fill material was present to a depth of approximately 0.6 metres below ground surface (m bgs). Bedrock was present at a depth of approximately 0.2 to 1.5 metres below ground surface (m bgs). Granular material, which was comprised of material that had particles larger than 2 mm, was present from a depth of 0.6 m bgs to bedrock. The total depth of the utility excavation was 2.4 m bgs. All excavated material was temporarily stockpiled on East Chaudière Island and was subsequently disposed of off-site in 2019. The utility trench was backfilled with material that was larger than 2 mm in diameter.

A pre-remedial drilling program was conducted to investigate the soil quality on the Phase Two property. The pre-remedial drilling program was completed March 15 and 16, 2021 by George Downing Estate Drillings (Downing), a licensed well contractor. Downing advanced five boreholes (MW21-01 to MW21-05) across the Phase Two property, using a CME-75 truck mounted drill. Boreholes were augured to refusal, then cored to depth. All of the boreholes were completed as monitoring wells.

The pre-remediation monitoring wells were decommissioned in accordance with Regulation 903. On March 26, 2021, five monitoring wells (BH/MW21-01 to BH/MW21-05) were decommissioned by using the pressure-grout method by Downing.

The 2021 remedial excavation program included excavating and stockpiling impacted soil for off-site disposal. The remedial excavation extended to the utility trench, from which all soil was removed in 2019, and extended horizontally beyond the property boundaries in all other directions and vertically to bedrock surface. With the exception of the soil at the northern property boundary, as described above, all soil was removed from the Phase Two property.

This remediation program commenced on March 29, 2021 and concluded on May 18, 2021. Excavation GTS was retained by the Phase Two property owner to complete the remedial excavation. Soil excavation and removal activities occurred over five days during this period, including March 29 to 31 and May 17 and 18. No soil was brought to the Phase Two property, as the excavation was backfilled with materials that were larger than 2 mm in diameter.

The post-remedial drilling investigation was conducted on April 28, 2021 by Downing. Downing advanced three boreholes (BH/MW21-01 to BH/MW21-03) on the Phase Two property, using a CME-75 truck mount drill. The boreholes were installed at depths between 6.1 and 6.7 mbgs. All soil was removed from the Phase Two property during the remediation program and all the boreholes were cored through bedrock. At the time of drilling, ground surface in the area of the monitoring wells consisted of bedrock surface, however $\frac{3}{4}$ inch stone was subsequently brought to the property.

Soil samples were selected for laboratory analysis based on combustible vapour measurements and visual and olfactory evidence of impacts, where observed. Soil samples identified for possible laboratory analysis were placed directly into pre-cleaned, laboratory-supplied glass sample jars/vials. Samples to be analysed for PHC fraction F1 and BTEX were collected using a soil core sampler and placed into vials containing methanol as a preservative. The jars and vials were sealed with Teflon-lined lids to minimize headspace and reduce the potential for induced volatilization during storage/transport prior to analysis. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, Paracel Laboratories Ltd. (Paracel) of Ottawa, Ontario.

Ten soil samples and one field duplicate were collected from the north wall of the utilities trench in 2019 and during the pre-remedial drilling investigation in 2021 and submitted to Paracel for analysis of PHC fractions F1 to F4, VOC, PAH, PCB and inorganics. Two soil samples were submitted for analysis of pH.

Soil samples collected during the pre-remediation drilling program exceeded the Table 7 and/or Table 9 SCS for VOC, PHC, PAH, and/or inorganic parameters. All of these samples were within the Table 7 and Table 9 SCS for PCB. The pH samples

were within the applicable ranges for surface and subsurface soils. All soil (except for the soil located on the north property line) was removed from the Phase Two property, so these samples are not representative of post-remediation site conditions.

None of the soil samples collected from the north wall of the utility trench exceeded the applicable Table 7 or Table 9 SCS. With the exception of the soil along the north wall of the services excavation on Chaudière Private, all soil was removed from the Phase Two property. Therefore, no post-remedial soil analysis was required.

All groundwater samples were collected via a low flow sampling technique using a YSI 550 multi probe water quality meter. The YSI probe was calibrated using in-house reference standards. Prior to collecting the groundwater samples, water quality field parameters (turbidity, dissolved oxygen, conductivity, temperature, pH, and oxidation reduction potential) were monitored until stable readings were achieved to ensure that the samples collected were representative of actual groundwater conditions.

The groundwater samples were placed in clean coolers containing ice packs prior to and during transportation to the laboratory. The samples were transported to the laboratory within 24 hours of collection with a chain of custody.

Prior to remediation, five groundwater samples, one field duplicate, one field blank, and one trip blank were submitted for chemical analysis of PHC, VOC, PAH, PCB, and/or inorganic parameters. No groundwater sample was submitted for metals analysis from BH/MW21-02 as there was insufficient sample volume for analysis of all parameters.

There were no exceedances of the MECP Table 9 or Table 7 SCS for PHC, PCB, and inorganic parameter groups. However, the sample collected from BH/MW21-04 exceeded the Table 7 and Table 9 SCS for chloroform. This monitoring well was installed within the limestone bedrock. To facilitate drilling at this location, municipal water was used to cool the drill bits. Chloroform is generated at municipal water treatment plants when chlorine is used to kill bacteria in the water. In accordance with Regulation 153/04 it is the opinion of the Qualified Person that the source of chloroform in this monitoring well, which was sampled nine days after its installation, is the municipal water. Therefore, in accordance with Section 49.1 of Regulation 153/04, chloroform is not considered to exceed the SCS.

Two post-remedial groundwater sampling events were conducted. The first event was conducted on August 23 and 31 and September 14, 2021, and the second event was conducted on December 21 and 22, 2021 and January 6, 12, 19, and February 16, 2022. Several days were required for each event because of the slow recovery of the monitoring wells and because they were covered with snow. During each event, three groundwater samples, one field duplicate, one field blank, and one trip blank were submitted for chemical analysis of PHC, VOC, PAH, PCB, inorganic parameters. All post-remediation groundwater samples were within the applicable Table 7 and Table 9 SCS.

Prior to remediation, all soil on site was determined to be contaminated. No contaminated groundwater was encountered. Contaminants that exceeded the applicable standards included:

Soil: PHC fractions F2 to F4, benzene, ethylbenzene, xylenes, acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-cd]pyrene, 1- & 2- methyl naphthalene, naphthalene, phenanthrene, pyrene, antimony, arsenic, barium, copper, lead, mercury, molybdenum, selenium, and thallium.

Groundwater: None.

Post-remediation, no soil or groundwater samples exceeded the Table 7 and Table 9 SCS. Maximum soil concentrations are representative of the wall samples from the utilities excavation on Chaudière Private completed in 2019. No other soil is present on the Phase Two property.

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COC in soil and groundwater, the contribution of which is dependent on the soil and groundwater conditions at the Phase Two property, as well as the chemical/physical properties of the COC. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e. sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

Prior to remediation, all soil on site was determined to be contaminated, as PHC fractions F2 to F4, BTEX, PAH, and metals exceeded the applicable Table 7 and/or Table 9 SCS. There were no pre-remediation groundwater exceedances.

A building with one or two levels of underground parking, ground floor retail, and upper floor residential use is planned to be constructed. The potential on-site human receptors include indoor and outdoor long-term workers, indoor and outdoor short-term workers, residents on upper floors (adult, teen, child, toddler and infant), property visitors (adult, teen, child, toddler and infant), and construction workers. Since all pre-remediation groundwater samples were within the Table 7 and Table 9 SCS, neither groundwater dermal contact nor groundwater ingestion were deemed to be potential exposure pathways for any of the potential on-site human receptors.

The potential on-site exposure pathways for the construction workers are incidental soil ingestion, soil particulate inhalation, soil dermal contact, ambient vapour inhalation, and vapour skin contact.

The potential on-site exposure pathways for the short-term and long-term outdoor workers (who are not exposed directly to subsurface soil and groundwater) are incidental surface soil ingestion, surface soil particulate inhalation, surface soil dermal contact, ambient air inhalation, and vapour skin contact.

The potential on-site exposure pathway for the property residents, the long-term indoor workers and visitors is indoor air inhalation.

While the footprint of the building that is being planned will occupy most of the Phase Two property, there will be a landscaped area surrounding the building. Therefore, The Phase Two property is capable of supporting some ecological receptors. Relevant ecological receptors include terrestrial vegetation (bushes, grasses and weeds); soil invertebrates (earthworms, millipedes and beetles); birds (seagulls, pigeons, sparrows and robins); and small terrestrial mammals (moles, voles, and mice). Since all pre-remediation groundwater samples were within the Table 7 and Table 9 SCS, groundwater root uptake, groundwater dermal contact, and incidental ingestion of groundwater were not deemed to be potential exposure pathways for any of the potential on-site ecological receptors.

The potential on-site exposure pathways for terrestrial vegetation are root uptake of soil and stem and foliar uptake of vapours from soil.

The potential on-site exposure pathways for soil invertebrates are soil particulate inhalation, soil dermal contact, soil ingestion, and vapour inhalation, and plant and animal tissue ingestion.

The potential on-site exposure pathways for mammals and birds are soil particulate inhalation, soil dermal contact, soil ingestion, vapour inhalation, and plant and animal tissue ingestion.

Approximately 2,431.87 tonnes of impacted soil and granular material were excavated and removed from the north part of the Phase Two property in 2019. This soil was temporarily stockpiled on East Chaudière Island and was disposed off-site in conjunction with remedial activities that occurred at 125 Zaida Eddy Private (RSC 228673). In conjunction with 2021 remedial activities, approximately 3,720.67 tonnes of impacted soil and 30.5 tonnes of impacted concrete were removed by excavation from the Phase Two property. All soil, concrete, and granular materials were disposed of as non-hazardous waste at the City of Ottawa Trail Road facility.

A building with one or two levels of underground parking, ground floor commercial, and upper-level residential units will be constructed on the Phase Two property. Services associated with future site development have been installed on the Phase Two property. All backfill material brought to the Phase Two property consisted of particles that were larger than 2 mm in diameter.

During the remediation program, all soil was removed from the Phase Two property except for soil that is still present along the north wall of a utility trench adjacent to Chaudière Private. All confirmatory groundwater samples were within the applicable Table 7 and Table 9 SCS. Therefore, there are no longer any potential human health or ecological receptors and exposure pathways. Further, no additional remedial activities are deemed to be warranted.

*Windmill Dream Zibi Ontario Inc.
Phase Two Environmental Site Assessment
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0
April 20, 2022*

The Qualified Person can confirm that the Phase Two Environmental Site Assessment was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices.

This executive summary is a brief synopsis of the report and should not be read in lieu of reading the report in its entirety.

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1.0 Introduction

EXP Services Inc. (EXP) was retained by Windmill Dream Zibi Ontario Inc. to conduct a Phase Two Environmental Site Assessment (ESA) at 315 Miwàte Private (formerly 4 Booth Street) in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was vacant, however after remedial activities were completed on the north part of the site in 2019, it was paved and became part of the Chaudière Private right of way.

The objective of the Phase Two ESA investigation was to assess the quality of the groundwater conditions within the areas of potential environmental concern (APEC) identified in a Phase One ESA prepared by EXP. The most recent use of the property was for pulp and paper operations, which is a type of industrial property use, and the proposed future property use will be residential and commercial. Consequently, in accordance with Regulation 153/04, as amended, a Record of Site Condition (RSC) must be filed.

This report has been prepared in accordance with the Phase Two ESA standard as defined by Ontario Regulation 153/04 (as amended), and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Section 8 of this report.

1.1 Site Description

The Phase Two property is located in a former industrial area on the west side of Chaudière Island west of Booth Street, as shown on Figure 1 in Appendix A. The Phase Two property is irregular in shape and has an area of approximately 0.8 hectares. The approximate centroid coordinates are NAD83 18T 443738 m E and 5029828 m N.

At the time of the investigation, the Phase Two property was vacant, however after remedial activities were completed on the north part of the site in 2019, it was paved and became part of the Chaudière Private right of way. The site layout is shown on Figure 2 in Appendix A.

The municipal address of the Phase Two property is 315 Miwàte Private, Ottawa, Ontario. The property identification numbers (PIN) are: 04097-0288, 04097-0306, and 04097-0292. The legal description of PIN 04097-0288 is Part Lots 3, 4, north side Head Street, Part Lot 21, south side Chaudière Street, Plan 10, City of Ottawa. The legal description of PIN 04097-0306 is Part of Lots 2, 3, 4, 5, 20, 21, 22, 23, 24, Plan 10, City of Ottawa. The legal description of PIN 04097-0292 is Part Lot 21, south Chaudière Street, Plan 10, City of Ottawa.

Two RSC have been filed for neighbouring properties owned by the same property owner. RSC 226108 was filed on October 21, 2019 for the property immediately adjacent to the Phase Two property to the east and south. RSC 228673 was filed on May 21, 2021 for 125 Zaida Eddy Private, which is located on East Chaudière Island. Refer to Table 1.1 for the Site identification information.

Table 1.1: Site Identification Details

| | |
|--------------------------------|--------------------------------------|
| Civic Address | 315 Miwàte Private, Ottawa, Ontario |
| Current Land Use | Industrial |
| Proposed Future Land Use | Residential and Commercial |
| Property Identification Number | 04097-0288, 04097-0306, 04097-0292 |
| UTM Coordinates | NAD83 18T 443738 m E and 5029828 m N |
| Site Area | 0.8 hectares |
| Property Owner | Windmill Dream Zibi Ontario Inc. |

A survey plan of the Phase Two property was completed by Stantec Geomatics Ltd. (Stantec) in January 2022. A copy of the survey plan is provided in Appendix B.

1.2 Property Ownership

The registered owner of the Phase One property is Windmill Dream Zibi Ontario Inc., who holds title to the Phase One property as nominee/bare trustee for the beneficial owner, Windmill Dream Ontario Holdings LP. Authorization to proceed with this investigation on behalf of the property owner was provided by Ms. Taryn Glancy, Brownfields Coordinator and Mr. Justin Robitaille, Vice President. Contact information is 6 Booth Street, Ottawa, Ontario, K1R 6K8.

1.3 Current and Proposed Future Use

The most recent use of the property was industrial land use (historically, a pulp and paper mill was in operation at the site). The proposed future use of the property is residential and commercial. A new building will be constructed at the Phase Two property. The building will have one or two levels of underground parking, ground level commercial space, and upper-level residential units. Since the past use of the property was industrial land use, an RSC must be filed, per Ontario Regulation 153/04.

1.4 Applicable Site Condition Standards

Analytical results obtained for soil and groundwater samples were compared to Site Condition Standards (SCS) established under subsection 169.4(1) of the Environmental Protection Act, and presented in the document entitled *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, 2011*. This document provides tabulated background SCS (Table 1) applicable to environmentally sensitive sites and effects-based generic SCS (Tables 2 to 9) applicable to non-environmentally sensitive sites. The effects-based SCS (Tables 2 to 9) are protective of human health and the environment for different groundwater conditions (potable and non-potable), land use scenarios (residential, parkland, institutional, commercial, industrial, community and agricultural/other), soil texture (coarse or medium/fine) and restoration depth (full or stratified).

Table 1 to 9 SCS are summarized as follows:

- Table 1 – applicable to sites where background concentrations must be met (full depth), such as sensitive sites where site-specific criteria have not been derived
- Table 2 – applicable to sites with potable groundwater and full depth restoration
- Table 3 – applicable to sites with non-potable groundwater and full depth restoration
- Table 4 – applicable to sites with potable groundwater and stratified restoration
- Table 5 – applicable to sites with non-potable groundwater and stratified restoration
- Table 6 – applicable to sites with potable groundwater and shallow soils (bedrock encountered at depths of 2 metres or less across one-third or more of the site)
- Table 7 – applicable to sites with non-potable groundwater and shallow soils (bedrock encountered at depths of 2 metres or less across one-third or more of the site)
- Table 8 – applicable to sites with potable groundwater and that are within 30 m of a water body
- Table 9 – applicable to sites with non-potable groundwater and that are within 30 m of a water body

Application of the generic or background SCS to a specific site is based on a consideration of site conditions related to soil pH, thickness and extent of overburden material, and proximity to an area of environmental sensitivity or of natural significance. For some chemical parameters, consideration is also given to soil textural classification with SCS having been derived for both coarse and medium-fine textured soil conditions.

For assessment purposes, EXP selected the 2011 Table 9 SCS and Table 7 SCS in a non-potable groundwater condition for residential/parkland/institutional property use. The Table 7 SCS are applicable for properties where the depth to bedrock is less than 2 metres from ground surface, while the Table 9 SCS are applicable for properties that are within 30 metres of a surface water body. Both conditions apply to the subject property, so both sets of SCS apply.

The selection of these categories was based on the following factors:

- Bedrock is less than 2 metres below grade across the subject property;
- The Phase Two property is part of Chaudière Island, which is surrounded by the Ottawa River;
- The Phase Two property is not located within an area of natural significance, does not include nor is adjacent to an area of natural significance, and does not include land that is within 30 metres of an area of natural significance;
- Potable water for the Phase Two property is provided by the City of Ottawa through its water distribution system;
- The Phase Two property is not located in an area designated in a municipal official plan as a well-head protection area;
- The proposed building is planned for residential and commercial use; and
- It is the opinion of the Qualified Person who oversaw this work that the Phase Two property is not a sensitive site.

2.0 Background Information

2.1 Physical Setting

The Phase Two property is part of a larger property with the municipal address 315 Miwàte Private (formerly 4 Booth Street) in Ottawa, Ontario. The Phase Two property is located in a former industrial area on the west side of Chaudière Island, west of Booth Street. The Phase Two property is irregular in shape has an area of approximately 0.8 hectares. At the time of the current investigation, the property was vacant.

A site plan showing the Phase Two property is presented as Figure 2 in Appendix A.

The Phase Two property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the Phase Two property, are supplied by a municipal drinking water system provided by the City of Ottawa. Further, the Phase Two property is not located in an area designated in the municipal official plan as a well-head protection area and no properties within the Phase Two study area have a well that is being used or is intended for use as a source of potable water. Thus, in accordance with Section 35 of Ontario Regulation 153/04, non-potable water standards apply to the Phase Two property.

In accordance with Section 41 of Ontario Regulation 153/04, the Phase Two property is not an environmentally sensitive area. In addition, the Phase Two property is not located within an area of natural significance, and it does not include land that is within 30 metres of an area of natural significance.

The Phase Two property is a shallow soil property as defined in Section 43.1 of the regulation. It is part of Chaudière Island and is within 30 m of the Ottawa River.

Bedrock in the general area of the Phase Two property consists of limestone, dolostone, shale, arkose, and sandstone from the Shadow Lake Formation of the Middle Ordovician period. The bedrock occurs as bare tabular outcrops and includes areas thinly veneered by unconsolidated sediments. The overburden at the Phase Two property consists of sand and gravel fill materials. The bedrock elevation is approximately 53 metres above sea level (masl).

The groundwater flow direction is anticipated to be northeasterly, in the same direction as the flow of the Ottawa River, which is located approximately 30 m north of the Phase Two property.

2.2 Past Investigations

EXP prepared a report entitled *Phase One Environmental Site Assessment, 315 and 303 Miwàte Private, 505 Chaudière Private, West Chaudière Island, Ottawa, Ontario*, dated April 8, 2022. The Phase One study area included the entire Phase Two property as well as property to the west and south. Based on the results of the Phase One ESA, EXP identified ten areas of potential environmental concern (APEC) within the Phase One study area. A summary is provided in Table 2.1.

Table 2.1: Findings of Phase One ESA

| Area of Potential Environmental Concern (APEC) | Location of APEC on Phase One Property | Potentially Contaminating Activity (PCA) | Location of PCA (On-Site or Off-Site) | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---------------------------------------|---|--|
| #1. The Phase One property was part of a pulp and paper mill | Entire Phase One property | #45 – Pulp, Paper and Paperboard Manufacturing and Processing | On-site and Off-Site | Volatile Organic Compounds (VOC), Petroleum Hydrocarbons (PHC), Polycyclic Aromatic Hydrocarbons (PAH), Metals, Polychlorinated Biphenyls (PCB) | Soil and groundwater |
| #2. Fill material is overlying bedrock throughout the Phase One property | Entire Phase One property | #30 – Importation of Fill Material of Unknown Quality | On-site | Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), PHC, PAH, Metals | Soil |
| #3. Former owner, E.B. Eddy Company, was listed on the PCB inventory | Entire Phase One property | #Other – PCB Storage | On-Site | PCB | Soil and groundwater |
| #4. A fire that occurred in 1900 destroyed all on-site buildings that existed at the time. Debris and rubble were buried on-site. | Entire Phase One property | #Other – Debris and Rubble from Fire of 1900 | On-Site | BTEX, PHC, PAH, Metals | Soil and groundwater |
| #5. Foundries were present on Victoria Island, east of the Phase One property | Entire Phase One property | #34 – Metal Fabrication | Off-Site | Metals | Soil |
| #6. Former rail spurs | Central part of the Phase One property, 10 metres on each side of former rail spurs | #46 – Rail yards, tracks and spurs | On-site | VOC, PHC, PAH, Metals, PCB | Soil and groundwater |
| #7. Former coal storage area | Northeast corner of the Phase One property | #9 – Coal gasification | On-Site | PAH | Soil and groundwater |
| #8. Former bunker C UST and diesel pumping station on the adjacent property to the north | North part of Phase One property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | Off-Site | PHC, BTEX, PAH, Metals, PCB | Groundwater |

| Area of Potential Environmental Concern (APEC) | Location of APEC on Phase One Property | Potentially Contaminating Activity (PCA) | Location of PCA (On-Site or Off-Site) | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|--|--|---------------------------------------|-----------------------------------|--|
| #9. Coal fired power generation, adjacent property to the northeast | Northeast part of the Phase One property | #18 – Electricity generation, transformation and power stations | Off-Site | VOC, PHC, PAH | Groundwater |
| #10. Former waste burner located south of a building to the northeast | North part of the Phase One property | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | Off-Site | PHC, PAH, Metals, PCB | Groundwater |

The locations of the APEC are shown on Figures 2 and 3 in Appendix A.

The Phase One ESA was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices. A copy of the Phase One conceptual site model is provided as Figure 3 in Appendix A.

3.0 Scope of the Investigation

3.1 Overview of Site Investigation

The objective of the Phase Two ESA was to assess the quality of soil and groundwater on the Phase Two property in conjunction with a remediation program.

The most recent use of the property was industrial land use (historically, a pulp and paper mill was in operation at the site). The proposed future use of the property is residential and commercial. Since the past use of the property was industrial land use, a Record of Site Condition (RSC) must be filed, per Ontario Regulation 153/04.

The investigation consisted of pre-remedial drilling, excavating impacted soil and disposing of it off-site and assessing soil conditions at the margins of the remedial excavation. Following the completion of the soil remediation program, a drilling program was conducted to evaluate post-remedial soil and groundwater conditions at the subject property.

3.2 Scope of Work

The scope of work for the Phase Two ESA was as follows:

- Drilling five pre-remedial boreholes on the subject property and completing all of them as monitoring wells;
- Submitting soil and groundwater samples for laboratory analysis of benzene, toluene, ethylbenzene, xylenes (BTEX), petroleum hydrocarbon (PHC) fractions F1 to F4, volatile organic compounds (VOC), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), and inorganics;
- Comparing the results of the soil and groundwater chemical analyses to applicable criteria, as set out by the Ontario Ministry of the Environment, Conservation and Parks (MECP);
- Conducting an elevation survey of the pre- and post-remediation boreholes;
- Excavating and removing impacted soil from the Phase Two property;
- Assessing post-remedial groundwater conditions by installing three post-remedial monitoring wells;
- Conducting hydraulic conductivity tests in one of the post-remedial monitoring wells;
- Monitoring groundwater levels in the new monitors to determine groundwater elevations;
- Submitting groundwater samples from each of the post-remedial monitors for laboratory analysis of the contaminants of potential concern, for two consecutive quarters, at least 90 days after the remediation is completed and with at least 90 days between sampling events; and
- Preparing a report summarizing the results of the assessment activities.

This report has been prepared in accordance with the Phase Two ESA standard as defined by Ontario Regulation 153/04 (as amended), and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Section 8 of this report.

3.3 Media Investigated

The Phase Two ESA included the investigation of soil and groundwater on the Phase Two property. There are no waterbodies on the Phase Two property, therefore sediment sampling was not required.

The contaminants of potential concern (COPC) identified in the Phase One ESA were identified as target parameters for this Phase Two ESA. The APEC and COPC identified in the Phase One ESA are outlined in Section 2.2.

3.4 Phase One Conceptual Site Model

The Phase One conceptual site model (CSM) was developed by considering the following physical characteristics and pathways. The CSM showing the topography of the site, inferred groundwater flow, general site features, APEC, and PCA is shown in Figures 2 and 3 in Appendix A.

3.4.1 Buildings and Structures

The Phase Two property was developed as an industrial pulp and paper mill and lumber facility in 1853, when William Perley and Gordon Pattee began purchasing lots on Chaudière Island. The facility ceased operations in 2006. The buildings that previously occupied the Phase Two property were demolished in early 2019.

At the time of the Phase One investigation, there were two temporary sea cans on the Phase Two property. These were no longer present when the Phase Two ESA was undertaken.

3.4.2 Water Bodies and Groundwater Flow Direction

The Phase Two property is on Chaudière Island, which is surrounded by the Ottawa River. The groundwater flow direction was determined to be northeasterly, in the same direction of flow as the Ottawa River.

3.4.3 Areas of Natural Significance

There are no ANSI within the Phase Two study area.

3.4.4 Water Wells

There are no potable water wells within the Phase Two study area.

3.4.5 Potentially Contaminating Activity

The following on-site potentially contaminating activities (PCA) were identified:

- PCA #9 – Coal Gasification (former coal storage area indicates use of coal as a source of coal gas, which was likely used as a source of heating and/or lighting at the Phase Two property);
- PCA #30 – Importation of fill material of unknown quality (fill material overlying bedrock throughout the Phase Two property);
- PCA # 45 – Pulp, paper and paperboard manufacturing and processing (historic use of the Phase Two property for industrial purposes related to lumber storage and pulp and paper);
- PCA #46 – Rail yards, tracks and spurs (former rail spurs shown in 1948 and 1956 FIP);
- PCA #Other – PCB storage (E.B. Eddy was listed in the PCB Inventory as a major PCB storage site, indicating that the site contained liquid PCB waste in quantities greater than or equal to 1,000 kilograms) and
- PCA #Other – Debris and rubble from fire of 1900 (a fire caused the destruction of every building in the Phase Two study area in 1900. Some of the debris related to the fire was used as backfilling material on the Phase Two property).

The following off-site PCA were identified:

- PCA #1 – Acid and alkali manufacturing, processing and bulk storage (three former acid storage tanks within sulphite mill and storage area on the eastern part of East Chaudière Island);
- PCA #6 – Battery manufacturing, recycling and bulk storage (battery storage area identified in the 1912 fire insurance plan on East Chaudière Island);
- PCA #18 – Electricity generation, transformation and power stations (former powerhouse to the northeast, Hydro Ottawa (and its predecessors) historically occupied the south part of East Chaudière Island for electricity generation, and power generation companies listed on Middle Street);
- PCA #28 – Gasoline and associated products storage in fixed tanks (three former AST on East Chaudière Island, six former AST on West Chaudière Island (east adjacent), two former UST on Albert Island, former diesel pumping station and bunker C UST to the north);
- PCA #34 – Metal fabrication (One or more foundries, manufacturing facilities where metal would be used as a raw material and/or blacksmith shops were listed on Victoria Island);
- PCA #39 – Paints manufacturing, processing and bulk storage (the former paint shop located in the east end of the south building on Albert Island);
- PCA #44 – Port activities, including operation and maintenance of wharves and docks (former wharf adjacent to the Ottawa River on East Chaudière Island);
- PCA #45 – Pulp, paper and paperboard manufacturing and processing (the presence a ground wood pulp mill, beater mill, and sulphite pulp mill on East Chaudière and of a pulp and paper/lumber facility on West Chaudière (paper mill, beater building, and pulp mill));
- PCA #46 – Rail yards, tracks and spurs (former rail spurs were present on the east adjacent property and on East Chaudière Island);
- PCA #55 – Transformer manufacturing, processing and use (five PCB-containing transformers present on East Chaudière Island); and
- PCA #58 – Waste disposal and waste management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners (the waste burner on the property to the adjacent northeast (in the 1912 FIP).

As Albert Island is separated from the Phase Two property by the Ottawa River, none of the off-site PCA identified on Albert Island (PCA # 39 (paint shop) and PCA #28 (two former UST)) resulted in APEC on the Phase Two property.

PCA identified on East Chaudière Island (PCA #1 (former acid storage tanks), PCA #6 (battery storage area), PCA #18 (former Hydro Ottawa facility), PCA #28 (three former AST), PCA #44 (former wharf), PCA #46 (spurs), and PCA #55 (five PCB-containing transformers)) were also determined not to result in APEC on the Phase Two property due to the separation distance and downgradient location from the Phase Two property.

The off-site PCA that were determined to result in APEC on the Phase Two property include PCA #18 (former powerhouse to the northeast), PCA #28 (former diesel pumping station and bunker C UST to the north), PCA #34 (foundries on Victoria Island), and PCA #58 (waste burner on the property to the adjacent northeast).

3.4.6 Areas of Potential Environmental Concern

The APEC identified are summarized in Table 3.1.

Table 3.1: Areas of Potential Environmental Concern

| Area of Potential Environmental Concern (APEC) | Location of APEC on Phase Two Property | Potentially Contaminating Activity (PCA) | Location of PCA (On-Site or Off-Site) | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---------------------------------------|---|--|
| #1. The Phase Two property was part of a pulp and paper mill | Entire Phase Two property | #45 – Pulp, Paper and Paperboard Manufacturing and Processing | On-site and Off-Site | Volatile Organic Compounds (VOC), Petroleum Hydrocarbons (PHC), Polycyclic Aromatic Hydrocarbons (PAH), Metals, Polychlorinated Biphenyls (PCB) | Soil and groundwater |
| #2. Fill material is overlying bedrock throughout the Phase Two property | Entire Phase Two property | #30 – Importation of Fill Material of Unknown Quality | On-site | Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), PHC, PAH, Metals | Soil |
| #3. Former owner, E.B. Eddy Company, was listed on the PCB inventory | Entire Phase Two property | #Other – PCB Storage | On-Site | PCB | Soil and groundwater |
| #4. A fire that occurred in 1900 destroyed all on-site buildings that existed at the time. Debris and rubble were buried on-site. | Entire Phase Two property | #Other – Debris and Rubble from Fire of 1900 | On-Site | BTEX, PHC, PAH, Metals | Soil and groundwater |
| #5. Foundries were present on Victoria Island, east of the Phase Two property | Entire Phase Two property | #34 – Metal Fabrication | Off-Site | Metals | Soil |
| #6. Former rail spurs | Central part of the Phase Two property, 10 metres on each side of former rail spurs | #46 – Rail yards, tracks and spurs | On-site | VOC, PHC, PAH, Metals, PCB | Soil and groundwater |
| #7. Former coal storage area | Northeast corner of the Phase Two property | #9 – Coal gasification | On-Site | PAH | Soil and groundwater |
| #8. Former bunker C UST and diesel pumping station on the adjacent property to the north | North part of Phase Two property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | Off-Site | PHC, BTEX, PAH, Metals, PCB | Groundwater |

| Area of Potential Environmental Concern (APEC) | Location of APEC on Phase Two Property | Potentially Contaminating Activity (PCA) | Location of PCA (On-Site or Off-Site) | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|--|--|---------------------------------------|-----------------------------------|--|
| #9. Coal fired power generation, adjacent property to the northeast | Northeast part of the Phase Two property | #18 – Electricity generation, transformation and power stations | Off-Site | VOC, PHC, PAH | Groundwater |
| #10. Former waste burner located south of a building to the northeast | North part of the Phase Two property | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | Off-Site | PHC, PAH, Metals, PCB | Groundwater |

3.4.7 Underground Utilities

Utilities, including underground hydro, natural gas, water, and sewers, are present on Chaudière Private, part of which is included in the Phase Two property. Since the water table is within the bedrock, the presence of utilities is not expected to affect possible migration of contaminants once buildings are constructed on the Phase Two property.

A multi-storey residential building with commercial at ground level and one or two levels of underground parking is planned for construction on the Phase Two property. The post-remediation geology, as well as the potential building footprint, is shown in Figure 25 in Appendix A.

3.4.8 Subsurface Stratigraphy

Bedrock in the general area of the Phase Two property consists of limestone, dolostone, shale, arkose, and sandstone from the Shadow Lake Formation of the Middle Ordovician period. The bedrock occurs as bare tabular outcrops and includes areas thinly veneered by unconsolidated sediments. The bedrock elevation is approximately 53 metres above sea level (masl).

Soil at the Phase Two property prior to remediation generally consisted of sand and gravel fill material with trace silt and brick debris and some boulders and cobbles. The fill layer ranged in thickness from 0.2 to 1.6 metres. Limestone bedrock underlaid the fill material

3.4.9 Uncertainty Analysis

The CSM is a simplification of reality, which aims to provide a description and assessment of any areas where potentially contaminating activity that occurred within the Phase Two study area may have adversely affected the Phase Two property. All information collected during this investigation, including records, interviews, and site reconnaissance, has contributed to the formulation of the CSM.

Information was assessed for consistency, however EXP has confirmed neither the completeness nor the accuracy of any of the records that were obtained or of any of the statements made by others. All reasonable inquiries to obtain accessible information were made, as required by Schedule D, Table 1, Mandatory Requirements for Phase Two Environmental Site Assessment Reports. The CSM reflects our best interpretation of the information that was available during this investigation.

3.5 Deviations from Sampling and Analysis Plan

The field investigative and sampling program was carried out following the requirements of the Phase Two property, as described in Section 4.

No significant deviations from the SAAP, as provided in Appendix C, were reported that affected the sampling and data quality objectives for the Phase Two property. One pre-remediation monitoring well (MW21-02) could not be sampled for metals due to insufficient sample volume.

3.6 Impediments

No impediments were encountered during this investigation.

4.0 Investigation Method

4.1 General

The current investigation was performed following requirements given under Ontario Regulation 153/04 and in accordance with generally accepted professional practices.

4.2 Drilling and Excavating

The site investigative activities consisted of the drilling of boreholes to facilitate the collection of soil samples for visual inspection and chemical analysis. The boreholes were instrumented with monitoring wells to facilitate the collection of groundwater samples.

Prior to the commencement of drilling, the locations of underground public utilities including telephone, natural gas and electrical lines were marked at the subject property by public locating companies. A private utility locating contractor was also retained to clear the individual borehole locations.

In March 2019, the Phase Two property owner retained Tomlinson Development Corporation to install utilities (water, sewer, gas, hydro) for future development along Chaudière Private (formerly Perley Street). From March 5 to 25, 2019, EXP observed excavation activities and took soil samples for characterization of the utility trench which ran along the north boundary of the Phase Two property. Beneath the concrete sidewalk and asphalt roadway, sand and gravel fill material was present to a depth of approximately 0.6 metres below ground surface (m bgs). Bedrock was present at a depth of approximately 0.2 to 1.5 metres below ground surface (m bgs). Granular material, which was comprised of material that had particles larger than 2 mm, was present from a depth of 0.6 m bgs to bedrock. The total depth of the utility excavation was 2.4 m bgs. All excavated material was temporarily stockpiled on East Chaudière Island and was subsequently disposed of off-site in 2019. The utility trench was backfilled with material that was larger than 2 mm in diameter.

The locations of the boreholes and the excavation are shown on Figure 2 in Appendix A.

4.2.1 Pre-Remedial Drilling

A pre-remedial drilling program was conducted to investigate the soil quality on the Phase Two property. The pre-remedial drilling program was completed March 15 and 16, 2021 by George Downing Estate Drillings (Downing), a licensed well contractor. Downing advanced five boreholes (MW21-01 to MW21-05) across the Phase Two property, using a CME-75 truck mounted drill. Boreholes were augured to refusal, then cored to depth. All of the boreholes were completed as monitoring wells.

Bedrock was encountered between 0.6 and 1.7 metres below ground surface (mbgs) in all boreholes. EXP staff continuously monitored the drilling activities to log the stratigraphy observed from the recovered samples, to record the depth of the samples, and to record total depths of borings. Field observations are documented on the borehole logs provided in Appendix D.

4.2.2 Pre-Remedial Monitoring Well Decommissioning

The pre-remediation monitoring wells were decommissioned in accordance with Regulation 903. On March 26, 2021, five monitoring wells (BH/MW21-01 to BH/MW21-05) were decommissioned by using the pressure-grout method by Downing.

4.2.3 Remediation

The 2021 remedial excavation program included excavating and stockpiling impacted soil for off-site disposal. The remedial excavation extended to the utility trench, from which all soil was removed in 2019, and extended horizontally beyond the

property boundaries in all other directions and vertically to bedrock surface. With the exception of the soil at the northern property boundary, as described above, all soil was removed from the Phase Two property.

This remediation program commenced on March 29, 2021 and concluded on May 18, 2021. Excavation GTS was retained by the Phase Two property owner to complete the remedial excavation. Soil excavation and removal activities occurred over five days during this period, including March 29 to 31 and May 17 and 18. No soil was brought to the Phase Two property, as the excavation was backfilled with materials that were larger than 2 mm in diameter.

Approximately 2,431.87 tonnes of impacted soil and granular material were excavated and removed from the north part of the Phase Two property in 2019. This soil was temporarily stockpiled on East Chaudière Island and was disposed off-site in conjunction with remedial activities that occurred at 125 Zaida Eddy Private (RSC 228673). In conjunction with 2021 remedial activities, approximately 3,720.67 tonnes of impacted soil and 30.5 tonnes of impacted concrete were removed by excavation from the Phase Two property. All soil, concrete, and granular materials were disposed of as non-hazardous waste at the City of Ottawa Trail Road facility.

The remediation program was completed in accordance with Regulation 153/04. As such, the outcome of the remediation program is discussed in Appendix E. A summary of soil brought to the Phase Two property is provided in Appendix F.

4.2.4 Post-Remedial Drilling

The post-remedial drilling investigation was conducted on April 28, 2021, by Downing. Downing advanced three boreholes (BH/MW21-01 to BH/MW21-03) on the Phase Two property, using a CME-75 truck mount drill. The boreholes were installed at depths between 6.1 and 6.7 mbgs. Boreholes were cored to depth and completed as monitoring wells.

The post-remedial drilling investigation was conducted on April 28, 2021 by Downing. Downing advanced three boreholes (BH/MW21-01 to BH/MW21-03) on the Phase Two property, using a CME-75 truck mount drill. The boreholes were installed at depths between 6.1 and 6.7 mbgs. All soil was removed from the Phase Two property during the remediation program and all the boreholes were cored through bedrock. At the time of drilling, ground surface in the area of the monitoring wells consisted of bedrock surface, however $\frac{3}{4}$ inch stone was subsequently brought to the property.

4.3 Soil Sampling

The soil sampling during the completion of this Phase Two ESA was undertaken in general accordance with the SAAP presented in Appendix C.

Soil samples were selected for laboratory analysis based on combustible vapour measurements and visual and olfactory evidence of impacts, where observed. Soil samples identified for possible laboratory analysis were placed directly into pre-cleaned, laboratory-supplied glass sample jars/vials. Samples to be analysed for PHC fraction F1 and BTEX were collected using a soil core sampler and placed into vials containing methanol as a preservative. The jars and vials were sealed with Teflon-lined lids to minimize headspace and reduce the potential for induced volatilization during storage/transport prior to analysis. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, Paracel Laboratories Ltd. (Paracel) of Ottawa, Ontario. The samples were transported/submitted within 24 hours of collection to the laboratory following chain of custody protocols for chemical analysis. Soil samples were submitted for laboratory analysis of PHC, VOC, PAH, PCB, metals, and/or pH.

4.3.1 Pre-Remedial Soil Sampling

Soil samples for geologic characterization were collected on a continuous basis in the overburden materials using 5 cm diameter, 61 cm long, split spoon samplers advanced into the subsurface using the drill rig. A split spoon sample was collected approximately every 80 cm as drilling progressed. The split spoon samplers were decontaminated between sampling intervals by EXP staff using a potable water/phosphate-free detergent solution followed by rinses with potable water. EXP staff continuously monitored the drilling activities to log the stratigraphy observed from the recovered soil cores, to record the

depth of soil sample collection, to record total depths of borings/excavation, and to record visual or olfactory observations of potential impacts. Field observations are summarized on the borehole logs provided in Appendix D.

4.3.2 Remedial and Post-Remedial Soil Sampling

A utilities trench was excavated along the north boundary of the Phase Two property (Chaudière Private) in 2019. All soil was removed from the Phase Two property, and no soil, per the definition of soil in Regulation 153/04, was brought to the Phase Two property. Rather, the utilities trench was backfilled with material that was larger in diameter than 2 mm in 2019 and the 2021 excavation was backfilled with gravel and cobbles.

Confirmatory soil samples were taken from the fill material along the north wall of the excavation, along the northern boundary of the Phase Two property. No samples were taken from the east or west excavation walls, as the excavation extended off the Phase Two property. No samples were taken from the south wall, as all soil south of the excavation boundary was removed from the Phase Two property as part of the 2021 remediation activities. No floor samples were taken, as the utilities trench was excavated into bedrock.

With the exception of the soil along the north wall of the services excavation on Chaudière Private, all soil was removed from the Phase Two property. Therefore, no post-remedial soil analysis was required.

4.4 Field Screening Measurements

Soil samples were placed in a sealed Ziploc plastic bag and allowed to reach ambient temperature prior to field screening with a combustible vapour meter calibrated to hexane gas prior to use. The field screening measurements were made by inserting the instrument's probe into the plastic bag while manipulating the sample to ensure volatilization of the soil gases. These 'headspace' readings provide a real-time indication of the relative concentration of combustible vapours encountered in the subsurface during drilling and are used to aid in the assessment of the vertical and horizontal extent of potential impacts and the selection of soil samples for analysis.

Readings of petroleum vapour concentrations in the soil samples collected during the drilling investigation were recorded using an RKI Eagle 2, where there was sufficient recovery. This instrument is designed to detect and measure concentrations of combustible gas in the atmosphere to within 5 parts per million by volume (ppmv) from 0 ppmv to 200 ppmv, 10 ppmv increments from 200 ppmv to 1,000 ppmv, 50 ppmv increments from 1,000 ppmv to 10,000 ppmv, and 250 ppmv increments above 10,000 ppmv. It is equipped with two ranges of measurement, reading concentrations in ppmv or in percentage lower explosive limit (% LEL). The RKI Eagle 2 instrument can determine combustible vapour concentrations in the range equivalent to 0 to 11,000 ppmv of hexane.

The instrument was configured to eliminate any response from methane for all sampling conducted at the subject property. Instrument calibration is checked on a daily basis in both the ppmv range and % LEL range using standard gases comprised of known concentrations of hexane (400 ppmv, 40% LEL) in air. If the instrument readings are within $\pm 10\%$ of the standard gas value, then the instrument is deemed to be calibrated, however if the readings are greater than $\pm 10\%$ of the standard gas value then the instrument is re-calibrated prior to use.

The field screening measurements, in parts per million by volume (ppmv), are presented in the borehole logs provided in Appendix D.

4.5 Groundwater: Monitoring Well Installation

Monitoring wells were installed in general accordance with the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 (as amended). The monitoring wells consisted of a 52 mm diameter Schedule 40 PVC screen that was no more than 3.0 m long and a 52 mm diameter Schedule 40 PVC riser pipe that was at least 0.8 m long. The annular space around the wells was backfilled with sand to an average height of 0.3 m above the top of the screen. A bentonite seal was added from the top of

the sand pack to approximately 0.3 m below ground surface. The monitoring wells were completed with monument casings. Details of the monitoring well installations are shown on the borehole logs provided in Appendix D.

Measures taken to minimize the potential for cross contamination or the introduction of contaminants during well construction included:

- The use of well pipe components (e.g. riser pipe and well screens) with factory machined threaded flush coupling joints
- Construction of wells without the use of glues or adhesives
- Removing the protective plastic wraps from well components at the time of borehole insertion to prevent contact with the ground and other surfaces
- Cleaning or disposal of drilling equipment between sampling locations

4.6 Groundwater: Field Measurement and Water Quality Parameters

Field measurement of water quality parameters is described in Section 4.7.

All measurements of petroleum vapours in the monitor riser were made with an RKI Eagle 2 in methane elimination mode. Immediately after removing the well cap, the collection tube of the Eagle was inserted into the riser and the peak instrument reading was recorded. EXP used a Heron water level tape to measure the static water level in each monitoring well. The measuring tape was cleaned with phosphate-free soap and tap water, rinsed with distilled water after each measurement.

4.7 Groundwater: Sampling

All groundwater samples were collected via a low flow sampling technique using a YSI 550 multi probe water quality meter. The YSI probe was calibrated using in-house reference standards. Prior to collecting the groundwater samples, water quality field parameters (turbidity, dissolved oxygen, conductivity, temperature, pH, and oxidation reduction potential) were monitored until stable readings were achieved to ensure that the samples collected were representative of actual groundwater conditions. These parameters are considered to be stable when three consecutive readings meet the following conditions:

- Turbidity: within 10% for values greater than 5 nephelometric turbidity units (NTU), or three values less than 5 NTU;
- Dissolved oxygen: within 10% for values greater than 0.5 mg/L, or three values less than 0.5 mg/L;
- Conductivity: within 3%;
- Temperature: $\pm 1^{\circ}\text{C}$;
- pH: ± 0.1 unit; and,
- Oxidation reduction potential: ± 10 millivolts.

When stabilization occurs, equilibrium between groundwater within a monitor and the surrounding formation water is attained. As such, samples collected when stabilization occurs are considered to be representative of formation water.

The groundwater sampling during the completion of this Phase Two ESA was undertaken in general accordance with the SAAP presented in Appendix C. The groundwater samples were placed in clean coolers containing ice packs prior to and during transportation to the laboratory. The samples were transported to the laboratory within 24 hours of collection with a chain of custody.

4.7.1 Pre-Remedial Groundwater

On March 23, 2021, groundwater samples were collected from the pre-remedial monitoring wells using the low flow sampling method described above.

Prior to remediation, five groundwater samples, one field duplicate, one field blank, and one trip blank were submitted for chemical analysis of PHC, VOC, PAH, PCB, and/or inorganic parameters. No groundwater sample was submitted for metals analysis from BH/MW21-02 as there was insufficient sample volume for analysis of all parameters.

4.7.2 Post-Remedial Groundwater

Two post-remedial groundwater sampling events were conducted. The first event was conducted on August 23 and 31 and September 14, 2021, and the second event was conducted on December 21 and 22, 2021 and January 6, 12, 19, and February 16, 2022. Several days were required for each event because of the slow recovery of the monitoring wells and because they were covered with snow. During each event, three groundwater samples, one field duplicate, one field blank, and one trip blank were submitted for chemical analysis of PHC, VOC, PAH, PCB, inorganic parameters.

4.8 Sediment: Sampling

There are no waterbodies present on the Phase Two property, therefore sediment sampling was not required.

4.9 Analytical Testing

The contracted laboratory selected to perform chemical analysis on all soil samples was Parcel Laboratories Ltd (Parcel). Parcel is an accredited laboratory under the Standards Council of Canada/Canadian Association for Laboratory Accreditation in accordance with ISO/IEC 17025:1999- General Requirements for the Competence of Testing and Calibration Laboratories.

4.10 Residue Management

The soil cuttings from pre-remediation drilling activities were left on-site. They were subsequently removed in conjunction with remediation activities. Purged water from groundwater development and sampling were collected in a drum and disposed of in accordance with the Permit to Take Water for the Phase Two property.

No soil was encountered during the post-remediation drilling investigation, as all monitoring wells were drilled from bedrock surface.

Fluids from cleaning drilling equipment were disposed of by the driller at their facility.

Excavated soil from the remediation was disposed of off-site at Trail Road Landfill (4475 Trail Road, Ottawa), a MECP approved waste receiving facility (A461303).

A bulk soil sample was collected from the soil cuttings on March 16, 2021 and submitted for analyses of waste acceptance parameters (VOC, PHC fractions F1 to F4 and semi-volatile organic compounds (SVOC)) and selected O. Reg. 558 parameters and ignitability. The results of the analysis are provided Table 15 in Appendix G and the laboratory certificates of analysis are provided in Appendix H. The sample was within the Schedule 4 leachate criteria for all of the parameters that were analysed and was also non-ignitable. Based on these results, impacted soil from the subject property was classified as nonhazardous waste for off-site disposal purposes.

4.11 Elevation Surveying

An elevation survey was conducted by EXP. The top of casing and ground surface elevation of each monitoring well location were surveyed relative to a geodetic reference. The Universal Transverse Mercator (UTM) coordinates of each monitoring well were also recorded so that their locations could be plotted accurately.

4.12 Quality Assurance and Quality Control Measures

All soil and groundwater samples were placed in coolers containing ice packs prior to and during transportation to the contract laboratory, Paracel Laboratories Ltd. (Paracel). Paracel is accredited to the ISO/IEC 17025:2005 standard - *General Requirements for the Competence of Testing and Calibration Laboratories*.

A QA/QC program was also implemented to ensure that the analytical results received are accurate and dependable. A QA/QC program is a system of documented checks that validate the reliability of the data. Quality Assurance is a system that ensures that quality control procedures are correctly performed and documented. Quality Control refers to the established procedures observed both in the field and in the laboratory, designed to ensure that the resulting end data meet intended quality objectives. The QA/QC program implemented by EXP incorporated the following components:

- Collecting and analysing field duplicate samples to ensure analytical precision;
- Using dedicated and/or disposable sampling equipment;
- Following proper decontamination protocols to minimize cross-contamination;
- Maintaining field notes and completing field forms to document field activities; and
- Using only laboratory-supplied sample containers and following prescribed sample protocols, including using proper preservation techniques, meeting sample hold times, and documenting sample transmission on chains of custody, to ensure the integrity of the samples is maintained.

Paracel's QA/QC program involved the systematic analysis of control standards for the purpose of optimizing the measuring system as well as establishing system precision and accuracy and included calibration standards, method blanks, reference standards, spiked samples, surrogates and duplicates.

5.0 Review and Evaluation

5.1 Geology

Soil at the Phase Two property prior to remediation generally consisted of sand and gravel fill material with trace silt and brick debris and some boulders and cobbles. The fill layer ranged in thickness from 0.2 to 1.6 metres. Limestone bedrock underlaid the fill material.

During the pre-remediation drilling investigation, limestone bedrock was encountered between 0.5 and 1.6 metres below ground surface (mbgs) in all of the boreholes. EXP staff continuously monitored the drilling activities to log the stratigraphy observed from the recovered samples, to record the depth of the samples, and to record total depths of borings. Field observations are documented on the borehole logs provided in Appendix D.

All soil was removed from the Phase Two property during the remediation program. Where required, backfill materials consisted of material that was not considered to be soil, as the particle diameter was larger than 2 mm.

The Phase Two property is on Chaudière Island, which is surrounded by the Ottawa River. Groundwater elevations depend on the level of water within the river, but generally range between 42 and 45 masl.

A plan view showing cross-sections is provided as Figure 5 in Appendix A, while the Phase Two property geology is depicted in cross-sections on Figure 6 in Appendix A.

5.2 Groundwater: Elevations and Flow Direction

On March 23 and 24, 2021, the five pre-remediation monitoring wells (BH/MW21-01 to BH/MW21-05) were inspected for general physical condition, groundwater depth, the presence of non-aqueous phase liquid and petroleum vapour.

Groundwater monitoring and elevation data are provided below.

Table 5.1: Pre-Remedial Monitoring and Elevation Data

| Monitoring Well ID | Grade Elevation (masl) | Top of Casing Elevation (masl) | Screen Depth (mbgs) | Petroleum Vapour (ppm) | Depth to LNAPL (mbgs) | Depth to Groundwater (mbTOC) | Groundwater Elevation (masl) |
|--------------------|------------------------|--------------------------------|---------------------|------------------------|-----------------------|------------------------------|------------------------------|
| BH/MW21-01 | 53.71 | 53.60 | 3.0 to 6.0 | ND | N/A | 3.29 | 50.31 |
| BH/MW21-02 | 53.55 | 53.39 | 3.5 to 6.5 | ND | N/A | 5.75 | 47.64 |
| BH/MW21-03 | 53.36 | 53.29 | 3.0 to 6.0 | ND | N/A | 2.35 | 50.95 |
| BH/MW21-04 | 53.80 | 53.71 | 3.1 to 6.1 | 10 | N/A | 5.22 | 48.49 |
| BH/MW21-05 | 53.43 | 53.41 | 3.0 to 6.0 | 10 | N/A | 2.82 | 50.59 |

Notes: Elevations were measured to a geodetic datum
 LNAPL – light non-aqueous phase liquid
 ppmv – parts per million by volume
 mbgs – metres below ground surface

masl – metres above sea level
 mbTOC – metres below top of monitor casing
 ND – non-detectable
 N/A – not applicable

Based on the groundwater elevations, a groundwater contour plan was prepared. The groundwater flow direction was determined to be to the northeast. The groundwater contour plan is provided as Figure 4 in Appendix A.

On August 23, 2021, monitoring wells BH/MW21-01 to BH/MW21-03 were inspected for general physical condition, groundwater depth, the presence of non-aqueous phase liquid and petroleum vapour.

Groundwater monitoring and elevation data are provided below.

Table 5.2: Post-Remedial Monitoring and Elevation Data

| Monitoring Well ID | Grade Elevation (masl) | Top of Casing Elevation (masl) | Screen Depth (mbgs) | Petroleum Vapour (ppm) | Depth to LNAPL (mbgs) | Depth to Groundwater (mbTOC) | Groundwater Elevation (masl) |
|----------------------|------------------------|--------------------------------|---------------------|------------------------|-----------------------|------------------------------|------------------------------|
| August 2021 | | | | | | | |
| BH/MW21-01 | 53.29 | 53.13 | 3.1 to 6.1 | 10 | N/A | 5.21 | 48.02 |
| BH/MW21-02 | 53.73 | 53.91 | 3.7 to 6.7 | 20 | N/A | 5.42 | 48.51 |
| BH/MW21-03 | 53.48 | 53.40 | 3.1 to 6.1 | ND | N/A | 2.60 | 50.80 |
| February 2022 | | | | | | | |
| BH/MW21-01 | 53.29 | 53.13 | 3.1 to 6.1 | 55 | N/A | 5.44 | 47.69 |
| BH/MW21-02 | 53.73 | 53.91 | 3.7 to 6.7 | ND | N/A | 4.80 | 49.11 |
| BH/MW21-03 | 53.48 | 53.40 | 3.1 to 6.1 | 15 | N/A | 2.99 | 50.41 |

Notes: Elevations were measured to a geodetic datum
LNAPL – light non-aqueous phase liquid
ppmv – parts per million by volume
mbgs – metres below ground surface

masl – metres above sea level
mbTOC – metres below top of monitor casing
ND – non-detectable
N/A – not applicable

EXP notes that groundwater levels depend on the size of the fractures that are intercepted as drilling progresses. Groundwater contour plans were not prepared for post-remediation groundwater levels because it is unlikely that the difference in groundwater elevations in the three monitoring wells is representative of the actual groundwater flow across the site as opposed to the differences in the fractures at each individual location.

Groundwater levels can also be influenced by seasonal changes, the presence of subsurface structures, or fill, however based on the presence of the Ottawa River surrounding Chaudière Island, it is unlikely that any of these factors will affect the groundwater flow direction at the Phase Two property.

5.3 Groundwater: Hydraulic Gradients

Horizontal hydraulic gradients were estimated for the groundwater flow components identified in the bedrock aquifer based on the March 2021 groundwater elevations.

The horizontal hydraulic gradient is calculated across the using the following equation:

$$i = \Delta h / \Delta s$$

Where,

i = horizontal hydraulic gradient;

Δh (m) = groundwater elevation difference; and,

Δs (m) = separation distance.

The horizontal hydraulic gradient was calculated to be 0.22 m/m.

From August 23 to 25, 2021 a rising head test was conducted one post-remediation monitoring well (MW21-03). The rising head test requires that the static water level be measured in each monitoring well prior to the removal of groundwater. Groundwater is removed from the monitoring well using a bailer. After the water level has been sufficiently lowered, an interface probe is lowered into the monitor as quickly as possible to measure the new water level. The time at which the new water level is measured is noted as time equal zero. Water level readings are subsequently taken at frequent intervals. Both the water levels and the time they were taken are recorded.

The frequency of the time measurement is determined by the rate the water level recovers to the static water level. Measurements are taken until at least 70% recovery has been achieved or, in cases where recovery is extremely slow, until it is deemed that a sufficient amount of time has elapsed. Using the Hvorslev model, the hydraulic conductivity for the monitoring well was calculated.

All water level measurements were made with a Heron oil/water interface probe. Both the probe and the measuring tape that come into contact with liquids within a monitor are cleaned with phosphate-free soap and tap water, rinsed with distilled water and then finally rinsed with methanol after each hydraulic conductivity test is concluded.

Table 5.3: Rising Head Tests

| Monitoring Well ID/ Installation ID | Horizon | Screen Depth (mbgs) | Initial Static Water Level (mbToC) | Water Level after Purging (mbToC) | Recovery to Static after Elapsed time (s) | Hydraulic Conductivity (cm/s) |
|-------------------------------------|---------|---------------------|------------------------------------|-----------------------------------|---|-------------------------------|
| MW21-03 | Bedrock | 3.1 to 6.1 | 2.60 | 4.87 | 19,1640 | 6.61×10^{-7} |

Notes: mbTOC – metres below top of monitor casing

The hydraulic conductivity calculated in MW21-03 was 6.61×10^{-7} cm/s. The data and the calculations for the hydraulic conductivity testing are provided in Appendix I.

Because of the proximity of the Phase Two property to the Ottawa River and because all soil was removed from the Phase Two property, vertical hydraulic gradients were not calculated.

5.4 Soil: Field Screening

The methodology for the collection of soil vapour concentration measurements is described in Section 4.4.

Petroleum vapours ranged from non-detectable to 35 ppm in samples collected from the pre-remedial boreholes. Field screening data is presented in the borehole logs in Appendix D.

No field screening was performed during post-remedial drilling, as all soil had been removed from the Phase Two property.

5.5 Soil: Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes and from the north wall of the utility trench excavation. The selection of representative “worst case” soil samples from each borehole was based on field visual or olfactory evidence of impacts and/or presence of potential water bearing zones.

Ten soil samples and one field duplicate were collected from the north wall of the utilities trench in 2019 and during the pre-remedial drilling investigation in 2021 and submitted to Paracel for analysis of PHC fractions F1 to F4, VOC, PAH, PCB and inorganics. Two soil samples were submitted for analysis of pH.

Soil samples collected during the pre-remediation drilling program exceeded the Table 7 and/or Table 9 SCS for VOC, PHC, PAH, and/or inorganic parameters. All of these samples were within the Table 7 and Table 9 SCS for PCB. The pH samples were within the applicable ranges for surface and subsurface soils. The pre-remediation drilling results are provided in Tables 1 to 3 in Appendix G. They are shown in plan view on Figures 7 to 9 and on cross-sections on Figures 10 to 12 in Appendix A. All soil (except for the soil located on the north property line) was removed from the Phase Two property, so these samples are not representative of post-remediation site conditions.

None of the soil samples collected from the north wall of the utility trench exceeded the applicable Table 7 or Table 9 SCS. Analytical results are provided in Tables 4 to 6 in Appendix G. The results are shown in plan view on Figures 19 to 21 and on cross-sections on Figures 22 to 24 in Appendix A.

With the exception of the soil along the north wall of the services excavation on Chaudière Private, all soil was removed from the Phase Two property. Therefore, no post-remedial soil analysis was required.

Copies of the laboratory Certificates of Analysis are provided in Appendix H.

5.6 Groundwater: Quality

All groundwater samples were collected via a low flow sampling technique. EXP monitored several water quality parameters (such as water level, temperature, dissolved oxygen, conductivity, salinity, pH, oxygen reduction potential and turbidity) in order to ensure that the samples collected were representative of actual groundwater conditions.

Following their installation, the monitoring wells were developed by purging water with an inertial pump and foot valve until it became clear. The following table provides monitoring well construction details and observations made during monitor development.

Table 5.4: Pre-Remedial Monitoring Well Construction and Purging Details

| Monitoring Well ID | Length of Screen (metres) | Depth of Borehole (metres) | Date of Development | Volume Purged (litres) | Description of Purged Water at Start of Development | Description of Purged Water at End of Development |
|--------------------|---------------------------|----------------------------|---------------------|------------------------|---|---|
| BH/MW21-01 | 3.0 | 6.0 | March 19, 2021 | 16 L | Dark grey, silty, no odour or sheen | Clear, no odour or sheen |
| BH/MW21-02 | 3.0 | 6.5 | March 19, 2021 | 11 L | Dark grey, silty, no odour or sheen | Clear, no odour or sheen |
| BH/MW21-03 | 3.0 | 6.0 | March 19, 2021 | 14 L | Dark grey, silty, no odour or sheen | Slightly cloudy, no odour or sheen |
| BH/MW21-04 | 3.0 | 6.1 | March 19, 2021 | 11 L | Dark grey, silty, no odour or sheen | Slightly cloudy, no odour or sheen |
| BH/MW21-05 | 3.0 | 6.0 | March 19, 2021 | 14 L | Dark grey, silty, no odour or sheen | Clear, no odour or sheen |

Prior to remediation, five groundwater samples, one field duplicate, one field blank, and one trip blank were submitted for chemical analysis of PHC, VOC, PAH, PCB, and/or inorganic parameters. No groundwater sample was submitted for metals analysis from BH/MW21-02 as there was insufficient sample volume for analysis of all parameters.

There were no exceedances of the MECP Table 9 or Table 7 SCS for PHC, PCB, and inorganic parameter groups. However, the sample collected from BH/MW21-04 exceeded the Table 7 and Table 9 SCS for chloroform. This monitoring well was installed within the limestone bedrock. To facilitate drilling at this location, municipal water was used to cool the drill bits. Chloroform is generated at municipal water treatment plants when chlorine is used to kill bacteria in the water. In accordance with Regulation 153/04 it is the opinion of the Qualified Person that the source of chloroform in this monitoring well, which was sampled nine days after its installation, is the municipal water. Therefore, in accordance with Section 49.1 of Regulation 153/04, chloroform is not considered to exceed the SCS. Analytical results are included in Tables 7 to 9 in Appendix G and are shown in plan view on Figures 13 to 15 and on cross-sections on Figures 16 to 18 in Appendix A.

Following their installation, the post-remediation monitoring wells were developed by purging water with an inertial pump and foot valve until it became clear. The following table provides monitoring well construction details and observations made during monitor development.

Table 5.5: Post-Remedial Monitoring Well Construction and Purging Details

| Monitoring Well ID | Length of Screen (metres) | Depth of Borehole (metres) | Date of Development | Volume Purged (litres) | Description of Purged Water at Start of Development | Description of Purged Water at End of Development |
|--------------------|---------------------------|----------------------------|---------------------|------------------------|---|---|
| BH/MW21-01 | 3.0 | 6.1 | April 28, 2021 | 15 L | Brown, no odour or sheen | Clear, no odour or sheen |
| BH/MW21-02 | 3.0 | 6.7 | April 28, 2021 | 30 L | Dark grey, no odour or sheen | Clear, no odour or sheen |
| BH/MW21-03 | 3.0 | 6.1 | April 28, 2021 | 30 L | Dark grey, no odour or sheen | Clear, no odour or sheen |

Two post-remedial groundwater sampling events were conducted. The first event was conducted on August 23 and 31 and September 14, 2021, and the second event was conducted on December 21 and 22, 2021 and January 6, 12, 19, and February 16, 2022. Several days were required for each event because of the slow recovery of the monitoring wells and because they were covered with snow. During each event, three groundwater samples, one field duplicate, one field blank, and one trip blank were submitted for chemical analysis of PHC, VOC, PAH, PCB, inorganic parameters. All post-remediation groundwater samples were within the applicable Table 7 and Table 9 SCS. Analytical results are included in Tables 10 to 12 in Appendix G and are shown in plan view on Figures 26 to 28 and on cross-sections on Figures 29 to 31 in Appendix A.

Copies of the laboratory Certificates of Analysis are provided in Appendix H.

5.6.1 Chemical Transformation and Contaminant Sources

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COC in soil and groundwater, the contribution of which is dependent on the soil and groundwater conditions at the Phase Two property, as well as the chemical/physical properties of the COC. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e. sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

Prior to remediation, all soil on site was determined to be contaminated, as PHC fractions F2 to F4, BTEX, PAH, and metals exceeded the applicable Table 7 and/or Table 9 SCS. There were no pre-remediation groundwater exceedances.

A building with one or two levels of underground parking, ground floor retail, and upper floor residential use is planned to be constructed. The potential on-site human receptors include indoor and outdoor long-term workers, indoor and outdoor short-term workers, residents on upper floors (adult, teen, child, toddler and infant), property visitors (adult, teen, child, toddler and infant), and construction workers. Since all pre-remediation groundwater samples were within the Table 7 and Table 9 SCS, neither groundwater dermal contact nor groundwater ingestion were deemed to be potential exposure pathways for any of the potential on-site human receptors.

The potential on-site exposure pathways for the construction workers are incidental soil ingestion, soil particulate inhalation, soil dermal contact, ambient vapour inhalation, and vapour skin contact.

The potential on-site exposure pathways for the short-term and long-term outdoor workers (who are not exposed directly to subsurface soil and groundwater) are incidental surface soil ingestion, surface soil particulate inhalation, surface soil dermal contact, ambient air inhalation, and vapour skin contact.

The potential on-site exposure pathway for the property residents, the long-term indoor workers and visitors is indoor air inhalation.

A diagram identifying the release mechanisms, contaminant transport pathway, human receptors, exposure points and routes of exposure are shown on Figure 32 in Appendix A.

While the footprint of the building that is being planned will occupy most of the Phase Two property, there will be a landscaped area surrounding the building. Therefore, The Phase Two property is capable of supporting some ecological receptors. Relevant ecological receptors include terrestrial vegetation (bushes, grasses and weeds); soil invertebrates (earthworms, millipedes and beetles); birds (seagulls, pigeons, sparrows and robins); and small terrestrial mammals (moles, voles, and mice). Since all pre-remediation groundwater samples were within the Table 7 and Table 9 SCS, groundwater root uptake, groundwater dermal contact, and incidental ingestion of groundwater were not deemed to be potential exposure pathways for any of the potential on-site ecological receptors.

The potential on-site exposure pathways for terrestrial vegetation are root uptake of soil and stem and foliar uptake of vapours from soil.

The potential on-site exposure pathways for soil invertebrates are soil particulate inhalation, soil dermal contact, soil ingestion, and vapour inhalation, and plant and animal tissue ingestion.

The potential on-site exposure pathways for mammals and birds are soil particulate inhalation, soil dermal contact, soil ingestion, vapour inhalation, and plant and animal tissue ingestion.

A diagram identifying the release mechanisms, contaminant transport pathway, ecological receptors, exposure points and routes of exposure are shown on Figure 33 in Appendix A.

During the remediation program, all soil was removed from the Phase Two property. All confirmatory groundwater samples were within the applicable Table 7 and Table 9 SCS. Therefore, there are no longer any potential human health or ecological receptors and exposure pathways.

5.6.2 Evidence of Non-Aqueous Phase Liquid

Inspection of the groundwater monitoring wells did not indicate the presence of non-aqueous phase liquid (NAPL).

5.6.3 Maximum Concentrations

Prior to remediation, all soil on site was determined to be contaminated. No contaminated groundwater was encountered. Contaminants that exceeded the applicable standards included:

Soil: PHC fractions F2 to F4, benzene, ethylbenzene, xylenes, acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-cd]pyrene, 1- & 2- methyl naphthalene, naphthalene, phenanthrene, pyrene, antimony, arsenic, barium, copper, lead, mercury, molybdenum, selenium, and thallium.

Groundwater: None.

Post-remediation, no soil or groundwater samples exceeded the Table 7 and Table 9 SCS. Maximum soil concentrations are representative of the wall samples from the utilities excavation on Chaudière Private completed in 2019. No other soil is present on the Phase Two property.

Maximum soil and groundwater concentrations are provided in Table 13 and 14 in Appendix G.

5.7 Sediment: Quality

There are no water bodies on the Phase Two property, therefore sediment sampling was not required.

5.8 Quality Assurance and Quality Control Results

Quality assurance and quality control measures were taken during the field activities to meet the objectives of the sampling and quality assurance plan to collect unbiased and representative samples to characterize existing conditions in the fill materials and groundwater at the site. QA/QC measures, included:

- Collection and analysis of blind duplicate soil and groundwater samples to ensure sample collection precision;
- Analysis of a groundwater field blank for all parameters that were analysed to assess potential impact during sampling;
- Using dedicated and/or disposable sampling equipment;
- Following proper decontamination protocols to minimize cross-contamination;
- Maintaining field notes and completing field forms to document on-site activities; and
- Using only laboratory supplied sample containers and following prescribed sample protocols, including proper preservation, meeting sample hold times, proper chain of custody documentation, to ensure integrity of the samples.

Parcel's QA/QC program consisted of the preparation and analysis of laboratory duplicate samples to assess precision and sample homogeneity, method blanks to assess analytical bias, spiked blanks and QC standards to evaluate analyte recovery, matrix spikes to evaluate matrix interferences and surrogate compound recoveries to evaluate extraction efficiency. The laboratory QA/QC results are presented in the Quality Assurance Report provided in the Certificates of Analysis prepared by Parcel. The QA/QC results are reported as percent recoveries for matrix spikes, spiked blanks and QC standards, relative percent difference for laboratory duplicates and analyte concentrations for method blanks.

Review of the laboratory QA/QC results reported indicated that they were mostly within acceptable control limits or below applicable alert criteria for the sampled media and analytical test groups. The exceptions are summarized in the table below.

Table 5.6: Laboratory QA/QC Results

| Parcel Job# | Matrix | Test Affected | Deviation | Interpretation |
|--------------------|-------------|---------------|--|---|
| 2112343 | Leachate | Inorganics | 2-Fluorophenol surrogate recovery (22.0%) is below the acceptance criteria (40-150%) | Possible low bias of data. Since leachate sample represents soil removed from the site and since all inorganics were well below the standards, the deviation should have no material effect on the interpretation of results. |
| 2112349 | Soil | Inorganics | Spike Recovery for lead (67.0%) is less than the acceptance criteria (70-130%). | Possible low bias of data. Since all soil was removed from the Phase Two property, the deviation should have no effect on interpretation of results. |
| 2112654 | Soil | Inorganics | Spike Recovery for silver (62.3%) is less than the acceptance criteria (70-130%). | Possible low bias of data. Since all soil was removed from the Phase Two property, the deviation should have no effect on interpretation of results. |
| 2113433 2113436 | Groundwater | Metals | Spike Recovery for lead (79.4%) is less than the acceptance criteria (80-120%). | Possible low bias of data. Since results were well below Table 7 and 9 standards, the deviation should have no effect on interpretation of results. |
| | | | Spike Recovery for selenium (79.3%) is less than the acceptance criteria (80-120%). | Possible low bias of data. Since results were well below Table 7 and 9 standards, the deviation should have no effect on interpretation of results. |

| Parcel Job# | Matrix | Test Affected | Deviation | Interpretation |
|--|---------------------------|---------------|--|--|
| | | | Spike Recovery for silver (66.3%) is less than the acceptance criteria (80-120%). | Possible low bias of data. Since results were well below Table 7 and 9 standards, the deviation should have no effect on interpretation of results. |
| | | | Spike recovery for vanadium (128%) is above the acceptance criteria (80-120%) | Possible high bias of data. Since results were well below Table 7 and 9 standards, the deviation should have no effect on interpretation of results. |
| 2135216 2135219 2135221 | Groundwater Trip Blank | Metals | Spike recovery for vanadium (122%) is above the acceptance criteria (80-120%) | Possible high bias of data. Since results were well below Table 7 and 9 standards, the deviation should have no effect on interpretation of results. |
| 2136274 | Groundwater | VOC | Duplicate result exceeds RPD limits for bromodichloromethane and chloroform due to non-homogeneity between multiple samples vials. | Possible variability of data. Since both the sample and its duplicate were within the Table 7 and 9 standards, the deviation should have no effect on interpretation of results. |
| 2204302 | Groundwater | Inorganics | Spike recovery for sodium (77.2%) is below the acceptance criteria (80-120%). | Possible low bias of data. Since results were well below Table 7 and 9 standards, the deviation should have no effect on interpretation of results. |

For QA/QC purposes, the analytical sample results are quantitatively evaluated by calculating the relative percent difference (RPD) between the samples and their duplicates. To accurately calculate a statistically valid RPD, the concentration of the analytes found in both the original and duplicate sample must be greater than five times the reporting detection limit (RDL).

The results of the RPD calculations are provided in Appendix G in Tables 16 to 24. All of the RPD for pre-remedial soil and pre- and post remedial groundwater were either not calculable or within the applicable alert limits.

During the first post-remediation groundwater sampling event, a field duplicate sample was submitted for analysis of PCB. The original sample (MW21-3) had a non-detectable concentration of this parameter, however the laboratory advised that the field duplicate was extracted in the same separatory funnel immediately following a highly contaminated PCB sample from another project (which was unknown at the time of extraction). A re-analysis of the sample was not possible, as the extract itself was likely contaminated. Based on the information from the laboratory and the non-detectable result in the original sample (as well as the non-detectable result obtained from this monitoring well during the second post-remediation event, it is the opinion of the Qualified Person that any detectable result in the field duplicate sample is not representative of actual groundwater conditions. Therefore, the laboratory was asked not to report the PCB result of the field duplicate sample.

Field blanks and trip blanks were prepared and submitted for laboratory analysis of all parameters tested in groundwater. The results of the field blank analyses are provided in Tables 7 to 9 (pre-remediation) and Tables 10 to 12 (post-remediation) in Appendix G. Several inorganic parameters were detected in the pre-remedial field blank including copper and sodium. As the concentrations were still below MECP Table 7 and Table 9, and there were no exceedances of the Table 7 or Table 9 SCS in the pre-remedial groundwater samples, the deviation should have no material effect on the conclusions presented in this report.

The trip blank and field blank submitted with the post-remedial groundwater samples showed detectable levels of methylene chloride. Methylene chloride is a common chemical used within laboratories. All of the samples submitted with the trip blank and field blank were non-detect for methylene chloride (and all other VOC). Therefore, it is the opinion of the Qualified Person that the presence of methylene chloride is related to laboratory error and is not related to field activities that occurred during sample collection.

The remaining parameters in the pre-remedial and post-remedial trip blanks and field blanks were non-detectable.

5.9 Phase Two Conceptual Site Model

A Conceptual Site Model (CSM) provides a narrative, graphical and tabulated description integrating information related to the Phase Two property's geologic and hydrogeological conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of contaminants of concern, contaminant fate and transport, and potential exposure pathways.

5.9.1 Introduction

EXP Services Inc. (EXP) was retained by Windmill Dream Zibi Ontario Inc. to conduct a Phase Two Environmental Site Assessment (ESA) at 315 Miwàte Private (formerly 4 Booth Street) in Ottawa, Ontario (hereinafter referred to as the 'Phase Two property'). At the time of the investigation, the Phase Two property was vacant, however after remedial activities were completed on the north part of the site in 2019, it was paved and became part of the Chaudière Private right of way.

The objective of the Phase Two ESA investigation was to assess the quality of the groundwater conditions within the areas of potential environmental concern (APEC) identified in a Phase One ESA prepared by EXP. The most recent use of the property was for pulp and paper operations, which is a type of industrial property use, and the proposed future property use will be residential and commercial. Consequently, in accordance with Regulation 153/04, as amended, a Record of Site Condition (RSC) must be filed.

The most recent use of the property was industrial land use (historically, a pulp and paper mill was in operation at the site). The proposed future use of the property is residential and commercial. A new building will be constructed at the Phase Two property. The building will have one or two levels of underground parking, ground level commercial space, and upper-level residential units.

5.9.2 Physical Site Description

The Phase Two property is located in a former industrial area on the west side of Chaudière Island west of Booth Street, as shown on Figure 1. The Phase Two property is irregular in shape and has an area of approximately 0.8 hectares. The approximate centroid coordinates are NAD83 18T 443738 m E and 5029828 m N.

At the time of the investigation, the Phase Two property was vacant, however after remedial activities were completed on the north part of the site in 2019, it was paved and became part of the Chaudière Private right of way. The site layout is shown on Figure 2.

The municipal address of the Phase Two property is 315 Miwàte Private, Ottawa, Ontario. The property identification numbers (PIN) are: 04097-0288, 04097-0306, and 04097-0292. The legal description of PIN 04097-0288 is Part Lots 3, 4, north side Head Street, Part Lot 21, south side Chaudière Street, Plan 10, City of Ottawa. The legal description of PIN 04097-0306 is Part of Lots 2, 3, 4, 5, 20, 21, 22, 23, 24, Plan 10, City of Ottawa. The legal description of PIN 04097-0292 is Part Lot 21, south Chaudière Street, Plan 10, City of Ottawa.

Two RSC have been filed for neighbouring properties owned by the same property owner. RSC 226108 was filed on October 21, 2019 for the property immediately adjacent to the Phase Two property to the east and south. RSC 228673 was filed on May 21, 2021 for 125 Zaida Eddy Private, which is located on East Chaudière Island. Refer to Table 5.7 for the Site identification information.

Refer to Table 5.7 for the Site identification information.

Table 5.7: Site Identification Details

| | |
|------------------|-------------------------------------|
| Civic Address | 315 Miwàte Private, Ottawa, Ontario |
| Current Land Use | Industrial |

| | |
|--------------------------------|--------------------------------------|
| Proposed Future Land Use | Residential and Commercial |
| Property Identification Number | 04097-0288, 04097-0306, 04097-0292 |
| UTM Coordinates | NAD83 18T 443738 m E and 5029828 m N |
| Site Area | 0.8 hectares |
| Property Owner | Windmill Dream Zibi Ontario Inc. |

The Phase One Conceptual Site Model is provided as Figure 3.

The Phase Two property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the Phase Two property, are supplied by a municipal drinking water system provided by the City of Ottawa. Further, the Phase Two property is not located in an area designated in the municipal official plan as a well-head protection area and no properties within the Phase Two study area has a well that is being used or is intended for use as a source of potable water. Thus, in accordance with Section 35 of Ontario Regulation 153/04, non-potable water standards apply to the Phase Two property.

In accordance with Section 41 of Ontario Regulation 153/04, the Phase Two property is not an environmentally sensitive area. In addition, the Phase Two property is not located within an area of natural significance, and it does not include land that is within 30 metres of an area of natural significance.

The Phase Two property is a shallow soil property as defined in Section 43.1 of the regulation. It is part of Chaudière Island and is within 30 m of the Ottawa River.

5.9.3 Geological and Hydrogeological

Bedrock in the general area of the Phase Two property consists of limestone, dolostone, shale, arkose, and sandstone from the Shadow Lake Formation of the Middle Ordovician period. The bedrock occurs as bare tabular outcrops and includes areas thinly veneered by unconsolidated sediments. The bedrock elevation is approximately 53 metres above sea level (masl).

Soil at the Phase Two property prior to remediation generally consisted of sand and gravel fill material with trace silt and brick debris and some boulders and cobbles. The fill layer ranged in thickness from 0.2 to 1.6 metres. Limestone bedrock underlaid the fill material.

All soil was removed from the Phase Two property during the remediation program. Where required, backfill materials consisted of material that was not considered to be soil, as the particle diameter was larger than 2 mm.

The Phase Two property is on Chaudière Island, which is surrounded by the Ottawa River. Groundwater elevations depend on the level of water within the river, but generally range between 42 and 45 masl. The groundwater flow direction was determined to be northeasterly, as shown in Figure 4.

EXP notes that groundwater levels depend on the size of the fractures that are intercepted as drilling progresses. Groundwater contour plans were not prepared for post-remediation groundwater levels because it is unlikely that the difference in groundwater elevations in the three monitoring wells is representative of the actual groundwater flow across the site as opposed to the differences in the fractures at each individual location.

Groundwater levels can also be influenced by seasonal changes, the presence of subsurface structures, or fill, however based on the presence of the Ottawa River surrounding Chaudière Island, it is unlikely that any of these factors will affect the groundwater flow direction at the Phase Two property.

The hydraulic conductivity in post remedial monitoring well MW21-03 was 6.61×10^{-7} cm/s.

A plan view showing cross-sections is provided as Figure 5, while the Phase Two property geology is depicted in cross-sections on Figure 6.

A summary of factors that apply to the Phase Two property is provided in Table 5.8.

Table 5.8: Site Characteristics

| Characteristic | Description |
|--|--|
| Minimum Depth to Bedrock | 0.2 metres below ground surface |
| Minimum Depth to Groundwater | 50.95 masl (March 24, 2021) |
| Shallow Soil Property | Yes, bedrock is less than 2.0 mbgs |
| Proximity to water body or ANSI | Approximately 30 m – Ottawa River |
| Soil pH | Surface and sub-surface pH was within applicable ranges prior to remediation and all soil was removed during remediation |
| Soil Texture | Coarse |
| Current Property Use | Industrial |
| Future Property Use | Residential and Commercial |
| Proposed Future Building | Multi-storey residential, commercial on ground level, one or two levels of underground parking |
| Areas Containing Suspected Fill | All soil that was on the property prior to remediation was fill |

5.9.4 Utilities and Impediments

Utilities, including underground hydro, natural gas, water, and sewers, are present on Chaudière Private, part of which is included in the Phase Two property. Since the water table is within the bedrock, the presence of utilities is not expected to affect possible migration of contaminants once buildings are constructed on the Phase Two property.

A multi-storey residential building with commercial at ground level and one or two levels of underground parking is planned for construction on the Phase Two property. The post-remediation geology, as well as the potential building footprint, is shown in Figure 25.

5.9.5 Potentially Contaminating Activities

The following on-site potentially contaminating activities (PCA) were identified:

- PCA #9 – Coal Gasification (former coal storage area indicates use of coal as a source of coal gas, which was likely used as a source of heating and/or lighting at the Phase Two property);
- PCA #30 – Importation of fill material of unknown quality (fill material overlying bedrock throughout the Phase Two property);
- PCA # 45 – Pulp, paper and paperboard manufacturing and processing (historic use of the Phase Two property for industrial purposes related to lumber storage and pulp and paper);
- PCA #46 – Rail yards, tracks and spurs (former rail spurs shown in 1948 and 1956 FIP);

- PCA #Other – PCB storage (E.B. Eddy was listed in the PCB Inventory as a major PCB storage site, indicating that the site contained liquid PCB waste in quantities greater than or equal to 1,000 kilograms) and
- PCA #Other – Debris and rubble from fire of 1900 (a fire caused the destruction of every building in the Phase Two study area in 1900. Some of the debris related to the fire was used as backfilling material on the Phase Two property).

The following off-site PCA were identified:

- PCA #1 – Acid and alkali manufacturing, processing and bulk storage (three former acid storage tanks within sulphite mill and storage area on the eastern part of East Chaudière Island);
- PCA #6 – Battery manufacturing, recycling and bulk storage (battery storage area identified in the 1912 fire insurance plan on East Chaudière Island);
- PCA #18 – Electricity generation, transformation and power stations (former powerhouse to the northeast, Hydro Ottawa (and its predecessors) historically occupied the south part of East Chaudière Island for electricity generation, and power generation companies listed on Middle Street);
- PCA #28 – Gasoline and associated products storage in fixed tanks (three former AST on East Chaudière Island, six former AST on West Chaudière Island (east adjacent), two former UST on Albert Island, former diesel pumping station and bunker C UST to the north);
- PCA #34 – Metal fabrication (One or more foundries, manufacturing facilities where metal would be used as a raw material and/or blacksmith shops were listed on Victoria Island);
- PCA #39 – Paints manufacturing, processing and bulk storage (the former paint shop located in the east end of the south building on Albert Island);
- PCA #44 – Port activities, including operation and maintenance of wharves and docks (former wharf adjacent to the Ottawa River on East Chaudière Island);
- PCA #45 – Pulp, paper and paperboard manufacturing and processing (the presence a ground wood pulp mill, beater mill, and sulphite pulp mill on East Chaudière and of a pulp and paper/lumber facility on West Chaudière (paper mill, beater building, and pulp mill));
- PCA #46 – Rail yards, tracks and spurs (former rail spurs were present on the east adjacent property and on East Chaudière Island);
- PCA #55 – Transformer manufacturing, processing and use (five PCB-containing transformers present on East Chaudière Island); and
- PCA #58 – Waste disposal and waste management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners (the waste burner on the property to the adjacent northeast (in the 1912 FIP).

As Albert Island is separated from the Phase Two property by the Ottawa River, none of the off-site PCA identified on Albert Island (PCA # 39 (paint shop) and PCA #28 (two former UST)) resulted in APEC on the Phase Two property.

PCA identified on East Chaudière Island (PCA #1 (former acid storage tanks), PCA #6 (battery storage area), PCA #18 (former Hydro Ottawa facility), PCA #28 (three former AST), PCA #44 (former wharf), PCA #46 (spurs), and PCA #55 (five PCB-containing transformers)) were also determined not to result in APEC on the Phase Two property due to the separation distance and downgradient location from the Phase Two property.

The off-site PCA that were determined to result in APEC on the Phase Two property include PCA #18 (former powerhouse to the northeast), PCA #28 (former diesel pumping station and bunker C UST to the north), PCA #34 (foundries on Victoria Island), and PCA #58 (waste burner on the property to the adjacent northeast).

5.9.6 Areas of Potential Environmental Concern/Potential Contaminates of Concern

Ontario Regulation 153/04 defines an APEC as an area on a property where one or more contaminants are potentially present. The following APEC were identified on the Phase Two property, as shown on Figure 2 and Table 5.9 below:

Table 5.9: Areas of Potential Environmental Concern

| Area of Potential Environmental Concern (APEC) | Location of APEC on Phase Two Property | Potentially Contaminating Activity (PCA) | Location of PCA (On-Site or Off-Site) | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|---|---|---|---------------------------------------|---|--|
| #1. The Phase Two property was part of a pulp and paper mill | Entire Phase Two property | #45 – Pulp, Paper and Paperboard Manufacturing and Processing | On-site and Off-Site | Volatile Organic Compounds (VOC), Petroleum Hydrocarbons (PHC), Polycyclic Aromatic Hydrocarbons (PAH), Metals, Polychlorinated Biphenyls (PCB) | Soil and groundwater |
| #2. Fill material is overlying bedrock throughout the Phase Two property | Entire Phase Two property | #30 – Importation of Fill Material of Unknown Quality | On-site | Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), PHC, PAH, Metals | Soil |
| #3. Former owner, E.B. Eddy Company, was listed on the PCB inventory | Entire Phase Two property | #Other – PCB Storage | On-Site | PCB | Soil and groundwater |
| #4. A fire that occurred in 1900 destroyed all on-site buildings that existed at the time. Debris and rubble were buried on-site. | Entire Phase Two property | #Other – Debris and Rubble from Fire of 1900 | On-Site | BTEX, PHC, PAH, Metals | Soil and groundwater |
| #5. Foundries were present on Victoria Island, east of the Phase Two property | Entire Phase Two property | #34 – Metal Fabrication | Off-Site | Metals | Soil |
| #6. Former rail spurs | Central part of the Phase Two property, 10 metres on each side of former rail spurs | #46 – Rail yards, tracks and spurs | On-site | VOC, PHC, PAH, Metals, PCB | Soil and groundwater |
| #7. Former coal storage area | Northeast corner of the Phase Two property | #9 – Coal gasification | On-Site | PAH | Soil and groundwater |

| Area of Potential Environmental Concern (APEC) | Location of APEC on Phase Two Property | Potentially Contaminating Activity (PCA) | Location of PCA (On-Site or Off-Site) | Contaminants of Potential Concern | Media Potentially Impacted (Groundwater, Soil and/or Sediment) |
|--|--|--|---------------------------------------|-----------------------------------|--|
| #8. Former bunker C UST and diesel pumping station on the adjacent property to the north | North part of Phase Two property | #28 – Gasoline and Associated Products Storage in Fixed Tanks | Off-Site | PHC, BTEX, PAH, Metals, PCB | Groundwater |
| #9. Coal fired power generation, adjacent property to the northeast | Northeast part of the Phase Two property | #18 – Electricity generation, transformation and power stations | Off-Site | VOC, PHC, PAH | Groundwater |
| #10. Former waste burner located south of a building to the northeast | North part of the Phase Two property | #58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners | Off-Site | PHC, PAH, Metals, PCB | Groundwater |

5.9.7 Investigation

The site investigative activities consisted of the drilling of boreholes to facilitate the collection of soil samples for visual inspection and chemical analysis. The boreholes were instrumented with monitoring wells to facilitate the collection of groundwater samples.

Prior to the commencement of drilling, the locations of underground public utilities including telephone, natural gas and electrical lines were marked at the subject property by public locating companies. A private utility locating contractor was also retained to clear the individual borehole locations.

In March 2019, the Phase Two property owner retained Tomlinson Development Corporation to install utilities (water, sewer, gas, hydro) for future development along Chaudière Private (formerly Perley Street). From March 5 to 25, 2019, EXP observed excavation activities and took soil samples for characterization of the utility trench which ran along the north boundary of the Phase Two property. Beneath the concrete sidewalk and asphalt roadway, sand and gravel fill material was present to a depth of approximately 0.6 metres below ground surface (m bgs). Bedrock was present at a depth of approximately 0.2 to 1.5 metres below ground surface (m bgs). Granular material, which was comprised of material that had particles larger than 2 mm, was present from a depth of 0.6 m bgs to bedrock. The total depth of the utility excavation was 2.4 m bgs. All excavated material was temporarily stockpiled on East Chaudière Island and was subsequently disposed of off-site in 2019. The utility trench was backfilled with material that was larger than 2 mm in diameter.

A pre-remedial drilling program was conducted to investigate the soil quality on the Phase Two property. The pre-remedial drilling program was completed March 15 and 16, 2021 by George Downing Estate Drillings (Downing), a licensed well contractor. Downing advanced five boreholes (MW21-01 to MW21-05) across the Phase Two property, using a CME-75 truck mounted drill. Boreholes were augured to refusal, then cored to depth. All of the boreholes were completed as monitoring wells.

The pre-remediation monitoring wells were decommissioned in accordance with Regulation 903. On March 26, 2021, five monitoring wells (BH/MW21-01 to BH/MW21-05) were decommissioned by using the pressure-grout method by Downing.

The 2021 remedial excavation program included excavating and stockpiling impacted soil for off-site disposal. The remedial excavation extended to the utility trench, from which all soil was removed in 2019, and extended horizontally beyond the property boundaries in all other directions and vertically to bedrock surface. With the exception of the soil at the northern property boundary, as described above, all soil was removed from the Phase Two property.

This remediation program commenced on March 29, 2021 and concluded on May 18, 2021. Excavation GTS was retained by the Phase Two property owner to complete the remedial excavation. Soil excavation and removal activities occurred over five days during this period, including March 29 to 31 and May 17 and 18. No soil was brought to the Phase Two property, as the excavation was backfilled with materials that were larger than 2 mm in diameter.

Approximately 2,431.87 tonnes of impacted soil and granular material were excavated and removed from the north part of the Phase Two property in 2019. This soil was temporarily stockpiled on East Chaudière Island and was disposed off-site in conjunction with remedial activities that occurred at 125 Zaida Eddy Private (RSC 228673). In conjunction with 2021 remedial activities, approximately 3,720.67 tonnes of impacted soil and 30.5 tonnes of impacted concrete were removed by excavation from the Phase Two property. All soil, concrete, and granular materials were disposed of as non-hazardous waste at the City of Ottawa Trail Road facility.

The post-remedial drilling investigation was conducted on April 28, 2021 by Downing. Downing advanced three boreholes (BH/MW21-01 to BH/MW21-03) on the Phase Two property, using a CME-75 truck mount drill. The boreholes were installed at depths between 6.1 and 6.7 mbgs. All soil was removed from the Phase Two property during the remediation program and all the boreholes were cored through bedrock. At the time of drilling, ground surface in the area of the monitoring wells consisted of bedrock surface, however $\frac{3}{4}$ inch stone was subsequently brought to the property.

5.9.8 Soil Sampling

Soil samples were selected for laboratory analysis based on combustible vapour measurements and visual and olfactory evidence of impacts, where observed. Soil samples identified for possible laboratory analysis were placed directly into pre-cleaned, laboratory-supplied glass sample jars/vials. Samples to be analysed for PHC fraction F1 and BTEX were collected using a soil core sampler and placed into vials containing methanol as a preservative. The jars and vials were sealed with Teflon-lined lids to minimize headspace and reduce the potential for induced volatilization during storage/transport prior to analysis. All soil samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, Paracel Laboratories Ltd. (Paracel) of Ottawa, Ontario.

Ten soil samples and one field duplicate were collected from the north wall of the utilities trench in 2019 and during the pre-remedial drilling investigation in 2021 and submitted to Paracel for analysis of PHC fractions F1 to F4, VOC, PAH, PCB and inorganics. Two soil samples were submitted for analysis of pH.

Soil samples collected during the pre-remediation drilling program exceeded the Table 7 and/or Table 9 SCS for VOC, PHC, PAH, and/or inorganic parameters. All of these samples were within the Table 7 and Table 9 SCS for PCB. The pH samples were within the applicable ranges for surface and subsurface soils. The pre-remediation drilling results are shown in plan view on Figures 7 to 9 and on cross-sections on Figures 10 to 12. All soil (except for the soil located on the north property line) was removed from the Phase Two property, so these samples are not representative of post-remediation site conditions.

None of the soil samples collected from the north wall of the utility trench exceeded the applicable Table 7 or Table 9 SCS. Analytical results are shown in plan view on Figures 19 to 21 and on cross-sections on Figures 22 to 24.

With the exception of the soil along the north wall of the services excavation on Chaudière Private, all soil was removed from the Phase Two property. Therefore, no post-remedial soil analysis was required.

5.9.9 Groundwater Sampling

All groundwater samples were collected via a low flow sampling technique using a YSI 550 multi probe water quality meter. The YSI probe was calibrated using in-house reference standards. Prior to collecting the groundwater samples, water quality

field parameters (turbidity, dissolved oxygen, conductivity, temperature, pH, and oxidation reduction potential) were monitored until stable readings were achieved to ensure that the samples collected were representative of actual groundwater conditions.

The groundwater samples were placed in clean coolers containing ice packs prior to and during transportation to the laboratory. The samples were transported to the laboratory within 24 hours of collection with a chain of custody.

Prior to remediation, five groundwater samples, one field duplicate, one field blank, and one trip blank were submitted for chemical analysis of PHC, VOC, PAH, PCB, and/or inorganic parameters. No groundwater sample was submitted for metals analysis from BH/MW21-02 as there was insufficient sample volume for analysis of all parameters.

There were no exceedances of the MECP Table 9 or Table 7 SCS for PHC, PCB, and inorganic parameter groups. However, the sample collected from BH/MW21-04 exceeded the Table 7 and Table 9 SCS for chloroform. This monitoring well was installed within the limestone bedrock. To facilitate drilling at this location, municipal water was used to cool the drill bits. Chloroform is generated at municipal water treatment plants when chlorine is used to kill bacteria in the water. In accordance with Regulation 153/04 it is the opinion of the Qualified Person that the source of chloroform in this monitoring well, which was sampled nine days after its installation, is the municipal water. Therefore, in accordance with Section 49.1 of Regulation 153/04, chloroform is not considered to exceed the SCS. Analytical results are shown in plan view on Figures 13 to 15 and on cross-sections on Figures 16 to 18.

Two post-remedial groundwater sampling events were conducted. The first event was conducted on August 23 and 31 and September 14, 2021, and the second event was conducted on December 21 and 22, 2021 and January 6, 12, 19, and February 16, 2022. Several days were required for each event because of the slow recovery of the monitoring wells and because they were covered with snow. During each event, three groundwater samples, one field duplicate, one field blank, and one trip blank were submitted for chemical analysis of PHC, VOC, PAH, PCB, inorganic parameters. All post-remediation groundwater samples were within the applicable Table 7 and Table 9 SCS. Analytical results are shown in plan view on Figures 26 to 28 and on cross-sections on Figures 29 to 31.

5.9.10 Contaminants of Concern

Prior to remediation, all soil on site was determined to be contaminated. No contaminated groundwater was encountered. Contaminants that exceeded the applicable standards included:

Soil: PHC fractions F2 to F4, benzene, ethylbenzene, xylenes, acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[k]fluoranthene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-cd]pyrene, 1- & 2- methyl-naphthalene, naphthalene, phenanthrene, pyrene, antimony, arsenic, barium, copper, lead, mercury, molybdenum, selenium, and thallium.

Groundwater: None.

Post-remediation, no soil or groundwater samples exceeded the Table 7 and Table 9 SCS. Maximum soil concentrations are representative of the wall samples from the utilities excavation on Chaudière Private completed in 2019. No other soil is present on the Phase Two property.

5.9.11 Contaminant Fate and Transport

A variety of physical, chemical and biochemical mechanisms affect the fate and transport of the potential COC in soil and groundwater, the contribution of which is dependent on the soil and groundwater conditions at the Phase Two property, as well as the chemical/physical properties of the COC. Relevant fate and transport mechanisms are natural attenuation mechanisms, including advection mixing, mechanical dispersion/molecular diffusion, phase partitions (i.e. sorption and volatilization), and possibly abiotic or biotic chemical reactions, which effectively reduce COC concentrations.

Prior to remediation, all soil on site was determined to be contaminated, as PHC fractions F2 to F4, BTEX, PAH, and metals exceeded the applicable Table 7 and/or Table 9 SCS. There were no pre-remediation groundwater exceedances.

A building with one or two levels of underground parking, ground floor retail, and upper floor residential use is planned to be constructed. The potential on-site human receptors include indoor and outdoor long-term workers, indoor and outdoor short-term workers, residents on upper floors (adult, teen, child, toddler and infant), property visitors (adult, teen, child, toddler and infant), and construction workers. Since all pre-remediation groundwater samples were within the Table 7 and Table 9 SCS, neither groundwater dermal contact nor groundwater ingestion were deemed to be potential exposure pathways for any of the potential on-site human receptors.

The potential on-site exposure pathways for the construction workers are incidental soil ingestion, soil particulate inhalation, soil dermal contact, ambient vapour inhalation, and vapour skin contact.

The potential on-site exposure pathways for the short-term and long-term outdoor workers (who are not exposed directly to subsurface soil and groundwater) are incidental surface soil ingestion, surface soil particulate inhalation, surface soil dermal contact, ambient air inhalation, and vapour skin contact.

The potential on-site exposure pathway for the property residents, the long-term indoor workers and visitors is indoor air inhalation.

A diagram identifying the release mechanisms, contaminant transport pathway, human receptors, exposure points and routes of exposure are shown on Figure 32.

While the footprint of the building that is being planned will occupy most of the Phase Two property, there will be a landscaped area surrounding the building. Therefore, The Phase Two property is capable of supporting some ecological receptors. Relevant ecological receptors include terrestrial vegetation (bushes, grasses and weeds); soil invertebrates (earthworms, millipedes and beetles); birds (seagulls, pigeons, sparrows and robins); and small terrestrial mammals (moles, voles, and mice). Since all pre-remediation groundwater samples were within the Table 7 and Table 9 SCS, groundwater root uptake, groundwater dermal contact, and incidental ingestion of groundwater were not deemed to be potential exposure pathways for any of the potential on-site ecological receptors.

The potential on-site exposure pathways for terrestrial vegetation are root uptake of soil and stem and foliar uptake of vapours from soil.

The potential on-site exposure pathways for soil invertebrates are soil particulate inhalation, soil dermal contact, soil ingestion, and vapour inhalation, and plant and animal tissue ingestion.

The potential on-site exposure pathways for mammals and birds are soil particulate inhalation, soil dermal contact, soil ingestion, vapour inhalation, and plant and animal tissue ingestion.

A diagram identifying the release mechanisms, contaminant transport pathway, ecological receptors, exposure points and routes of exposure are shown on Figure 33.

During the remediation program, all soil was removed from the Phase Two property. All confirmatory groundwater samples were within the applicable Table 7 and Table 9 SCS. Therefore, there are no longer any potential human health or ecological receptors and exposure pathways.

6.0 Conclusion

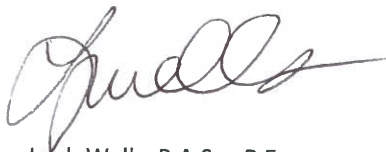
During the current investigation, the soil and groundwater quality at the Phase Two property were investigated. The investigation included a pre- and post-remedial soil and groundwater sampling program. Results were compared to Regulation 153/04 Table 7 and Table 9 standards for residential/parkland/institutional property use and coarse textured soils in a non-potable groundwater condition.

Approximately 2,431.87 tonnes of impacted soil and granular material were excavated and removed from the north part of the Phase Two property in 2019. This soil was temporarily stockpiled on East Chaudière Island and was disposed off-site in conjunction with remedial activities that occurred at 125 Zaida Eddy Private (RSC 228673). In conjunction with 2021 remedial activities, approximately 3,720.67 tonnes of impacted soil and 30.5 tonnes of impacted concrete were removed by excavation from the Phase Two property. All soil, concrete, and granular materials were disposed of as non-hazardous waste at the City of Ottawa Trail Road facility.

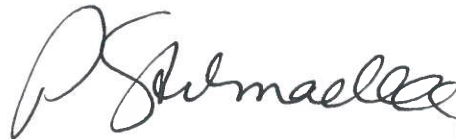
A building with one or two levels of underground parking, ground floor commercial, and upper-level residential units will be constructed on the Phase Two property. Services associated with future site development have been installed on the Phase Two property. All backfill material brought to the Phase Two property consisted of particles that were larger than 2 mm in diameter.

During the remediation program, all soil was removed from the Phase Two property except for soil that is still present along the north wall of a utility trench adjacent to Chaudière Private. All confirmatory groundwater samples were within the applicable Table 7 and Table 9 SCS. Therefore, there are no longer any potential human health or ecological receptors and exposure pathways. Further, no additional remedial activities are deemed to be warranted.

The Qualified Person can confirm that the Phase Two Environmental Site Assessment was conducted per the requirements of Ontario Regulation 153/04, as amended, and in accordance with generally accepted professional practices.



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 Environmental Engineer
 Earth and Environment



Patricia Stelmack, M.Sc., P.Eng.
 Team Lead/Senior Project Manager
 Earth and Environment



7.0 References

This study was conducted in accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives. Specific reference is made to the following documents.

- EXP Services Inc., *Phase One Environmental Site Assessment, 315 and 300 Miwàte Private and 505 Chaudière Private, Ottawa, Ontario, April 1, 2022.*
- EXP Services Inc., *Soil Sampling Program, Perley Street Excavation, Chaudière Island, 4 Booth Street, Ottawa, Ontario, June 3, 2019*
- EXP Services Inc., *Phase One Environmental Site Assessment, 125 Zaida Eddy Private, Ottawa, Ontario, November 19, 2019.*
- EXP Services Inc., *Phase Two Environmental Site Assessment, 125 Zaida Eddy Private, Ottawa, Ontario, December 11, 2020.*
- Freeze and Cherry, *Groundwater*, Prentice Hall, 1979.
- Ontario Ministry of the Environment, Conservation and Parks, *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, December 1996.
- Ontario Ministry of the Environment, Conservation and Parks, *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, April 15, 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04*, June 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*, July 1, 2011.
- Ontario Ministry of the Environment, Conservation and Parks, *Management of Excess Soil – A Guide for Best Management Practices*, January 2014.
- Ontario Regulation 153/04, made under the *Environmental Protection Act*, as amended.
- Ontario R.R.O. 1990, Regulation 347, made under the *Environmental Protection Act*, as amended.
- Ontario R.R.O. 1990, Regulation 903, made under the *Water Resources Act*, as amended.

8.0 General Limitations

Basis of Report

This report ("Report") is based on site conditions known or inferred by the investigation undertaken as of the date of the Report. Should changes occur which potentially impact the condition of the site the recommendations of EXP may require re-evaluation. Where special concerns exist, or Windmill Dream Zibi Ontario Inc. ("the Client") has special considerations or requirements, these should be disclosed to EXP to allow for additional or special investigations to be undertaken not otherwise within the scope of investigation conducted for the purpose of the Report.

Reliance on Information Provided

The evaluation and conclusions contained in the Report are based on conditions in evidence at the time of site inspections and information provided to EXP by the Client and others. The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose as communicated by the Client. EXP has relied in good faith upon such representations, information and instructions and accepts no responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of any misstatements, omissions, misrepresentation or fraudulent acts of persons providing information. Unless specifically stated otherwise, the applicability and reliability of the findings, recommendations, suggestions or opinions expressed in the Report are only valid to the extent that there has been no material alteration to or variation from any of the information provided to exp. If new information about the environmental conditions at the Site is found, the information should be provided to EXP so that it can be reviewed and revisions to the conclusions and/or recommendations can be made, if warranted.

Standard of Care

The Report has been prepared in a manner consistent with the degree of care and skill exercised by engineering consultants currently practicing under similar circumstances and locale. No other warranty, expressed or implied, is made. Unless specifically stated otherwise, the Report does not contain environmental consulting advice.

Complete Report

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment form part of the Report. This material includes, but is not limited to, the terms of reference given to EXP by the Client, communications between EXP and the Client, other reports, proposals or documents prepared by EXP for the Client in connection with the site described in the Report. In order to properly understand the suggestions, recommendations and opinions expressed in the Report, reference must be made to the Report in its entirety. EXP is not responsible for use by any party of portions of the Report.

Use of Report

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. No other party may use or rely upon the Report in whole or in part without the written consent of EXP. Any use of the Report, or any portion of the Report, by a third party are the sole responsibility of such third party. EXP is not responsible for damages suffered by any third party resulting from unauthorised use of the Report.

Report Format

Where EXP has submitted both electronic file and a hard copy of the Report, or any document forming part of the Report, only the signed and sealed hard copy shall be the original documents for record and working purposes. In the event of a dispute or discrepancy, the hard copy shall govern. Electronic files transmitted by EXP utilize specific software and hardware systems. EXP makes no representation about the compatibility of these files with the Client's current or future software and hardware systems. Regardless of format, the documents described herein are EXP's instruments of professional service and shall not be altered without the written consent of EXP.

EXP Services Inc.

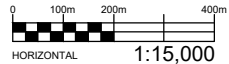
*Windmill Dream Zibi Ontario Inc.
Phase Two Environmental Site Assessment
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0
April 20, 2022*

Appendix A: Figures

Filename: \\exp_data\OTT\00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
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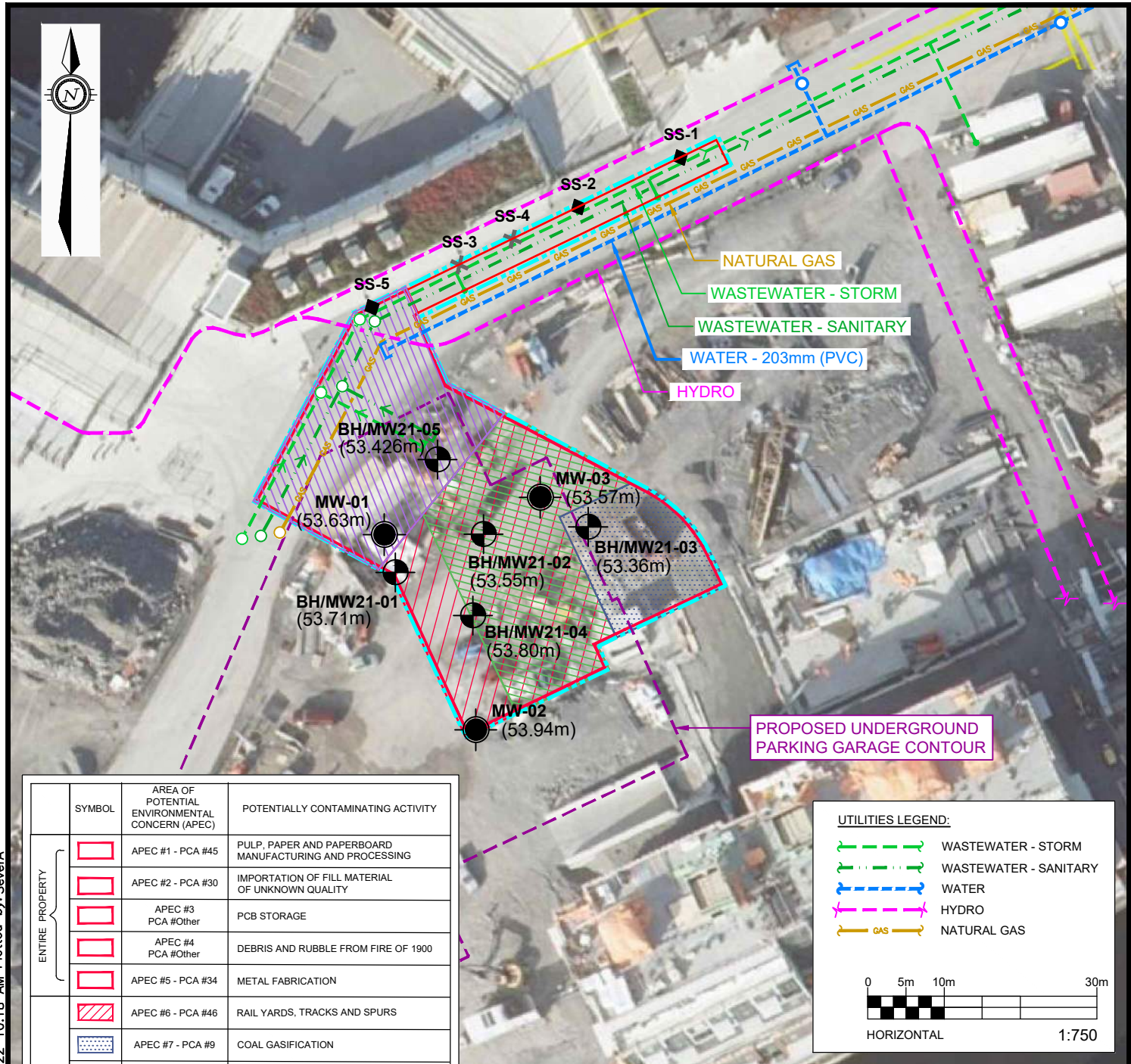
APPROXIMATE SITE LOCATION



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| DATE APRIL 2022 | | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | TITLE: SITE LOCATION PLAN | | scale ~1:15,000 |
| DRAWN BY AS | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO | | FIG 1 |

Filename: \\exp_data\OTT\OTT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
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| | SYMBOL | AREA OF POTENTIAL ENVIRONMENTAL CONCERN (APEC) | POTENTIALLY CONTAMINATING ACTIVITY |
|-----------------|--------|--|---|
| ENTIRE PROPERTY | | APEC #1 - PCA #45 | PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING |
| | | APEC #2 - PCA #30 | IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY |
| | | APEC #3 PCA #Other | PCB STORAGE |
| | | APEC #4 PCA #Other | DEBRIS AND RUBBLE FROM FIRE OF 1900 |
| | | APEC #5 - PCA #34 | METAL FABRICATION |
| | | APEC #6 - PCA #46 | RAIL YARDS, TRACKS AND SPURS |
| | | APEC #7 - PCA #9 | COAL GASIFICATION |
| | | APEC #8 - PCA #28 | GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS |
| | | APEC #9 - PCA #28 | GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS |
| | | APEC #10 - PCA #18 | ELECTRICITY GENERATION, TRANSFORMATION AND POWER STATIONS |
| | | APEC #11 - PCA #58 | WASTE DISPOSAL (THERMAL TREATMENT) |
| | | APEC #12 - PCA #28 | GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS |

UTILITIES LEGEND:

- WASTEWATER - STORM
- WASTEWATER - SANITARY
- WATER
- HYDRO
- NATURAL GAS

0 5m 10m 30m
 HORIZONTAL 1:750

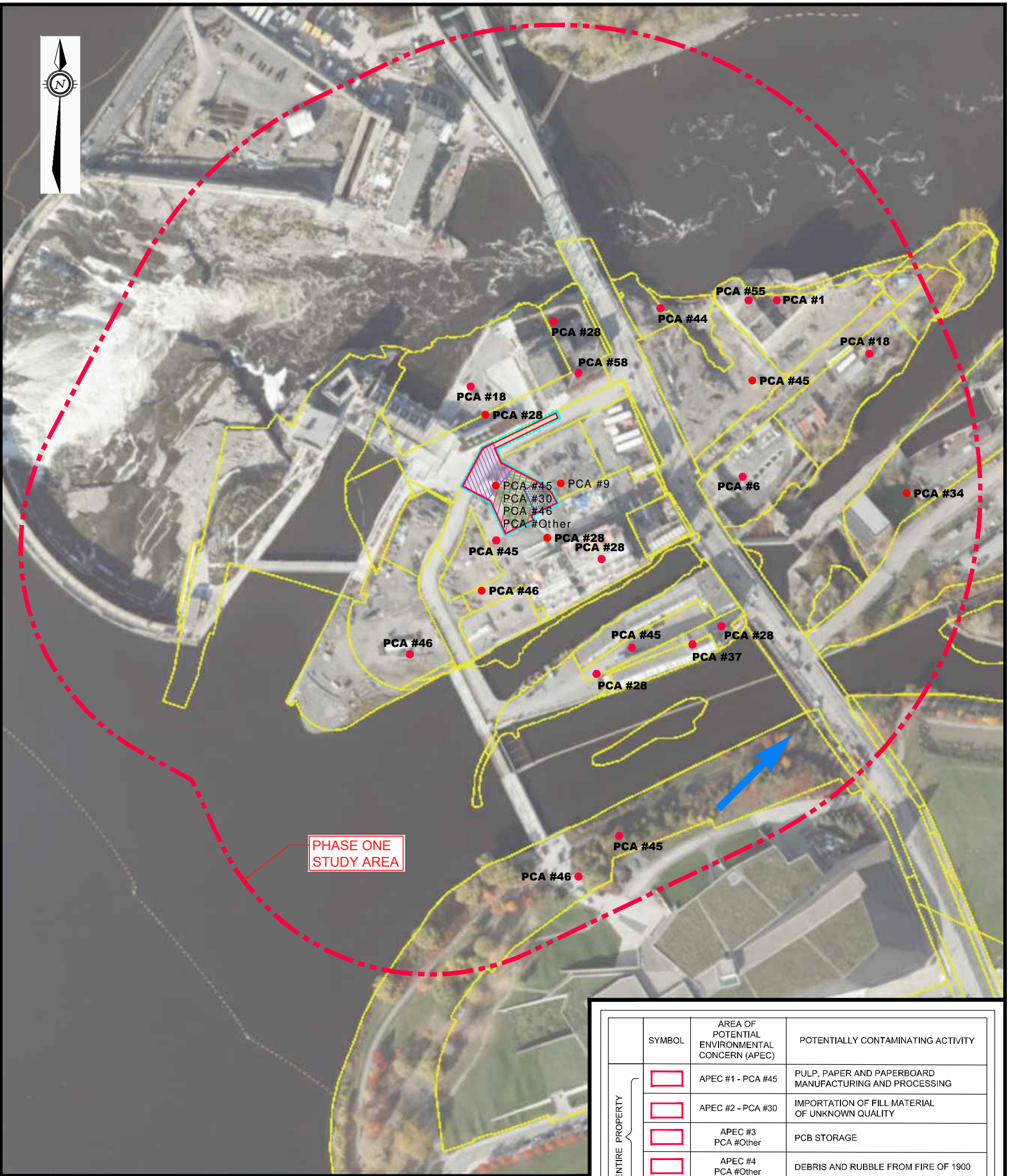
LEGEND

- PROPERTY BOUNDARY
- BH/MW21-01** (53.71m) PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)
- MW-01** (53.63m) POST-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)
- NORTH WALL EXCAVATION SAMPLES: CONFIRMATORY SOIL SAMPLE (SUBMITTED)
- SOIL SAMPLE NOT SUBMITTED

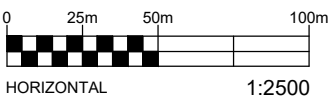


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| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: SITE PLAN 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 2 |



PHASE ONE STUDY AREA



| | SYMBOL | AREA OF POTENTIAL ENVIRONMENTAL CONCERN (APEC) | POTENTIALLY CONTAMINATING ACTIVITY |
|-----------------|--------|--|---|
| ENTIRE PROPERTY | | APEC #1 - PCA #45 | PULP, PAPER AND PAPERBOARD MANUFACTURING AND PROCESSING |
| | | APEC #2 - PCA #30 | IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY |
| | | APEC #3 PCA #Other | PCB STORAGE |
| | | APEC #4 PCA #Other | DEBRIS AND RUBBLE FROM FIRE OF 1900 |
| | | APEC #5 - PCA #34 | METAL FABRICATION |
| | | APEC #6 - PCA #46 | RAIL YARDS, TRACKS AND SPURS |
| | | APEC #7 - PCA #9 | COAL GASIFICATION |
| | | APEC #8 - PCA #28 | GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS |
| | | APEC #9 - PCA #28 | GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS |
| | | APEC #10 - PCA #18 | ELECTRICITY GENERATION, TRANSFORMATION AND POWER STATIONS |
| | | APEC #11 - PCA #58 | WASTE DISPOSAL (THERMAL TREATMENT) |
| | | APEC #12 - PCA #28 | GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS |

LEGEND

- PROPERTY BOUNDARY
- STUDY AREA (250m)
- INFERRED GROUNDWATER FLOW DIRECTION
- PCA #28 POTENTIALLY CONTAMINATING ACTIVITY (PCA)



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| DESIGN LW | CHECKED PS | scale 1:2,500 |
| DRAWN BY AS | TITLE: CONCEPTUAL SITE MODEL - PHASE TWO STUDY AREA 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 3 |

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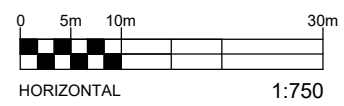
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LEGEND

- PROPERTY BOUNDARY
- INFERRED GROUNDWATER FLOW DIRECTION
- PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)

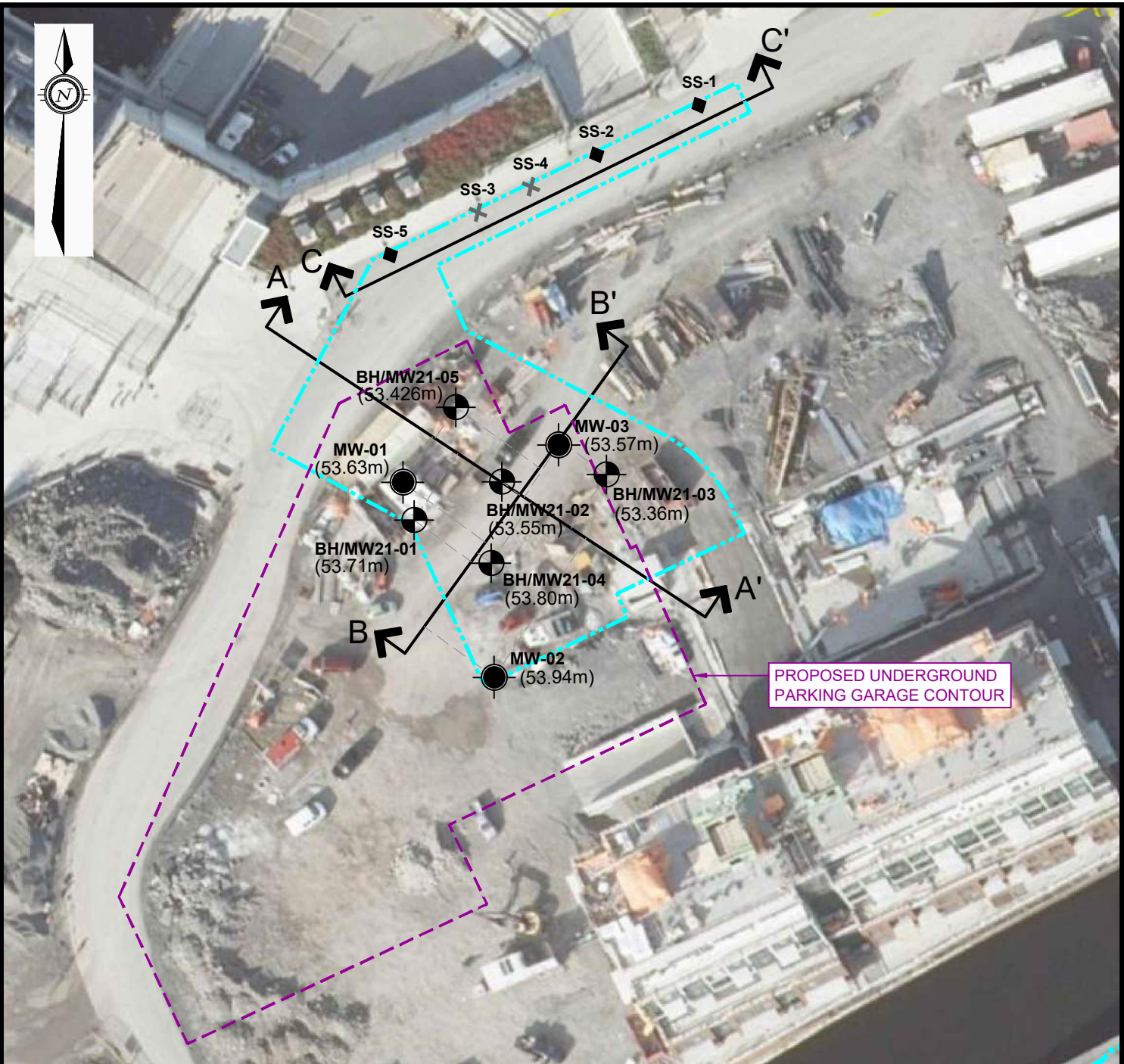
BH/MW21-01
(50.31m)





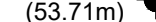


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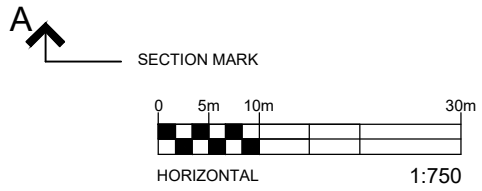
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| LW | PS | | | | 1:750 |
| DRAWN BY | AS | | | | FIG 4 |

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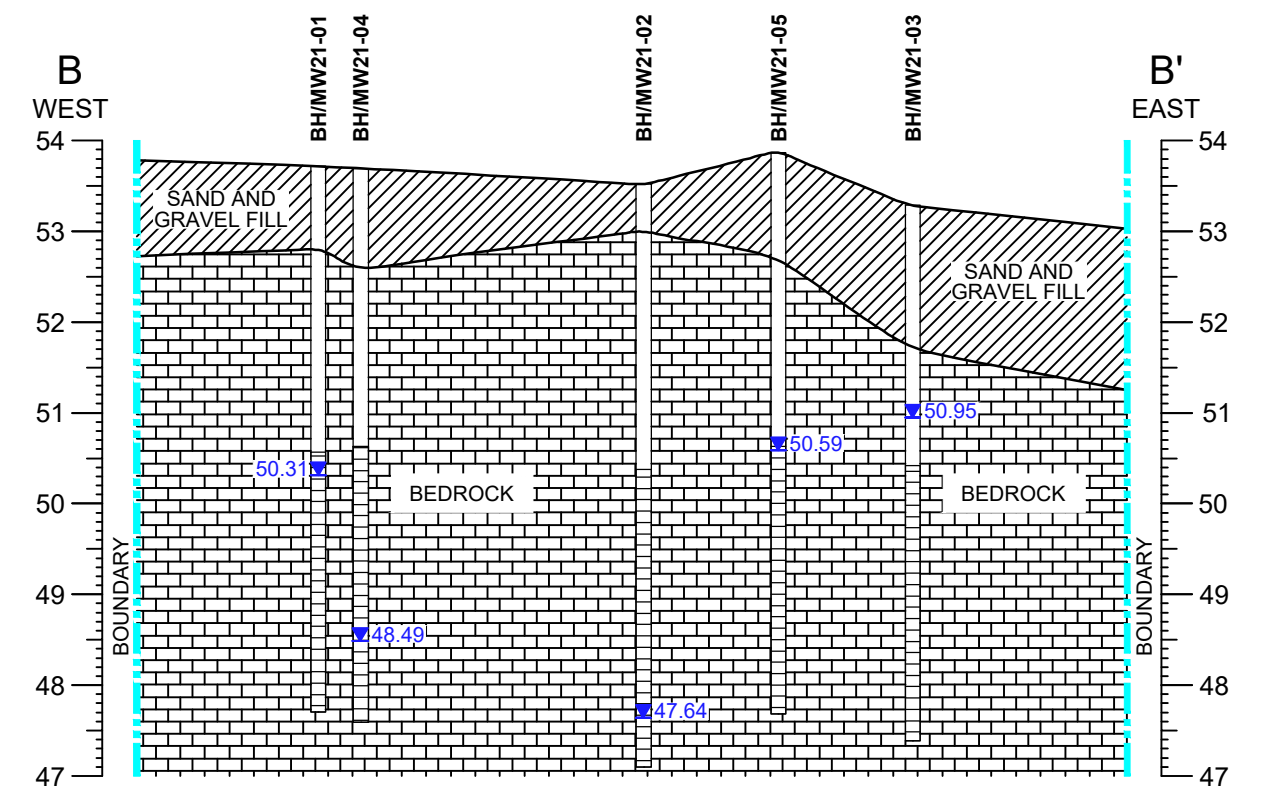
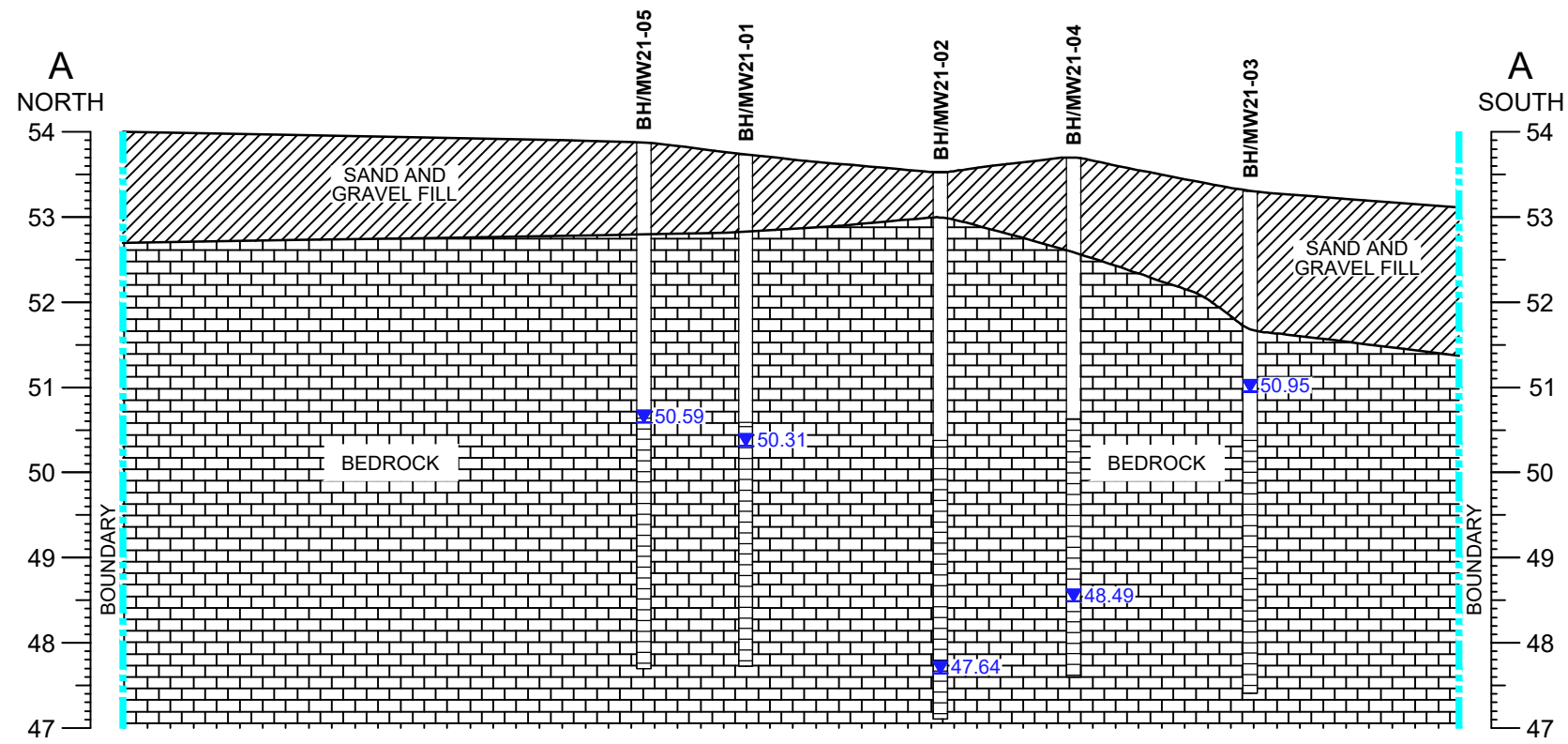
-  PROPERTY BOUNDARY
-  PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)
-  POST-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)
-  NORTH WALL EXCAVATION SAMPLES: CONFIRMATORY SOIL SAMPLE (SUBMITTED)
-  SOIL SAMPLE NOT SUBMITTED



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| DATE APRIL 2022 | | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | TITLE: CROSS SECTION PLAN | | scale 1:750 |
| DRAWN BY AS | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO | | FIG 5 |

File name: \\exp\data\OTT\011-00250193-NO\60_Execution\65_Drawings\250193-P0_Drawings\ph2\250193-P0 Drawings\ph2 Sections.dwg
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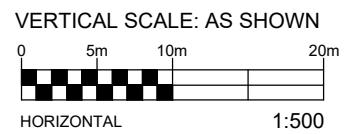
CROSS SECTION A-A'

CROSS SECTION B-B'

LEGEND

- SAND & GRAVEL FILL
- BEDROCK

GROUNDWATER LEVEL FROM MARCH 24, 2021



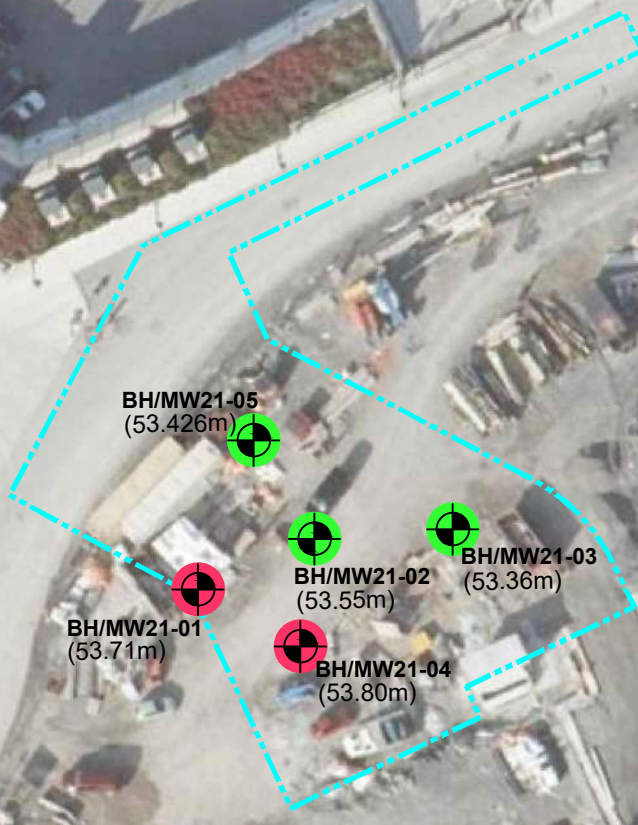
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| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:500 |
| DRAWN BY TM / AS | TITLE: CROSS SECTIONS A-A' AND B-B' (PRE-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 6 |

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BOTH STREET



| PARAMETERS | ABBREVIATION | REG 153/04 | REG 153/04 |
|----------------------------|--------------|---------------------|---------------------|
| | | TABLE 9 STANDARD | TABLE 7 STANDARD |
| Benzene | B | 0.02 | 0.21 |
| Toluene | T | 0.2 | 2.3 |
| Ethylbenzene | E | 0.05 | 2 |
| Total Xylenes | X | 0.05 | 3.1 |
| F1 | F1 (C6-C10) | 25 | 55 |
| F2 | F2 (C10-C16) | 10 | 98 |
| F3 | F3 (C16-C34) | 240 | 300 |
| F4 | F4 (C34-C50) | 120 | 2800 |
| 1,1-Dichloroethane | 1,1-DCA | 0.05 | 3.5 |
| 1,2-Dichloroethane | 1,2-DCA | 0.05 | 0.05 |
| 1,1-Dichloroethylene | 1,1-DCE | 0.05 | 0.05 |
| Cis-1,2-Dichloroethylene | c-1,2-DCE | 0.05 | 3.4 |
| Trans-1,2-Dichloroethylene | t-1,2-DCE | 0.05 | 0.084 |
| Styrene | ST | 0.05 | 0.7 |
| Tetrachloroethylene | PCE | 0.05 | 0.28 |
| Trichloroethylene | TCE | 0.05 | 0.061 |
| Vinyl Chloride | VC | 0.02 | 0.02 |

| BH/MW21-01 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|------|------|------|--------|--------|-----|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | 0.78 | 0.93 | 0.11 | 0.79 | ND (7) | ND (4) | 623 | 1370 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |

| BH/MW21-02 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|-----------|-----------|-----------|--------|--------|----|----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 50 | 36 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |

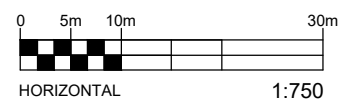
| BH/MW21-03 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
|------------------|--------------|-----------|-----------|-----------|-----------|--------|--------|----|----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 46 | 28 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| D206 (Duplicate) | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 56 | 34 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| 02 | 0.6 to 1.2 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 38 | 34 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |

| BH/MW21-04 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|-----------|-----------|-----------|--------|-----|-----|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | 121 | 293 | 746 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| 02 | 0.6 to 0.8 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | 61 | 315 | 681 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |

| BH/MW21-05 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|-----------|-----------|-----------|--------|-----|----|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | 149 | 94 | 102 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |

LEGEND

- PROPERTY BOUNDARY
- SOIL CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)



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| | | |
|---------------------------|---|---------------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: SOIL ANALYTICAL RESULTS - PHC & VOC (PRE-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 7 |

Filename: \\exp\data\OTT\OTT-00250193-NO\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:18 AM Plotted by: Severa



BOTH STREET

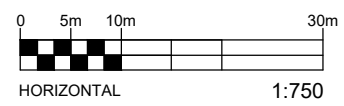


| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|-------------------------|--------------|------------------------------|------------------------------|
| Acenaphthene | Ace | 0.072 | 7.9 |
| Acenaphthylene | AcI | 0.093 | 0.15 |
| Anthracene | An | 0.22 | 0.67 |
| Benzo(a)anthracene | B(a)A | 0.36 | 0.5 |
| Benzo(a)pyrene | B(a)P | 0.3 | 0.3 |
| Benzo(b)fluoranthene | B(b)F | 0.47 | 0.78 |
| Benzo(g,h,i)perylene | B(ghi)P | 0.68 | 6.6 |
| Benzo(k)fluoranthene | B(k)F | 0.48 | 0.78 |
| Chrysene | C | 2.8 | 7 |
| Dibenzo(a,h)anthracene | DA | 0.1 | 0.1 |
| Fluoranthene | Fl | 0.69 | 0.69 |
| Fluorene | F | 0.19 | 62 |
| Indeno(1,2,3-cd)pyrene | I(123)P | 0.23 | 0.38 |
| Total Methylnaphthalene | T-MN | 0.59 | 0.99 |
| Naphthalene | N | 0.09 | 0.6 |
| Phenanthrene | P | 0.69 | 6.2 |
| Pyrene | Py | 1 | 78 |
| Total PCBs | PCB | 0.3 | 0.35 |

| BH/MW21-01 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
|------------------|--------------|-----------|------------|-----------|-------|-------|-------|---------|-------|------|-----------|------|-----------|---------|-----------|------|------|------|------|------|-----------|
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | 1-MN | 2-MN | T-MN | N | P | Py | PCB |
| 01 | 0.0 to 0.6 | 0.10 | 0.09 | 0.21 | 0.72 | 0.42 | 0.65 | 0.33 | 0.31 | 0.49 | 0.08 | 0.74 | 0.13 | 0.25 | 2.72 | 4.34 | 7.05 | 1.94 | 1.19 | 0.86 | ND (0.05) |
| BH/MW21-02 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | 1-MN | 2-MN | T-MN | N | P | Py | PCB |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.02) | ND (0.02) | 0.03 | 0.04 | 0.05 | 0.03 | 0.02 | 0.04 | ND (0.02) | 0.06 | ND (0.02) | 0.02 | 0.06 | 0.11 | 0.17 | 0.05 | 0.06 | 0.05 | ND (0.05) |
| BH/MW21-03 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | 1-MN | 2-MN | T-MN | N | P | Py | PCB |
| | | 01 | 0.0 to 0.6 | 0.11 | 0.07 | 0.47 | 1.02 | 0.88 | 0.82 | 0.48 | 0.45 | 0.83 | 0.13 | 1.88 | 0.19 | 0.47 | 0.06 | 0.13 | 0.19 | 0.21 | 1.75 |
| D206 (Duplicate) | 0.0 to 0.6 | 0.21 | 0.12 | 0.83 | 1.35 | 1.16 | 1.31 | 0.62 | 0.74 | 1.28 | 0.19 | 3.25 | 0.3 | 0.64 | 0.14 | 0.2 | 0.34 | 0.33 | 2.78 | 2.53 | 0.14 |
| 02 | 0.6 to 1.2 | 0.05 | 0.02 | 0.17 | 0.30 | 0.32 | 0.31 | 0.17 | 0.15 | 0.32 | 0.05 | 0.63 | 0.07 | 0.16 | 0.04 | 0.06 | 0.10 | 0.10 | 0.65 | 0.50 | ND (0.05) |
| BH/MW21-04 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | 1-MN | 2-MN | T-MN | N | P | Py | PCB |
| | | 01 | 0.0 to 0.6 | 0.03 | 0.05 | 0.07 | 0.18 | 0.19 | 0.22 | 0.12 | 0.11 | 0.17 | 0.03 | 0.36 | 0.03 | 0.11 | 0.06 | 0.10 | 0.17 | 0.04 | 0.24 |
| 02 | 0.6 to 0.8 | 0.02 | 0.06 | 0.11 | 0.31 | 0.26 | 0.39 | 0.20 | 0.16 | 0.31 | 0.05 | 0.43 | 0.06 | 0.19 | 0.93 | 1.36 | 2.29 | 1.00 | 0.65 | 0.42 | ND (0.05) |
| BH/MW21-05 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | 1-MN | 2-MN | T-MN | N | P | Py | PCB |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.02) | ND (0.02) | 0.06 | 0.07 | 0.08 | 0.06 | 0.04 | 0.06 | ND (0.02) | 0.09 | ND (0.02) | 0.04 | ND (0.02) | 0.04 | 0.06 | 0.03 | 0.07 | 0.09 | ND (0.05) |

LEGEND

- PROPERTY BOUNDARY
- SOIL CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)



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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

| | | |
|---------------------------|---|---------------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: SOIL ANALYTICAL RESULTS - PAH & PCB (PRE-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 8 |

Filename: \\exp\data\OTT\OTT-00250193-NO\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:19 AM Plotted by: Severa



BOTH STREET



| PARAMETERS | ABBREVIATION | REG 153/04 | REG 153/04 |
|-------------|--------------|-------------------|-------------------|
| | | TABLE 9 STANDARDS | TABLE 7 STANDARDS |
| Antimony | Sb | 1.3 | 7.5 |
| Arsenic | As | 18 | 18 |
| Barium | Ba | 220 | 390 |
| Beryllium | Be | 2.5 | 4 |
| Boron | B | 36 | 120 |
| Cadmium | Cd | 1.2 | 1.2 |
| Chromium | Cr | 70 | 160 |
| Chromium VI | Cr VI | 0.66 | 8 |
| Cobalt | Co | 22 | 22 |
| Copper | Cu | 92 | 140 |
| Lead | Pb | 120 | 120 |
| Mercury | Hg | 0.27 | 0.27 |
| Molybdenum | Mo | 2 | 6.9 |
| Nickel | Ni | 82 | 100 |
| Selenium | Se | 1.5 | 2.4 |
| Silver | Ag | 0.5 | 20 |
| Thallium | Tl | 1 | 1 |
| Uranium | U | 2.5 | 23 |
| Vanadium | V | 86 | 86 |
| Zinc | Zn | 290 | 340 |

| BH/MW21-01 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|-----|-----|-----|------|-----|------|----------|------|-----|-----|-----|------|------|-----|-----|-----|----------|------|-----|
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.1 to 0.7 | 3.8 | 134 | 420 | 1.1 | 16.7 | 0.8 | 26.2 | ND (0.2) | 10.0 | 121 | 218 | 0.6 | 13.5 | 37.4 | 2.6 | 0.3 | 1.7 | ND (1.0) | 29.8 | 183 |

| BH/MW21-02 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|-----|-----|----------|-----|----------|------|----------|-----|-----|------|----------|-----|-----|----------|----------|----------|----------|-----------|------|
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.0 to 0.6 | ND (1.0) | 4.1 | 137 | ND (0.5) | 9.2 | ND (0.5) | 11.1 | ND (0.2) | 3.6 | 8.0 | 12.5 | ND (0.1) | 1.9 | 9.5 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | ND (10.0) | 25.3 |

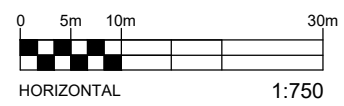
| BH/MW21-03 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
|------------------|--------------|-----------|-----|-----|----------|------|----------|------|----------|-----|------|------|----------|----------|------|----------|----------|----------|----------|------|-----------|
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.0 to 0.6 | ND (1.0) | 2.9 | 144 | ND (0.5) | 10.9 | ND (0.5) | 15.4 | ND (0.2) | 3.2 | 18.8 | 18.8 | 0.1 | 1.5 | 14.1 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 11.6 | 37.7 |
| D206 (Duplicate) | 0.0 to 0.6 | ND (1.0) | 2.6 | 136 | ND (0.5) | 10.4 | ND (0.5) | 13.3 | ND (0.2) | 3.2 | 17.8 | 17.9 | 0.1 | ND (1.0) | 10.0 | ND (0.3) | ND (1.0) | ND (1.0) | 11.4 | 34.8 | |
| 02 | 0.6 to 1.2 | ND (1.0) | 3.2 | 198 | 0.6 | 17.8 | ND (0.5) | 17.3 | ND (0.2) | 5.7 | 10.0 | 15.7 | ND (0.1) | ND (1.0) | 14.6 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 10.4 | ND (20.0) |

| BH/MW21-04 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|------|-----|----------|------|----------|------|----------|-----|------|------|----------|----------|------|----------|----------|----------|----------|------|------|
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.0 to 0.6 | ND (1.0) | 2.7 | 211 | ND (0.5) | 13.4 | ND (0.5) | 13.6 | ND (0.2) | 5.4 | 20.8 | 26.4 | ND (0.1) | ND (1.0) | 11.4 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 19.8 | 39.9 |
| 02 | 0.6 to 1.2 | 1.3 | 21.6 | 161 | 0.8 | 16.8 | ND (0.5) | 26.7 | ND (0.2) | 8.7 | 55.8 | 2880 | 0.3 | 3.6 | 24.4 | 1.7 | ND (0.3) | ND (1.0) | ND (1.0) | 22.5 | 148 |

| BH/MW21-05 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
|------------|--------------|-----------|-----|-----|----------|-----|----------|------|----------|-----|------|-----|----------|----------|-----|----------|----------|----------|----------|------|-----------|
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.0 to 0.6 | ND (1.0) | 2.2 | 146 | ND (0.5) | 9.5 | ND (0.5) | 10.5 | ND (0.2) | 3.5 | 10.1 | 9.7 | ND (0.1) | ND (1.0) | 9.1 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 13.6 | ND (20.0) |

LEGEND

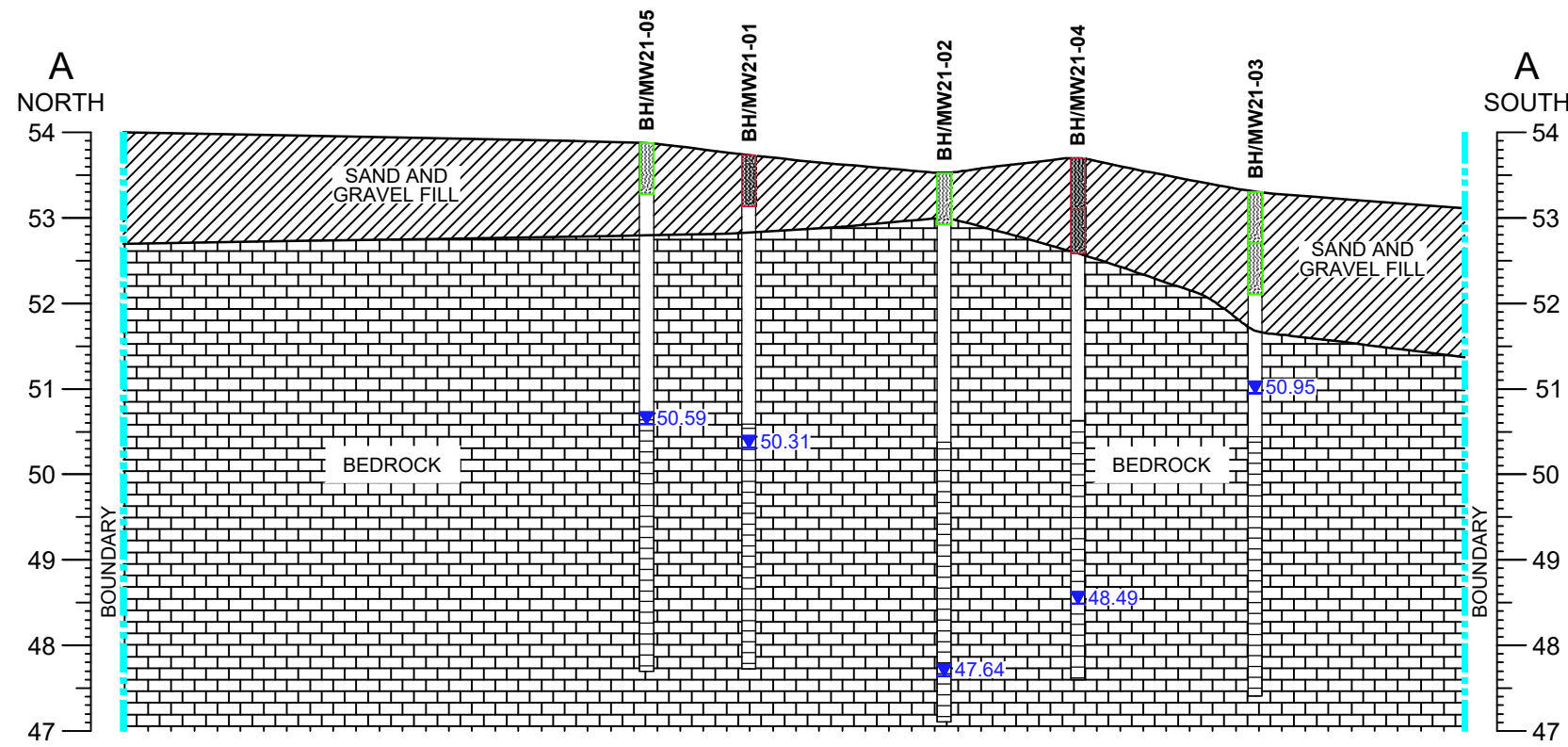
- PROPERTY BOUNDARY
- SOIL CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)



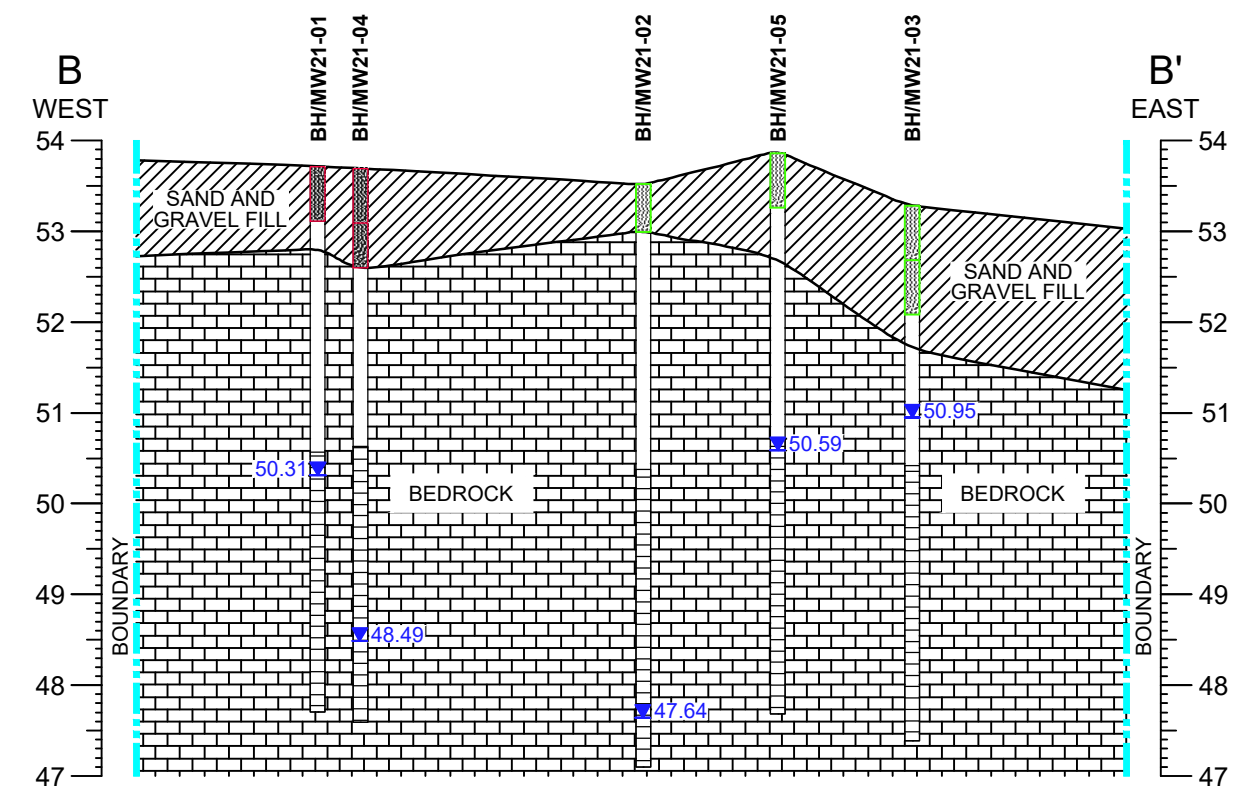
EXP Services Inc. www.exp.com
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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

| | | |
|---------------------------|--|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: SOIL ANALYTICAL RESULTS - INORGANICS (PRE-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 9 |

File name: \\exp\data\OTT\OTT-00250193-ND\60_Execution\65_Drawings\250193-P0 Drawings\ph2 Sections\ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:20 AM Plotted by: Severa



CROSS SECTION A-A'



CROSS SECTION B-B'

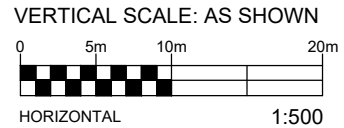
STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARD | REG 153/04 TABLE 7 STANDARD |
|-----------------------------|--------------|-----------------------------|-----------------------------|
| Benzene | B | 0.02 | 0.21 |
| Toluene | T | 0.2 | 2.3 |
| Ethylbenzene | E | 0.05 | 2 |
| Total Xylenes | X | 0.05 | 3.1 |
| F1 | F1 (C6-C10) | 25 | 55 |
| F2 | F2 (C10-C16) | 10 | 98 |
| F3 | F3 (C16-C34) | 240 | 300 |
| F4 | F4 (C34-C50) | 120 | 2800 |
| 1,1-Dichloroethane | 1,1-DCA | 0.05 | 3.5 |
| 1,2-Dichloroethane | 1,2-DCA | 0.05 | 0.05 |
| 1,1-Dichloroethy lene | 1,1-DCE | 0.05 | 0.05 |
| Cis-1,2-Dichloroethy lene | c-1,2-DCE | 0.05 | 3.4 |
| Trans-1,2-Dichloroethy lene | t-1,2-DCE | 0.05 | 0.084 |
| Styrene | ST | 0.05 | 0.7 |
| Tetrachloroethy lene | PCE | 0.05 | 0.28 |
| Trichloroethy lene | TCE | 0.05 | 0.061 |
| Vinyl Chloride | VC | 0.02 | 0.02 |

| BH/MW21-01 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
|------------------|--------------|-----------|-----------|-----------|-----------|--------|--------|-----|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | 0.78 | 0.93 | 0.11 | 0.79 | ND (7) | ND (4) | 623 | 1370 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| BH/MW21-02 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 50 | 36 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| BH/MW21-03 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 46 | 28 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| D206 (Duplicate) | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 56 | 34 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| 02 | 0.6 to 1.2 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 38 | 34 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| BH/MW21-04 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | 121 | 293 | 746 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| 02 | 0.6 to 0.8 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | 61 | 315 | 681 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| BH/MW21-05 | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | |
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC | |
| 01 | 0.0 to 0.6 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | 149 | 94 | 102 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |

LEGEND

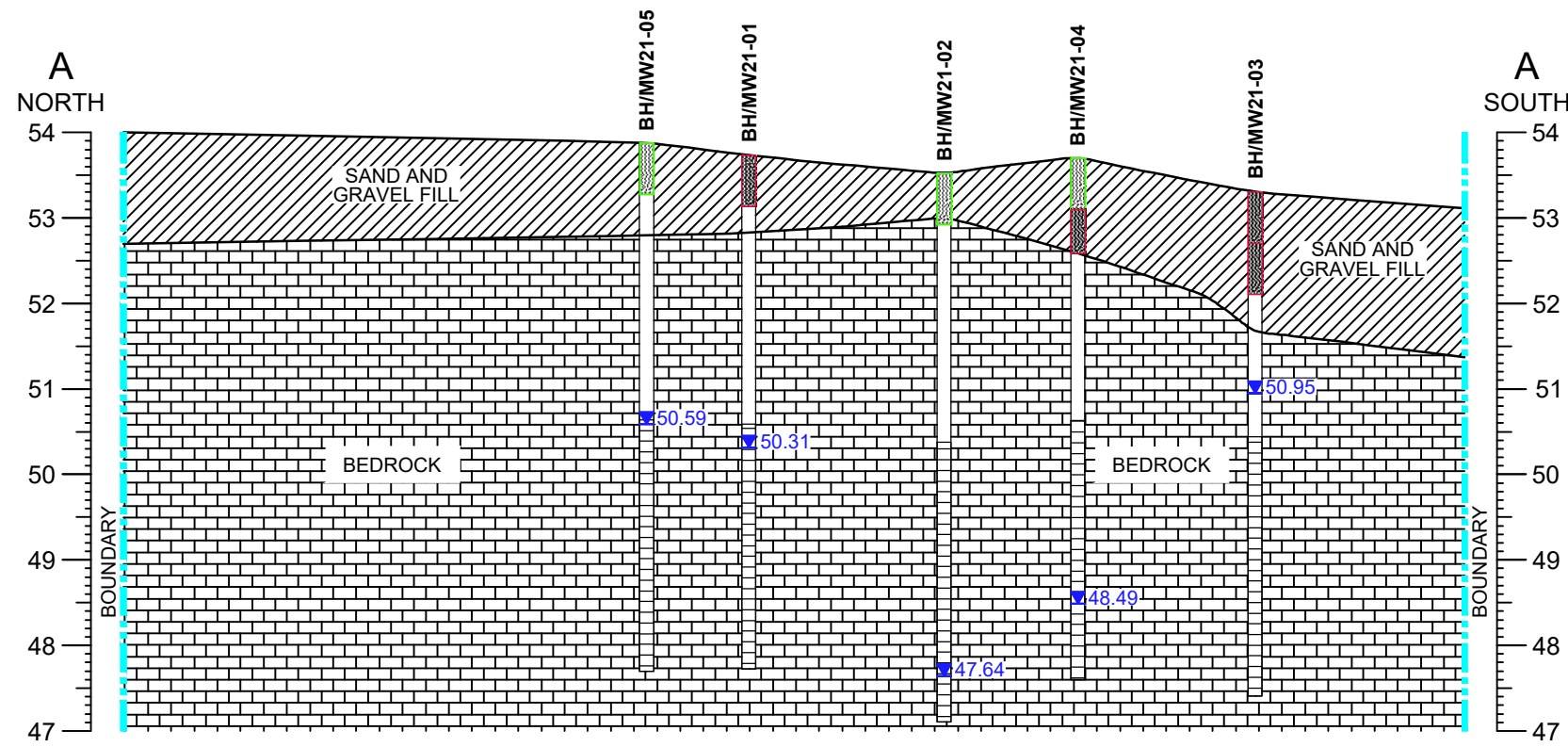
- SAND & GRAVEL FILL
- BEDROCK
- GROUNDWATER LEVEL FROM MARCH 24, 2021
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- SOIL CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



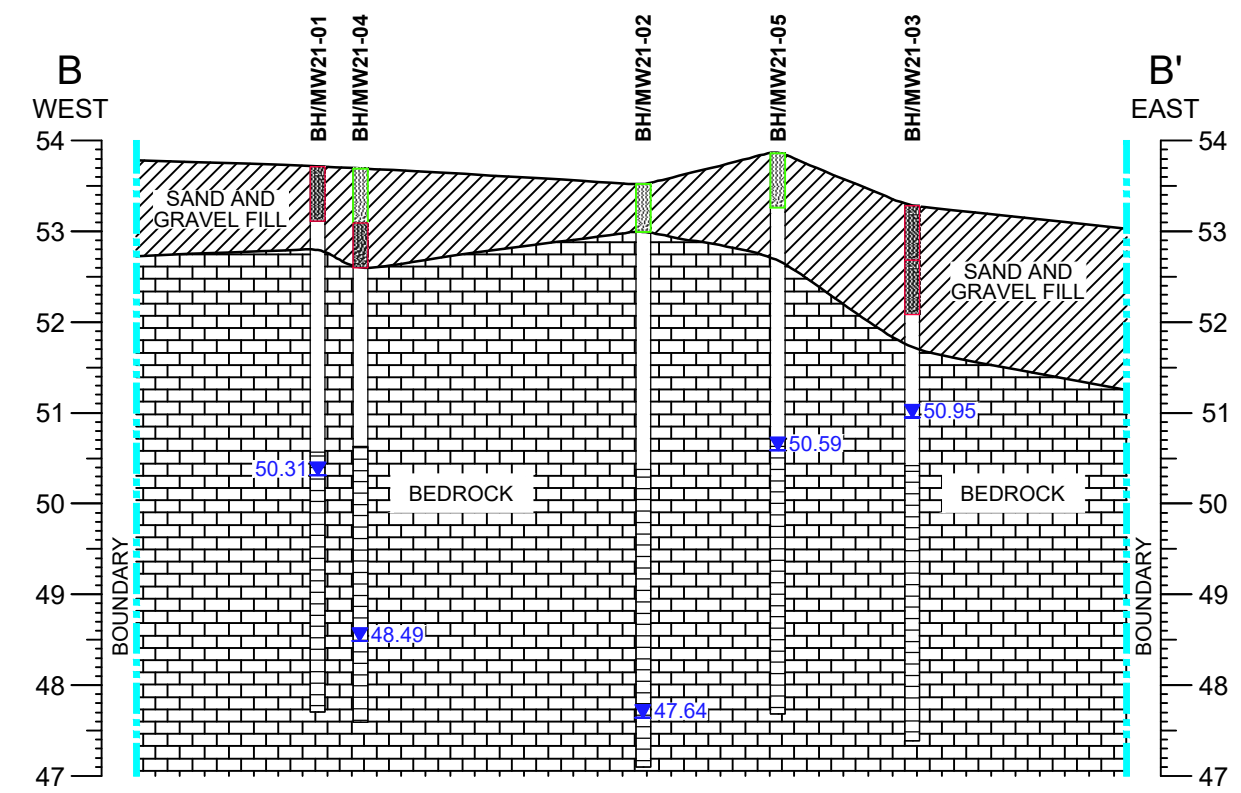
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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

| | | | |
|----------|------------|---|-----------------|
| DATE | APRIL 2022 | CLIENT: | project no. |
| DESIGN | CHECKED | WINDMILL DREAM ONTARIO HOLDINGS LP | OTT-00250193-P0 |
| LW | PS | | scale |
| DRAWN BY | TM / AS | SOIL CROSS SECTIONS A-A' AND B-B' - PHC & VOC (PRE-REMEDATION) | 1:500 |
| | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 10 |

File name: \\exp\data\OTT\OTT-00250193-ND\60_Execution\65_Execution\250193-PO Drawings\ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:21 AM Plotted by: Severa



CROSS SECTION A-A'



CROSS SECTION B-B'

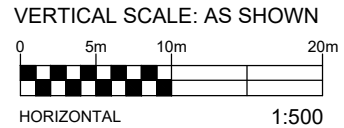
STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|--------------------------|--------------|------------------------------|------------------------------|
| Acenaphthene | Ace | 0.072 | 7.9 |
| Acenaphthylene | AcI | 0.093 | 0.15 |
| Anthracene | An | 0.22 | 0.67 |
| Benzo(a)anthracene | B(a)A | 0.36 | 0.5 |
| Benzo(a)pyrene | B(a)P | 0.3 | 0.3 |
| Benzo(b)fluoranthene | B(b)F | 0.47 | 0.78 |
| Benzo(g,h,i)perylene | B(ghi)P | 0.68 | 6.6 |
| Benzo(k)fluoranthene | B(k)F | 0.48 | 0.78 |
| Chrysene | C | 2.8 | 7 |
| Dibenz(a,h)anthracene | DA | 0.1 | 0.1 |
| Fluoranthene | Fl | 0.69 | 0.69 |
| Fluorene | F | 0.19 | 62 |
| Indeno(1,2,3-cd)pyrene | I(123)P | 0.23 | 0.38 |
| Total Methyl naphthalene | T-MN | 0.59 | 0.99 |
| Naphthalene | N | 0.09 | 0.6 |
| Phenanthrene | P | 0.69 | 6.2 |
| Pyrene | Py | 1 | 78 |
| Total PCBs | PCB | 0.3 | 0.35 |

| Borehole | Depth (mbgs) | 15-Mar-21 | | | | | | | | | | | | | | | | | | | |
|------------------|----------------|-----------|-----------|-----------|-------|-------|-------|---------|-------|------|-----------|------|-----------|---------|-----------|------|------|------|------|------|-----------|
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | 1-MN | 2-MN | T-MN | N | P | Py | PCB |
| BH/MW21-01 | 01: 0.0 to 0.6 | 0.10 | 0.09 | 0.21 | 0.72 | 0.42 | 0.65 | 0.33 | 0.31 | 0.49 | 0.08 | 0.74 | 0.13 | 0.25 | 2.72 | 4.34 | 7.05 | 1.94 | 1.19 | 0.86 | ND (0.05) |
| BH/MW21-02 | 01: 0.0 to 0.6 | ND (0.02) | ND (0.02) | ND (0.02) | 0.03 | 0.04 | 0.05 | 0.03 | 0.02 | 0.04 | ND (0.02) | 0.06 | ND (0.02) | 0.02 | 0.06 | 0.11 | 0.17 | 0.05 | 0.06 | 0.05 | ND (0.05) |
| BH/MW21-03 | 01: 0.0 to 0.6 | 0.11 | 0.07 | 0.47 | 1.02 | 0.88 | 0.82 | 0.48 | 0.45 | 0.83 | 0.13 | 1.88 | 0.19 | 0.47 | 0.06 | 0.13 | 0.19 | 0.21 | 1.75 | 1.50 | 0.16 |
| D206 (Duplicate) | 01: 0.0 to 0.6 | 0.21 | 0.12 | 0.83 | 1.35 | 1.16 | 1.31 | 0.62 | 0.74 | 1.28 | 0.19 | 3.25 | 0.3 | 0.64 | 0.14 | 0.2 | 0.34 | 0.33 | 2.78 | 2.63 | 0.14 |
| | 02: 0.6 to 1.2 | 0.05 | 0.02 | 0.17 | 0.30 | 0.32 | 0.31 | 0.17 | 0.15 | 0.32 | 0.05 | 0.63 | 0.07 | 0.16 | 0.04 | 0.06 | 0.10 | 0.10 | 0.65 | 0.50 | ND (0.05) |
| BH/MW21-04 | 01: 0.0 to 0.6 | 0.03 | 0.05 | 0.07 | 0.18 | 0.19 | 0.22 | 0.12 | 0.11 | 0.17 | 0.03 | 0.36 | 0.03 | 0.11 | 0.06 | 0.10 | 0.17 | 0.04 | 0.24 | 0.31 | 0.11 |
| | 02: 0.6 to 0.8 | 0.02 | 0.06 | 0.11 | 0.31 | 0.26 | 0.39 | 0.20 | 0.16 | 0.31 | 0.05 | 0.43 | 0.06 | 0.19 | 0.93 | 1.36 | 2.29 | 1.00 | 0.65 | 0.42 | ND (0.05) |
| BH/MW21-05 | 01: 0.0 to 0.6 | ND (0.02) | ND (0.02) | ND (0.02) | 0.06 | 0.07 | 0.08 | 0.06 | 0.04 | 0.06 | ND (0.02) | 0.09 | ND (0.02) | 0.04 | ND (0.02) | 0.04 | 0.06 | 0.03 | 0.07 | 0.09 | ND (0.05) |

LEGEND

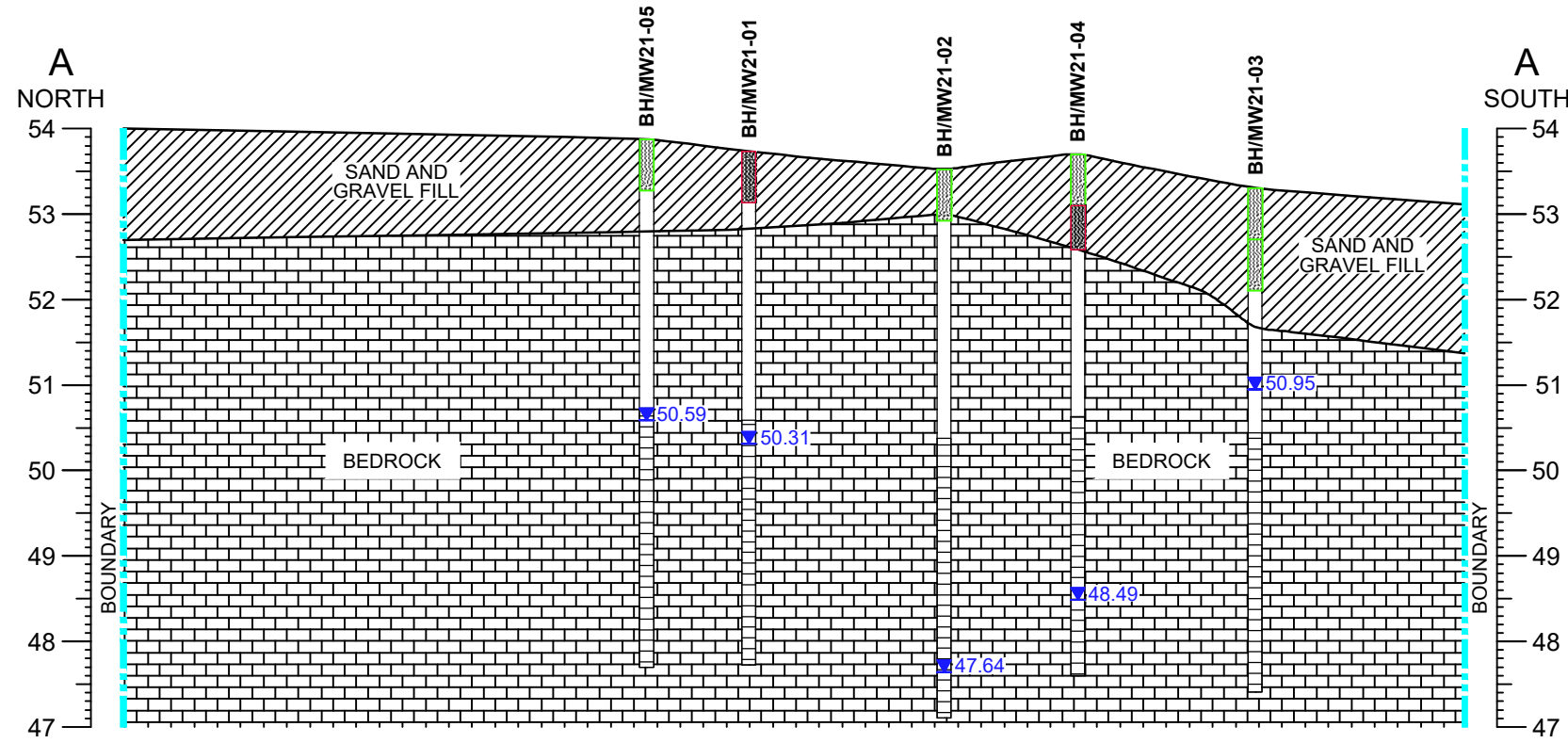
- SAND & GRAVEL FILL
- BEDROCK
- GROUNDWATER LEVEL FROM MARCH 24, 2021
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- SOIL CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



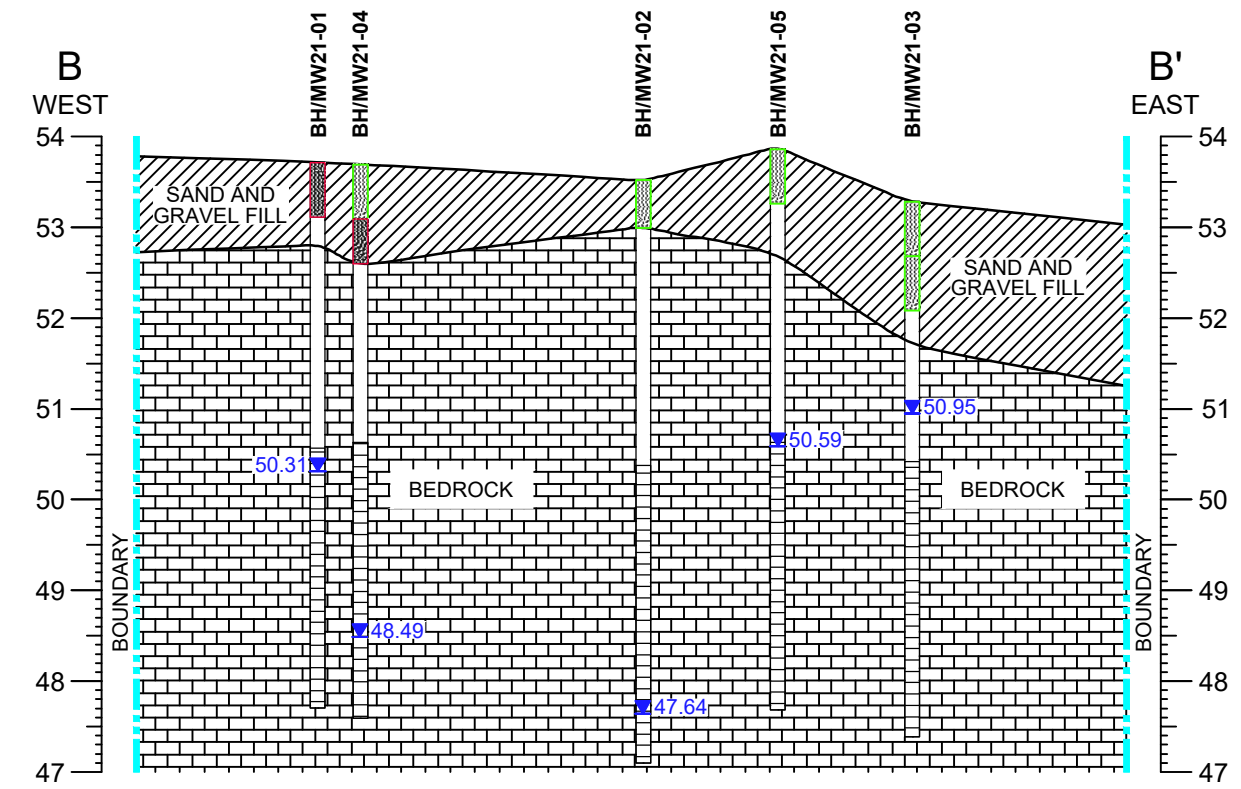
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 Ottawa, ON K2B 8H6, Canada

| | | | |
|----------|------------|---|-----------------|
| DATE | APRIL 2022 | CLIENT: | project no. |
| DESIGN | CHECKED | WINDMILL DREAM ONTARIO HOLDINGS LP | OTT-00250193-PO |
| LW | PS | | scale |
| DRAWN BY | TM / AS | SOIL CROSS SECTIONS A-A' AND B-B' – PAH & PCB (PRE-REMEDATION) | 1:500 |
| | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 11 |

File name: \\exp\data\OTT\OTT-00250193-NO\60_Execution\65_Execution\250193-PO Drawings\p2\Drawings\p2\250193-PO West Chaudière ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:21 AM Plotted by: Severa



CROSS SECTION A-A'



CROSS SECTION B-B'

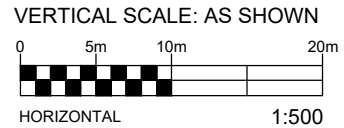
STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|-------------|--------------|------------------------------|------------------------------|
| Antimony | Sb | 1.3 | 7.5 |
| Arsenic | As | 18 | 18 |
| Barium | Ba | 220 | 390 |
| Beryllium | Be | 2.5 | 4 |
| Boron | B | 36 | 120 |
| Cadmium | Cd | 1.2 | 1.2 |
| Chromium | Cr | 70 | 160 |
| Chromium VI | Cr VI | 0.66 | 8 |
| Cobalt | Co | 22 | 22 |
| Copper | Cu | 92 | 140 |
| Lead | Pb | 120 | 120 |
| Mercury | Hg | 0.27 | 0.27 |
| Molybdenum | Mo | 2 | 6.9 |
| Nickel | Ni | 82 | 100 |
| Selenium | Se | 1.5 | 2.4 |
| Silver | Ag | 0.5 | 20 |
| Thallium | Tl | 1 | 1 |
| Uranium | U | 2.5 | 23 |
| Vanadium | V | 86 | 86 |
| Zinc | Zn | 290 | 340 |

| BH/MW21-01 | Depth (mbgs) | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
|------------------|--------------|----------|------|-----|----------|------|----------|------|----------|------|------|------|----------|----------|------|----------|----------|----------|----------|-----------|-----------|
| 01 | 0.1 to 0.7 | 3.8 | 134 | 420 | 1.1 | 16.7 | 0.8 | 26.2 | ND (0.2) | 10.0 | 121 | 218 | 0.6 | 13.5 | 37.4 | 2.6 | 0.3 | 1.7 | ND (1.0) | 29.8 | 183 |
| BH/MW21-02 | Depth (mbgs) | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.0 to 0.6 | ND (1.0) | 4.1 | 137 | ND (0.5) | 9.2 | ND (0.5) | 11.1 | ND (0.2) | 3.6 | 8.0 | 12.5 | ND (0.1) | 1.9 | 9.5 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | ND (10.0) | 25.3 |
| BH/MW21-03 | Depth (mbgs) | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.0 to 0.6 | ND (1.0) | 2.9 | 144 | ND (0.5) | 10.9 | ND (0.5) | 15.4 | ND (0.2) | 3.2 | 18.8 | 18.8 | 0.1 | 1.5 | 14.1 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 11.6 | 37.7 |
| D206 (Duplicate) | 0.0 to 0.6 | ND (1.0) | 2.6 | 136 | ND (0.5) | 10.4 | ND (0.5) | 13.3 | ND (0.2) | 3.2 | 17.8 | 17.9 | 0.1 | ND (1.0) | 10.0 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 11.4 | 34.8 |
| 02 | 0.6 to 1.2 | ND (1.0) | 3.2 | 198 | 0.6 | 17.8 | ND (0.5) | 17.3 | ND (0.2) | 5.7 | 10.0 | 15.7 | ND (0.1) | ND (1.0) | 14.6 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 10.4 | ND (20.0) |
| BH/MW21-04 | Depth (mbgs) | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.0 to 0.6 | ND (1.0) | 2.7 | 211 | ND (0.5) | 13.4 | ND (0.5) | 13.6 | ND (0.2) | 5.4 | 20.8 | 26.4 | ND (0.1) | ND (1.0) | 11.4 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 19.8 | 39.9 |
| 02 | 0.6 to 1.2 | 1.3 | 21.6 | 161 | 0.8 | 16.8 | ND (0.5) | 26.7 | ND (0.2) | 8.7 | 55.8 | 2880 | 0.3 | 3.6 | 24.4 | 1.7 | ND (0.3) | ND (1.0) | ND (1.0) | 22.5 | 148 |
| BH/MW21-05 | Depth (mbgs) | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| 01 | 0.0 to 0.6 | ND (1.0) | 2.2 | 146 | ND (0.5) | 9.5 | ND (0.5) | 10.5 | ND (0.2) | 3.5 | 10.1 | 9.7 | ND (0.1) | ND (1.0) | 9.1 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 13.6 | ND (20.0) |

LEGEND

- SAND & GRAVEL FILL
- BEDROCK
- GROUNDWATER LEVEL FROM MARCH 24, 2021
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- SOIL CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



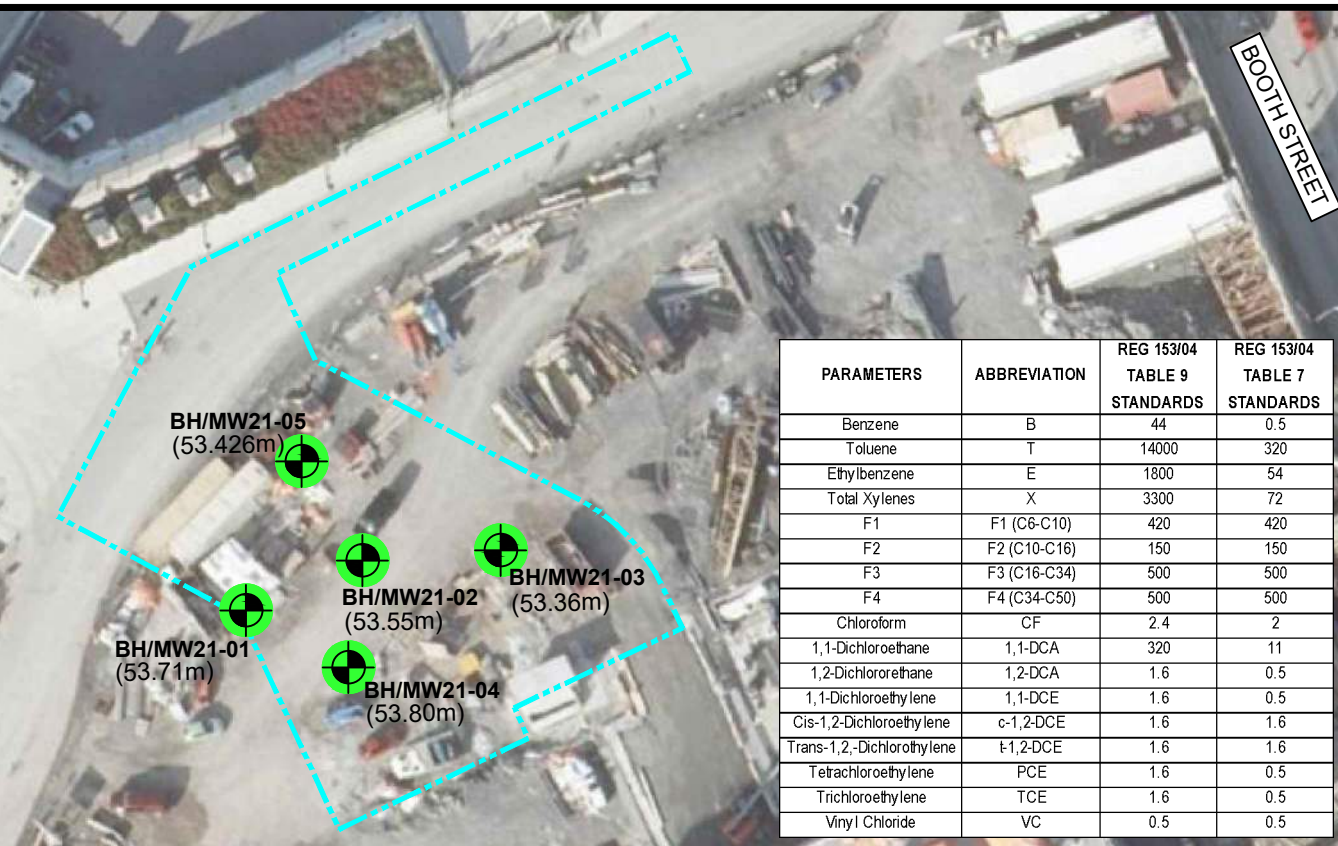
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 Ottawa, ON K2B 8H6, Canada

| | | | |
|----------|------------|---|-----------------|
| DATE | APRIL 2022 | CLIENT: | project no. |
| DESIGN | CHECKED | WINDMILL DREAM ONTARIO HOLDINGS LP | OTT-00250193-PO |
| LW | PS | | scale |
| DRAWN BY | TM / AS | SOIL CROSS SECTIONS A-A' AND B-B' - INORGANICS (PRE-REMEDICATION) | |
| | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO | |
| | | | 1:500 |
| | | | FIG 12 |

Filename: \\exp\data\OTT-00250193-NO\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:19 AM Plotted by: Severa



BOTH STREET

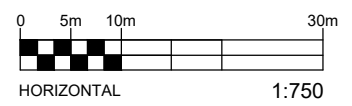


| PARAMETERS | ABBREVIATION | REG 153/04 | REG 153/04 |
|----------------------------|--------------|-------------------|-------------------|
| | | TABLE 9 STANDARDS | TABLE 7 STANDARDS |
| Benzene | B | 44 | 0.5 |
| Toluene | T | 14000 | 320 |
| Ethylbenzene | E | 1800 | 54 |
| Total Xylenes | X | 3300 | 72 |
| F1 | F1 (C6-C10) | 420 | 420 |
| F2 | F2 (C10-C16) | 150 | 150 |
| F3 | F3 (C16-C34) | 500 | 500 |
| F4 | F4 (C34-C50) | 500 | 500 |
| Chloroform | CF | 2.4 | 2 |
| 1,1-Dichloroethane | 1,1-DCA | 320 | 11 |
| 1,2-Dichloroethane | 1,2-DCA | 1.6 | 0.5 |
| 1,1-Dichloroethylene | 1,1-DCE | 1.6 | 0.5 |
| Cis-1,2-Dichloroethylene | c-1,2-DCE | 1.6 | 1.6 |
| Trans-1,2-Dichloroethylene | t-1,2-DCE | 1.6 | 1.6 |
| Tetrachloroethylene | PCE | 1.6 | 0.5 |
| Trichloroethylene | TCE | 1.6 | 0.5 |
| Vinyl Chloride | VC | 0.5 | 0.5 |

| BH/MW21-01 | | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | |
|------------------|----------|----------------------------------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 23-Mar-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | 0.6 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| BH/MW21-02 | | Screen Interval 3.5 to 6.5 m bgs | | | | | | | | | | | | | | | |
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 24-Mar-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (177) | ND (177) | ND (177) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| BH/MW21-03 | | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | |
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 23-Mar-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| BH/MW21-04 | | Screen Interval 3.1 to 6.1 m bgs | | | | | | | | | | | | | | | |
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 24-Mar-21 | ND (0.5) | 1.1 | ND (0.5) | 1.6 | ND (25) | ND (100) | ND (100) | ND (100) | 3.1 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| BH/MW21-05 | | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | |
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 23-Mar-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | 1.9 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 23-Mar-21 (D206) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | 2.0 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |

LEGEND

- PROPERTY BOUNDARY
- PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS



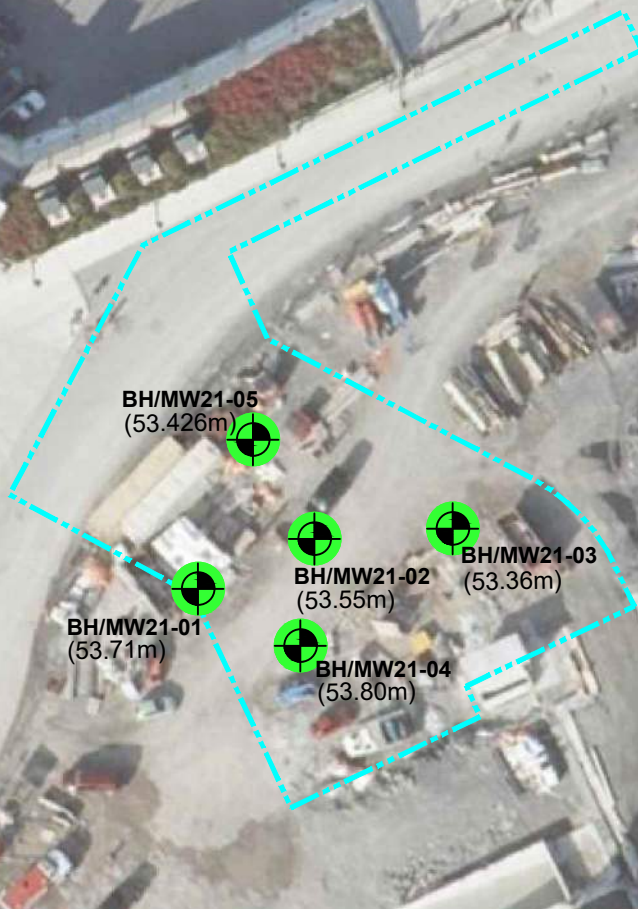
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 Ottawa, ON K2B 8H6, Canada

| | | |
|---------------------------|--|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: GROUNDWATER ANALYTICAL RESULTS - PHC & VOC (PRE-REMIATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 13 |

Filename: \\exp_data\OTT\OTT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Lost Plotted: Apr 22, 2022 10:19 AM Plotted by: SeverA



BOTH STREET



| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|--------------------------|--------------|------------------------------|------------------------------|
| Acenaphthene | Ace | 600 | 17 |
| Anthracene | An | 1 | 1 |
| Benzo(a)anthracene | B(a)A | 1.8 | 1.8 |
| Benzo(a)pyrene | B(a)P | 0.81 | 0.81 |
| Benzo(b)fluoranthene | B(b)F | 0.75 | 0.75 |
| Benzo(g,h,i)perylene | B(ghi)P | 0.2 | 0.2 |
| Benzo(k)fluoranthene | B(k)F | 0.4 | 0.4 |
| Chrysene | C | 0.7 | 0.7 |
| Dibenz(a,h)anthracene | DA | 0.4 | 0.4 |
| Fluoranthene | Fl | 73 | 44 |
| Fluorene | F | 290 | 290 |
| Indeno(1,2,3-cd)pyrene | I(123)P | 0.2 | 0.2 |
| Total Methyl naphthalene | T-MN | 1500 | 1500 |
| Naphthalene | N | 1400 | 7 |
| Phenanthrene | P | 380 | 380 |
| Pyrene | Py | 5.7 | 5.7 |

| BH/MW21-01 | | | | | | | | | | | | | | | | | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | | | |
|------------|-----------|-----------|------|-------|-------|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|-----------|------|------|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DATE | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | | | | | | | | | | | | | | | | | | |
| 23-Mar-21 | ND (0.05) | ND (0.05) | 0.02 | 0.04 | 0.03 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.10 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | 0.09 | 0.12 | | | | | | | | | | | | | | | | | | |

| BH/MW21-02 | | | | | | | | | | | | | | | | | | Screen Interval 3.5 to 6.5 mbgs | | | | | | | | | | | | | | | | | |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DATE | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | | | | | | | | | | | | | | | | | | |
| 24-Mar-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | | | | | | | | | | | | | | | | | | |

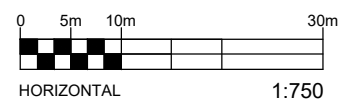
| BH/MW21-03 | | | | | | | | | | | | | | | | | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | | | |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|-----------|-----------|------|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DATE | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | | | | | | | | | | | | | | | | | | |
| 23-Mar-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.04 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | 0.08 | | | | | | | | | | | | | | | | | | |

| BH/MW21-04 | | | | | | | | | | | | | | | | | | Screen Interval 3.1 to 6.1 mbgs | | | | | | | | | | | | | | | | | |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DATE | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | | | | | | | | | | | | | | | | | | |
| 24-Mar-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | | | | | | | | | | | | | | | | | | |

| BH/MW21-05 | | | | | | | | | | | | | | | | | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | | | |
|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|-----------|-----------|------|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DATE | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | | | | | | | | | | | | | | | | | | |
| 23-Mar-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.02 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | 0.05 | | | | | | | | | | | | | | | | | | |
| 23-Mar-21 (D206) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.03 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | 0.05 | | | | | | | | | | | | | | | | | | |

LEGEND

- PROPERTY BOUNDARY
- PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS



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| | | | | | | | | | | | | | |
|---------------------------|---------------|--|--|--|--|--|--|--|--|--|--|--------------------------------|--|
| DATE APRIL 2022 | | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | | | | | | | | | | project no. OTT-00250193-P0 | |
| DESIGN LW | CHECKED PS | TITLE: GROUNDWATER ANALYTICAL RESULTS - PAH & PCB (PRE-REMEDATION) | | | | | | | | | | scale 1:750 | |
| DRAWN BY AS | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO | | | | | | | | | | FIG 14 | |

Filename: \\exp_data\OTT\OTT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:19 AM Plotted by: SeverA



BOTH STREET



| PARAMETERS | ABBREVIATION | REG 153/04 | REG 153/04 |
|---------------|--------------|-------------------|-------------------|
| | | TABLE 9 STANDARDS | TABLE 7 STANDARDS |
| Antimony | Sb | 16000 | 16000 |
| Arsenic | As | 1500 | 1500 |
| Barium | Ba | 23000 | 23000 |
| Beryllium | Be | 53 | 53 |
| Boron | B | 36000 | 36000 |
| Cadmium | Cd | 2.1 | 2.1 |
| Chromium | Cr | 640 | 640 |
| Chromium (VI) | Cr IV | 110 | 110 |
| Cobalt | Co | 52 | 52 |
| Copper | Cu | 69 | 69 |
| Lead | Pb | 20 | 20 |
| Mercury | Hg | 0.29 | 0.1 |
| Moly bdenum | Mo | 7300 | 7300 |
| Nickel | Ni | 390 | 390 |
| Selenium | Se | 50 | 50 |
| Silver | Ag | 1.2 | 1.2 |
| Sodium | Na | 1800000 | 1800000 |
| Thalium | Tl | 400 | 400 |
| Uranium | U | 890 | 890 |
| Vanadium | V | 200 | 200 |
| Zinc | Zn | 890 | 890 |

| BH/MW21-01 | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | | | | | |
|------------|----------|---------------------------------|-----|----------|----|----------|--------|---------|-----|-----|-----|----------|-----|----|--------|----------|--------|----------|-----|----------|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Mar-21 | ND (0.5) | ND (1) | 350 | ND (0.5) | 77 | ND (0.1) | ND (1) | ND (10) | 3.4 | 1.5 | 0.4 | ND (0.1) | 5.9 | 11 | ND (1) | ND (0.1) | 884000 | ND (0.1) | 1.7 | ND (0.5) | ND (5) |

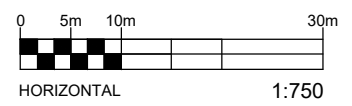
| BH/MW21-03 | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | | | | | |
|------------|-----|---------------------------------|-----|----------|----|----------|--------|---------|-----|-----|-----|----------|------|----|--------|----------|--------|----------|-----|-----|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Mar-21 | 0.9 | 2 | 161 | ND (0.5) | 61 | ND (0.1) | ND (1) | ND (10) | 1.4 | 0.9 | 0.2 | ND (0.1) | 17.8 | 23 | ND (1) | ND (0.1) | 181000 | ND (0.1) | 1.7 | 5.9 | ND (5) |

| BH/MW21-04 | | Screen Interval 3.1 to 6.1 mbgs | | | | | | | | | | | | | | | | | | | |
|------------|----------|---------------------------------|-----|----------|----|----------|--------|---------|-----|-----|-----|----------|-----|----|--------|----------|--------|----------|-----|-----|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 24-Mar-21 | ND (0.5) | 1 | 700 | ND (0.5) | 92 | ND (0.1) | ND (1) | ND (10) | 0.8 | 4.2 | 1.0 | ND (0.1) | 6.8 | 5 | ND (1) | ND (0.1) | 553000 | ND (0.1) | 2.6 | 1.2 | ND (5) |

| BH/MW21-05 | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | | | | | |
|------------------|----------|---------------------------------|------|----------|----|----------|--------|---------|-----|-----|----------|----------|-----|----|--------|----------|--------|----------|-----|----------|----|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Mar-21 | ND (0.5) | ND (1) | 1200 | ND (0.5) | 77 | ND (0.1) | ND (1) | ND (10) | 3.7 | 2.5 | ND (0.1) | ND (0.1) | 1.4 | 6 | ND (1) | ND (0.1) | 617000 | ND (0.1) | 1.1 | ND (0.5) | 21 |
| 23-Mar-21 (D206) | ND (0.5) | ND (1) | 1160 | ND (0.5) | 76 | ND (0.1) | ND (1) | ND (10) | 3.6 | 2.3 | ND (0.1) | ND (0.1) | 1.5 | 5 | ND (1) | ND (0.1) | 606000 | 0.1 | 1.1 | ND (0.5) | 21 |

LEGEND

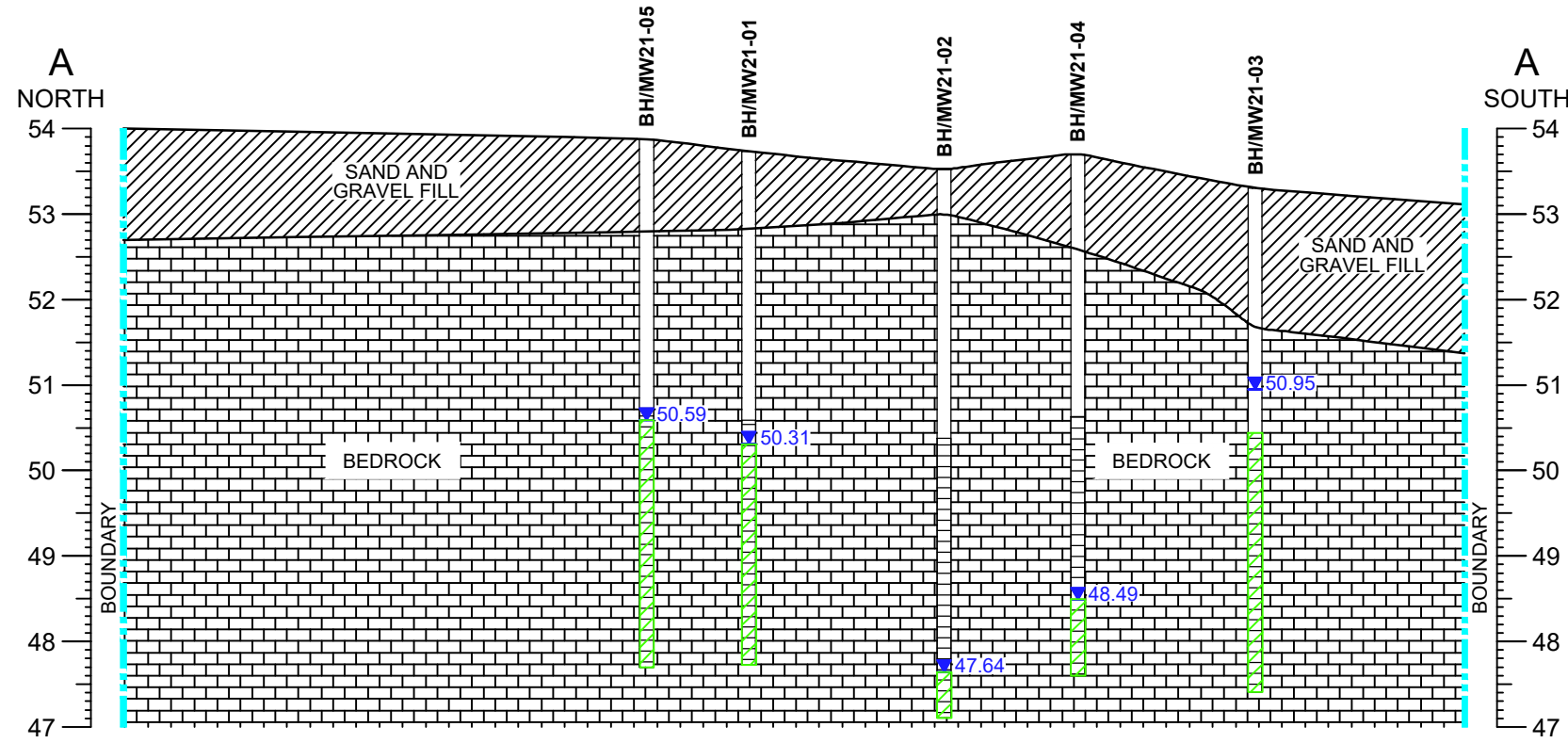
- PROPERTY BOUNDARY
- PRE-REMEDIAL MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)
- SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS



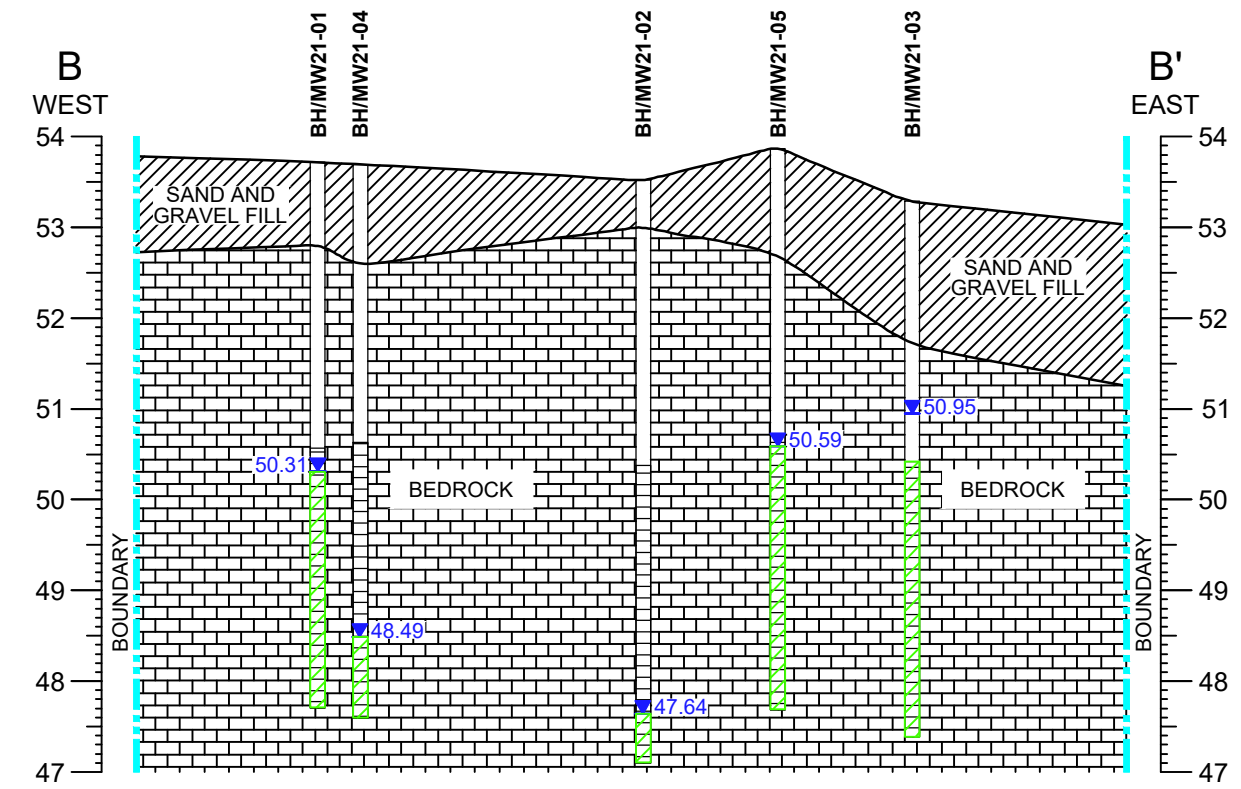
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 Ottawa, ON K2B 8H6, Canada

| | | |
|---------------------------|---|---------------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: GROUNDWATER ANALYTICAL RESULTS - INORGANICS (PRE-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 15 |

File name: \\exp\data\OTT\OTT-00250193-ND\60_Execution\65_Drawings\250193-P0_Drawings\ph2\250193-P0_West_Chaudière_ph2_Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:21 AM Plotted by: SeverA



CROSS SECTION A-A'



CROSS SECTION B-B'

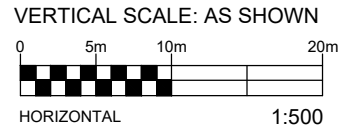
STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|----------------------------|--------------|------------------------------|------------------------------|
| Benzene | B | 44 | 0.5 |
| Toluene | T | 14000 | 320 |
| Ethylbenzene | E | 1800 | 54 |
| Total Xylenes | X | 3300 | 72 |
| F1 | F1 (C6-C10) | 420 | 420 |
| F2 | F2 (C10-C16) | 150 | 150 |
| F3 | F3 (C16-C34) | 500 | 500 |
| F4 | F4 (C34-C50) | 500 | 500 |
| Chloroform | CF | 2.4 | 2 |
| 1,1-Dichloroethane | 1,1-DCA | 320 | 11 |
| 1,2-Dichloroethane | 1,2-DCA | 1.6 | 0.5 |
| 1,1-Dichloroethylene | 1,1-DCE | 1.6 | 0.5 |
| Cis-1,2-Dichloroethylene | c-1,2-DCE | 1.6 | 1.6 |
| Trans-1,2-Dichloroethylene | t-1,2-DCE | 1.6 | 1.6 |
| Tetrachloroethylene | PCE | 1.6 | 0.5 |
| Trichloroethylene | TCE | 1.6 | 0.5 |
| Vinyl Chloride | VC | 0.5 | 0.5 |

| BH/MW21-01 | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | | |
|------------------|----------------------------------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 23-Mar-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | 0.6 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| BH/MW21-02 | Screen Interval 3.5 to 6.5 m bgs | | | | | | | | | | | | | | | | |
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 24-Mar-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (177) | ND (177) | ND (177) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| BH/MW21-03 | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | | |
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 23-Mar-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| BH/MW21-04 | Screen Interval 3.1 to 6.1 m bgs | | | | | | | | | | | | | | | | |
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 24-Mar-21 | ND (0.5) | 1.1 | ND (0.5) | 1.6 | ND (25) | ND (100) | ND (100) | ND (100) | 3.1 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| BH/MW21-05 | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | | |
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 23-Mar-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | 1.9 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 23-Mar-21 (D206) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | 2.0 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |

LEGEND

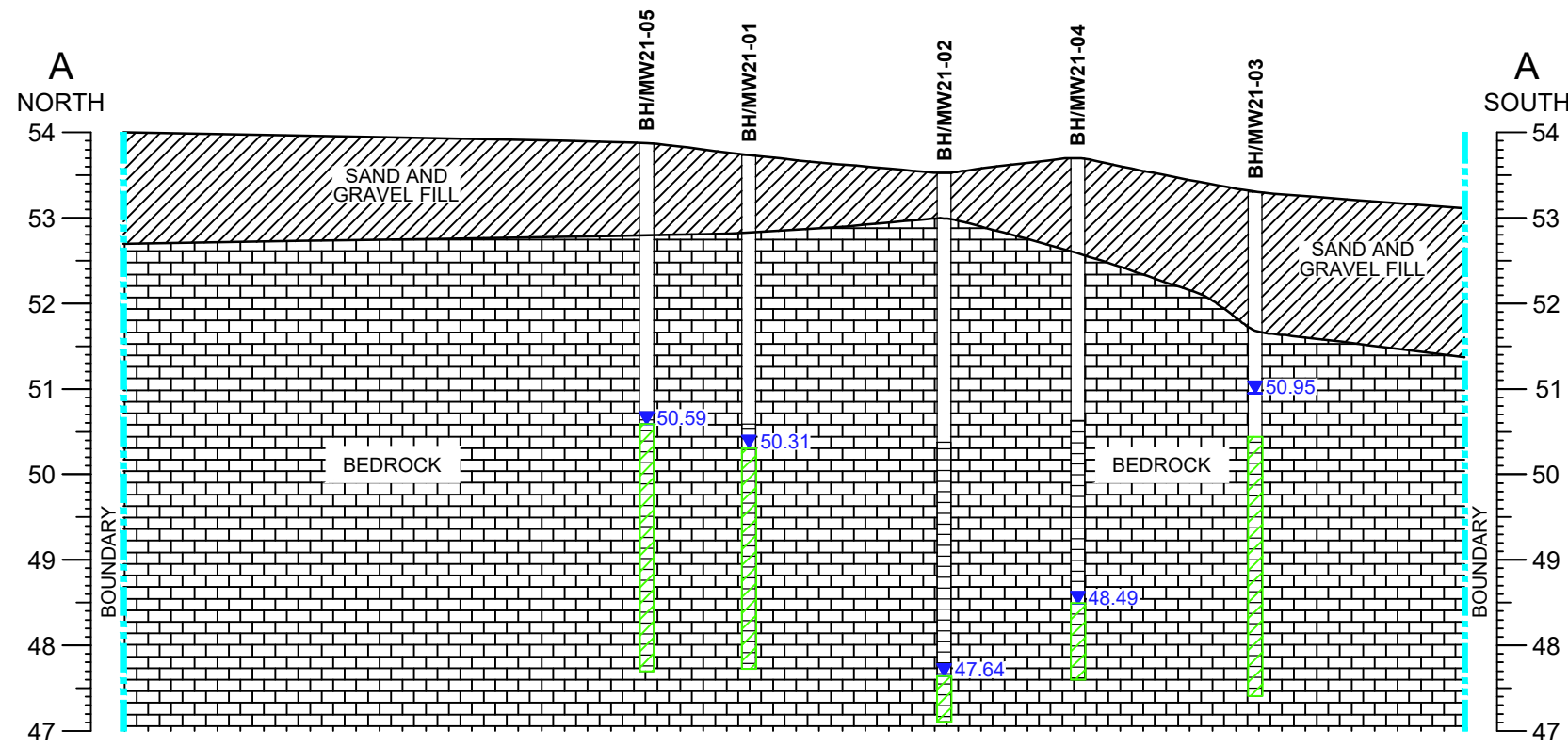
- SAND & GRAVEL FILL
- BEDROCK
- GROUNDWATER LEVEL FROM JUNE 21, 2021
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



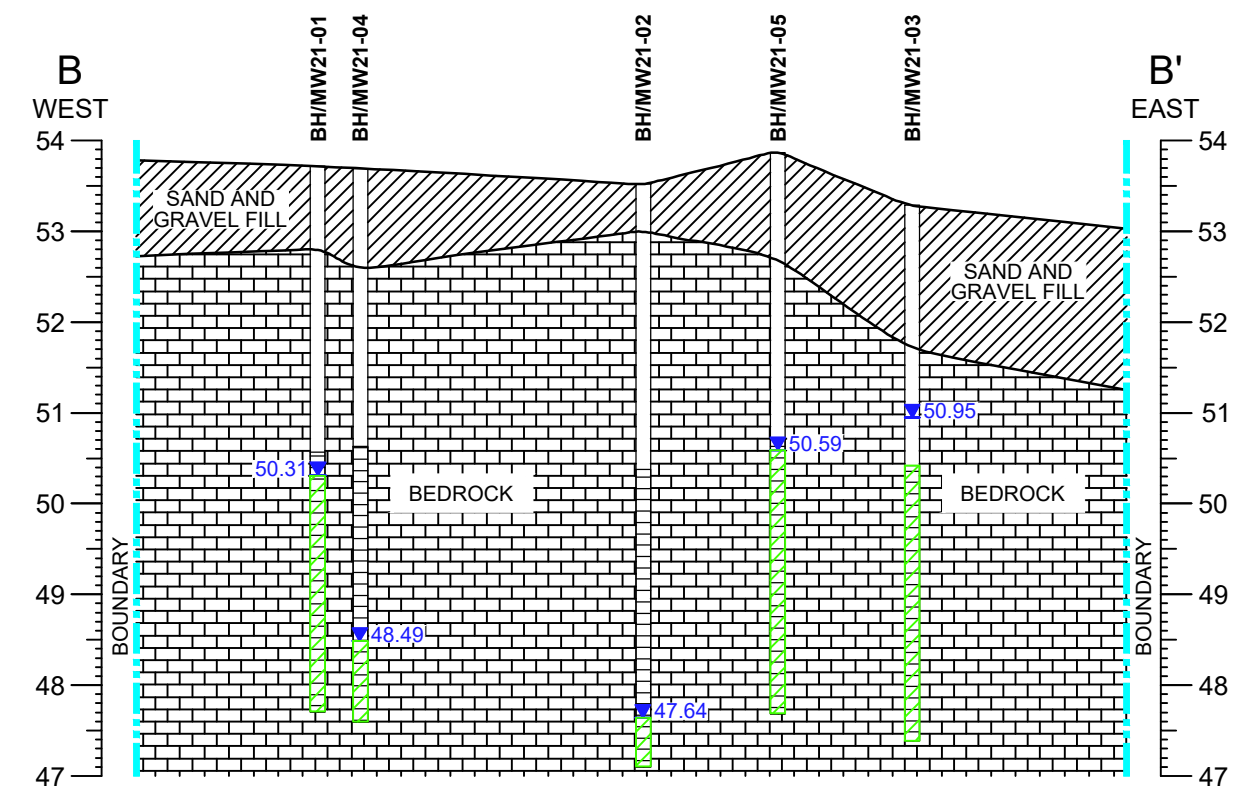
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 Ottawa, ON K2B 8H6, Canada

| | | | |
|----------|------------|---|-----------------|
| DATE | APRIL 2022 | CLIENT: | project no. |
| DESIGN | CHECKED | WINDMILL DREAM ONTARIO HOLDINGS LP | OTT-00250193-P0 |
| LW | PS | | scale |
| DRAWN BY | TM / AS | GROUNDWATER CROSS SECTIONS A-A' AND B-B' - PHC & VOC (PRE-REMEDATION) | 1:500 |
| | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 16 |

File name: \\exp\data\OTT\011-00250193-ND\60_Execution\65_Drawings\250193-P0 Drawings\ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM
 Last Plotted: Apr 22, 2022 10:21 AM
 Plotted by: Severa



CROSS SECTION A-A'



CROSS SECTION B-B'

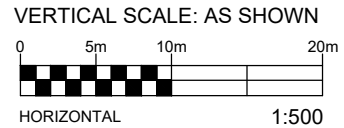
STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|-------------------------|--------------|------------------------------|------------------------------|
| Acenaphthene | Ace | 600 | 17 |
| Anthracene | An | 1 | 1 |
| Benzo(a)anthracene | B(a)A | 1.8 | 1.8 |
| Benzo(a)pyrene | B(a)P | 0.81 | 0.81 |
| Benzo(b)fluoranthene | B(b)F | 0.75 | 0.75 |
| Benzo(g,h,i)perylene | B(ghi)P | 0.2 | 0.2 |
| Benzo(k)fluoranthene | B(k)F | 0.4 | 0.4 |
| Chrysene | C | 0.7 | 0.7 |
| Dibenz(a,h)anthracene | DA | 0.4 | 0.4 |
| Fluoranthene | Fl | 73 | 44 |
| Fluorene | F | 290 | 290 |
| Indeno(1,2,3-cd)pyrene | I(123)P | 0.2 | 0.2 |
| Total Methylnaphthalene | T-MN | 1500 | 1500 |
| Naphthalene | N | 1400 | 7 |
| Phenanthrene | P | 380 | 380 |
| Pyrene | Py | 5.7 | 5.7 |

| BH/MW21-01 | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | |
|------------------|-----------|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| DATE | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py |
| 23-Mar-21 | ND (0.05) | ND (0.05) | 0.02 | 0.04 | 0.03 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.10 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | 0.09 | 0.12 |
| BH/MW21-02 | | Screen Interval 3.5 to 6.5 mbgs | | | | | | | | | | | | | | | |
| DATE | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py |
| 24-Mar-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) |
| BH/MW21-03 | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | |
| DATE | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py |
| 23-Mar-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.04 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | 0.08 |
| BH/MW21-04 | | Screen Interval 3.1 to 6.1 mbgs | | | | | | | | | | | | | | | |
| DATE | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py |
| 24-Mar-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) |
| BH/MW21-05 | | Screen Interval 3.0 to 6.0 mbgs | | | | | | | | | | | | | | | |
| DATE | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py |
| 23-Mar-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.02 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | 0.05 |
| 23-Mar-21 (D206) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.03 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | 0.05 |

LEGEND

- SAND & GRAVEL FILL
- BEDROCK
- GROUNDWATER LEVEL FROM JUNE 21, 2021
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



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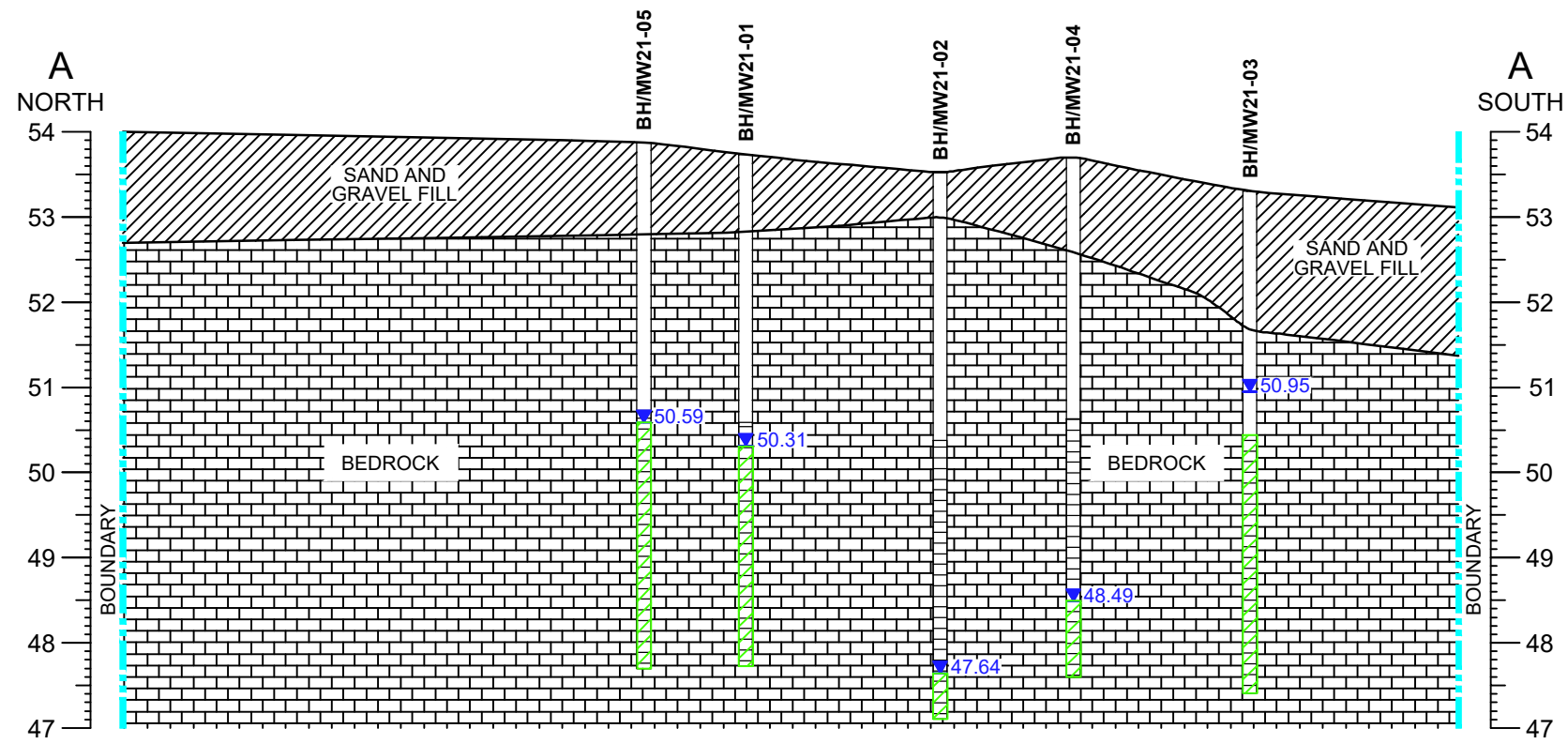
t: +1.613.688.1899 | f: +1.613.225.7337

2650 Queensview Drive, Suite 100

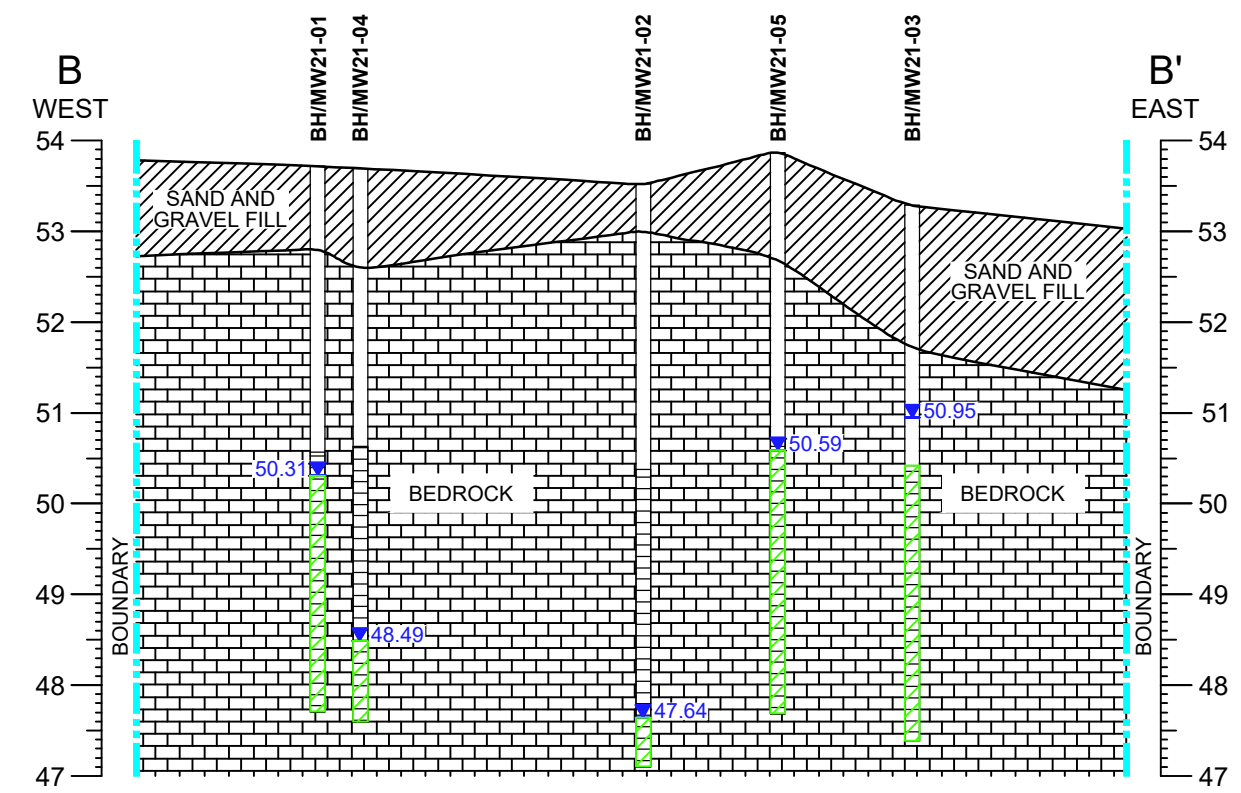
Ottawa, ON K2B 8H6, Canada

| | | | | | |
|----------|------------|---|---|-------------|-----------------|
| DATE | APRIL 2022 | CLIENT: | WINDMILL DREAM ONTARIO HOLDINGS LP | project no. | OTT-00250193-P0 |
| DESIGN | LW | CHECKED | PS | scale | 1:500 |
| DRAWN BY | TM / AS | GROUNDWATER CROSS SECTIONS A-A' AND B-B' - PAH & PCB (PRE-REMEDATION) | | | FIG 17 |
| | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO | | | |

File name: \\exp\data\011\011-00250193-NO_60_Execution\65 Drawings\250193-P0 Drawings\ph2 Sections\ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:21 AM Plotted by: Severa



CROSS SECTION A-A'



CROSS SECTION B-B'

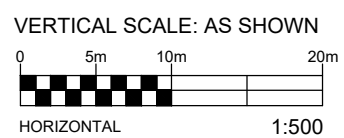
STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|---------------|--------------|------------------------------|------------------------------|
| Antimony | Sb | 16000 | 16000 |
| Arsenic | As | 1500 | 1500 |
| Barium | Ba | 23000 | 23000 |
| Beryllium | Be | 53 | 53 |
| Boron | B | 36000 | 36000 |
| Cadmium | Cd | 2.1 | 2.1 |
| Chromium | Cr | 640 | 640 |
| Chromium (VI) | Cr IV | 110 | 110 |
| Cobalt | Co | 52 | 52 |
| Copper | Cu | 69 | 69 |
| Lead | Pb | 20 | 20 |
| Mercury | Hg | 0.29 | 0.1 |
| Molybdenum | Mo | 7300 | 7300 |
| Nickel | Ni | 390 | 390 |
| Selenium | Se | 50 | 50 |
| Silver | Ag | 1.2 | 1.2 |
| Sodium | Na | 1800000 | 1800000 |
| Thalium | Tl | 400 | 400 |
| Uranium | U | 890 | 890 |
| Vanadium | V | 200 | 200 |
| Zinc | Zn | 890 | 890 |

| BH/MW21-01 | | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | | | | | |
|------------------|----------|----------------------------------|------|----------|----|----------|--------|---------|-----|-----|----------|----------|------|----|--------|----------|--------|----------|-----|----------|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Mar-21 | ND (0.5) | ND (1) | 350 | ND (0.5) | 77 | ND (0.1) | ND (1) | ND (10) | 3.4 | 1.5 | 0.4 | ND (0.1) | 5.9 | 11 | ND (1) | ND (0.1) | 884000 | ND (0.1) | 1.7 | ND (0.5) | ND (5) |
| BH/MW21-03 | | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | | | | | |
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Mar-21 | 0.9 | 2 | 161 | ND (0.5) | 61 | ND (0.1) | ND (1) | ND (10) | 1.4 | 0.9 | 0.2 | ND (0.1) | 17.8 | 23 | ND (1) | ND (0.1) | 181000 | ND (0.1) | 1.7 | 5.9 | ND (5) |
| BH/MW21-04 | | Screen Interval 3.1 to 6.1 m bgs | | | | | | | | | | | | | | | | | | | |
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 24-Mar-21 | ND (0.5) | 1 | 700 | ND (0.5) | 92 | ND (0.1) | ND (1) | ND (10) | 0.8 | 4.2 | 1.0 | ND (0.1) | 6.8 | 5 | ND (1) | ND (0.1) | 553000 | ND (0.1) | 2.6 | 1.2 | ND (5) |
| BH/MW21-05 | | Screen Interval 3.0 to 6.0 m bgs | | | | | | | | | | | | | | | | | | | |
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Mar-21 | ND (0.5) | ND (1) | 1200 | ND (0.5) | 77 | ND (0.1) | ND (1) | ND (10) | 3.7 | 2.5 | ND (0.1) | ND (0.1) | 1.4 | 6 | ND (1) | ND (0.1) | 617000 | ND (0.1) | 1.1 | ND (0.5) | 21 |
| 23-Mar-21 (D206) | ND (0.5) | ND (1) | 1160 | ND (0.5) | 76 | ND (0.1) | ND (1) | ND (10) | 3.6 | 2.3 | ND (0.1) | ND (0.1) | 1.5 | 5 | ND (1) | ND (0.1) | 606000 | 0.1 | 1.1 | ND (0.5) | 21 |

LEGEND

- SAND & GRAVEL FILL
- BEDROCK
- GROUNDWATER LEVEL FROM JUNE 21, 2021
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



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| | | | | | |
|----------|------------|--|------------------------------------|-------------|-----------------|
| DATE | APRIL 2022 | CLIENT: | WINDMILL DREAM ONTARIO HOLDINGS LP | project no. | OTT-00250193-P0 |
| DESIGN | CHECKED | GROUNDWATER CROSS SECTIONS A-A' AND B-B' - INORGANICS (PRE-REMEDICATION) | | | scale |
| LW | PS | | | | 1:500 |
| DRAWN BY | TM / AS | TITLE: 315 MIWATE PRIVATE, OTTAWA, ONTARIO | | | FIG 18 |

Filename: \\exp\data\OTT\OTT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:19 AM Plotted by: Severa



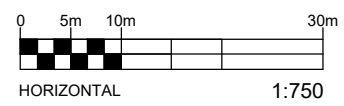
| PARAMETERS | ABBREVIATION | REG 153/04 | REG 153/04 |
|----------------------------|--------------|---------------------|---------------------|
| | | TABLE 9 STANDARD | TABLE 7 STANDARD |
| Benzene | B | 0.02 | 0.21 |
| Toluene | T | 0.2 | 2.3 |
| Ethylbenzene | E | 0.05 | 2 |
| Total Xylenes | X | 0.05 | 3.1 |
| F1 | F1 (C6-C10) | 25 | 55 |
| F2 | F2 (C10-C16) | 10 | 98 |
| F3 | F3 (C16-C34) | 240 | 300 |
| F4 | F4 (C34-C50) | 120 | 2800 |
| 1,1-Dichloroethane | 1,1-DCA | 0.05 | 3.5 |
| 1,2-Dichloroethane | 1,2-DCA | 0.05 | 0.05 |
| 1,1-Dichloroethylene | 1,1-DCE | 0.05 | 0.05 |
| Cis-1,2-Dichloroethylene | c-1,2-DCE | 0.05 | 3.4 |
| Trans-1,2-Dichloroethylene | t-1,2-DCE | 0.05 | 0.084 |
| Styrene | ST | 0.05 | 0.7 |
| Tetrachloroethylene | PCE | 0.05 | 0.28 |
| Trichloroethylene | TCE | 0.05 | 0.061 |
| Vinyl Chloride | VC | 0.02 | 0.02 |

| Sample ID | Depth (mbgs) | 13-Mar-19 | | | | | | | | | | | | | | | | |
|-----------|--------------|-----------|-----------|-----------|-----------|--------|--------|--------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC |
| SS-1 | 0.25 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 25 | 14 | - | - | - | - | - | - | - | - | - |
| Sample ID | Depth (mbgs) | 18-Mar-19 | | | | | | | | | | | | | | | | |
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC |
| SS-2 | 0.5 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | 6 | 86 | 58 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| Sample ID | Depth (mbgs) | 25-Mar-19 | | | | | | | | | | | | | | | | |
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC |
| SS-5 | 0.5 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | ND (8) | ND (6) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |

LEGEND

- PROPERTY BOUNDARY
- NORTH WALL EXCAVATION SAMPLES:**
- CONFIRMATORY SOIL SAMPLE (SUBMITTED)
- SOIL SAMPLE NOT SUBMITTED

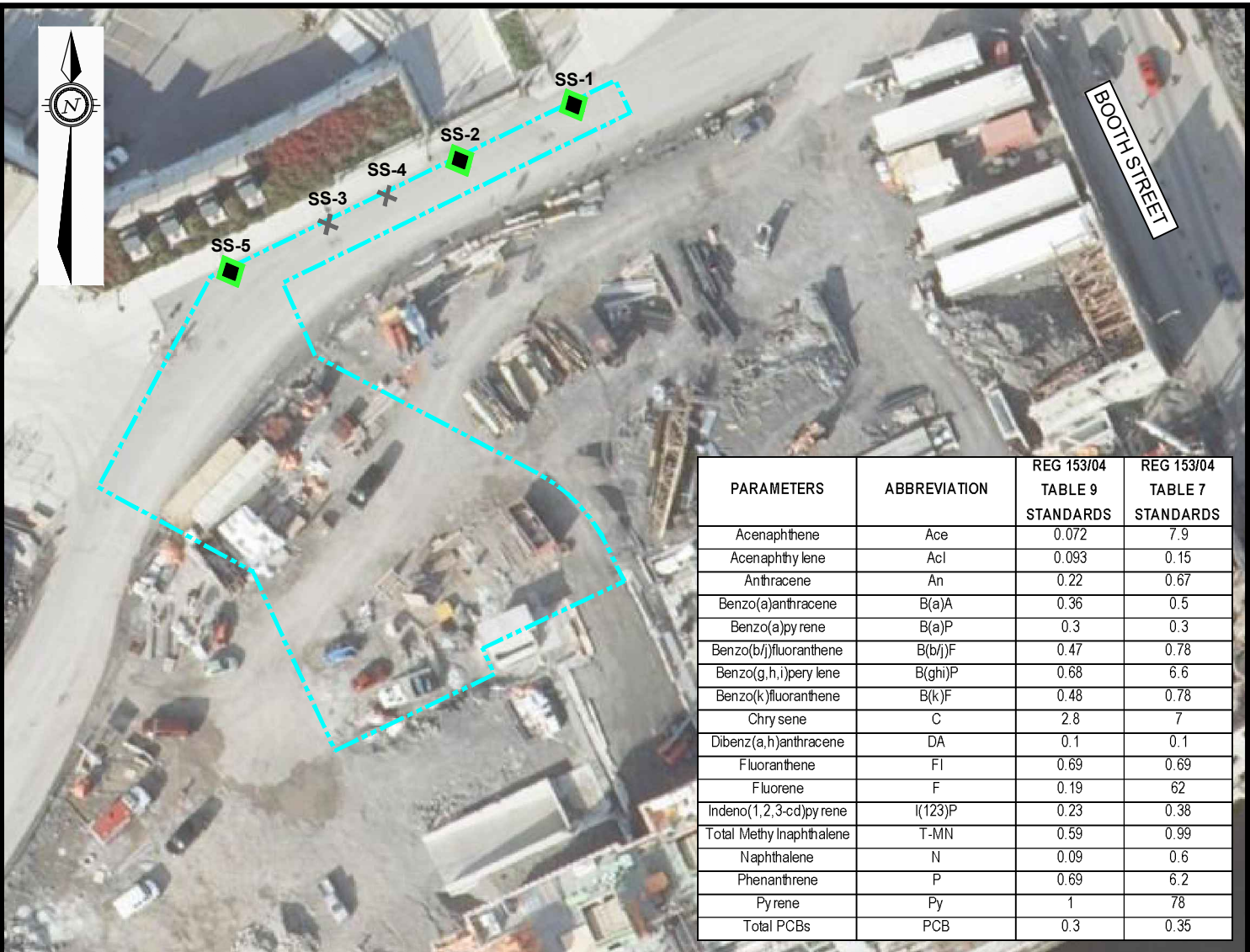
SS-1
 SOIL CONCENTRATION MEETS
 MECP TABLE 7 AND 9 SCS



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| | | |
|--------------------|---|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: SOIL ANALYTICAL RESULTS - PHC & VOC (POST-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 19 |

Filename: \\exp_data\OTT\OTT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:19 AM Plotted by: SeverA



| PARAMETERS | ABBREVIATION | REG 153/04 | REG 153/04 |
|-------------------------|--------------|----------------------|----------------------|
| | | TABLE 9 STANDARDS | TABLE 7 STANDARDS |
| Acenaphthene | Ace | 0.072 | 7.9 |
| Acenaphthylene | AcI | 0.093 | 0.15 |
| Anthracene | An | 0.22 | 0.67 |
| Benzo(a)anthracene | B(a)A | 0.36 | 0.5 |
| Benzo(a)pyrene | B(a)P | 0.3 | 0.3 |
| Benzo(b)fluoranthene | B(b)F | 0.47 | 0.78 |
| Benzo(g,h,i)perylene | B(ghi)P | 0.68 | 6.6 |
| Benzo(k)fluoranthene | B(k)F | 0.48 | 0.78 |
| Chrysene | C | 2.8 | 7 |
| Dibenz(a,h)anthracene | DA | 0.1 | 0.1 |
| Fluoranthene | Fl | 0.69 | 0.69 |
| Fluorene | F | 0.19 | 62 |
| Indeno(1,2,3-cd)pyrene | I(123)P | 0.23 | 0.38 |
| Total Methylnaphthalene | T-MN | 0.59 | 0.99 |
| Naphthalene | N | 0.09 | 0.6 |
| Phenanthrene | P | 0.69 | 6.2 |
| Pyrene | Py | 1 | 78 |
| Total PCBs | PCB | 0.3 | 0.35 |

| SS-1 | Depth (mbgs) | 13-Mar-19 | | | | | | | | | | | | | | | | | |
|------|--------------|-----------|-----------|------|-------|-------|-------|---------|-------|------|-----------|------|------|---------|-----------|-----------|------|------|-----|
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | PCB |
| | 0.25 | 0.03 | ND (0.02) | 0.06 | 0.13 | 0.1 | 0.13 | 0.07 | 0.07 | 0.14 | ND (0.02) | 0.33 | 0.03 | 0.06 | ND (0.04) | ND (0.01) | 0.25 | 0.25 | - |

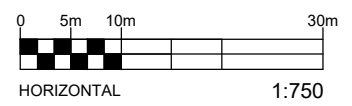
| SS-2 | Depth (mbgs) | 18-Mar-19 | | | | | | | | | | | | | | | | | |
|------|--------------|-----------|-----------|------|-------|-------|-------|---------|-------|------|-----------|------|-----------|---------|-----------|-----------|------|------|-----------|
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | PCB |
| | 0.5 | ND (0.02) | ND (0.02) | 0.03 | 0.04 | 0.04 | 0.06 | 0.04 | 0.03 | 0.04 | ND (0.02) | 0.12 | ND (0.02) | 0.03 | ND (0.04) | ND (0.01) | 0.09 | 0.09 | ND (0.05) |

| SS-5 | Depth (mbgs) | 25-Mar-19 | | | | | | | | | | | | | | | | | |
|------|--------------|-----------|-----------|-----------|-------|-----------|-------|-----------|-----------|------|-----------|------|-----------|-----------|-----------|-----------|------|------|-----------|
| | | Ace | AcI | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | PCB |
| | 0.5 | ND (0.02) | ND (0.02) | ND (0.02) | 0.02 | ND (0.02) | 0.03 | ND (0.02) | ND (0.02) | 0.03 | ND (0.02) | 0.05 | ND (0.02) | ND (0.02) | ND (0.04) | ND (0.01) | 0.04 | 0.05 | ND (0.05) |

LEGEND

- PROPERTY BOUNDARY
- NORTH WALL EXCAVATION SAMPLES:**
- CONFIRMATORY SOIL SAMPLE (SUBMITTED)
- SOIL SAMPLE NOT SUBMITTED

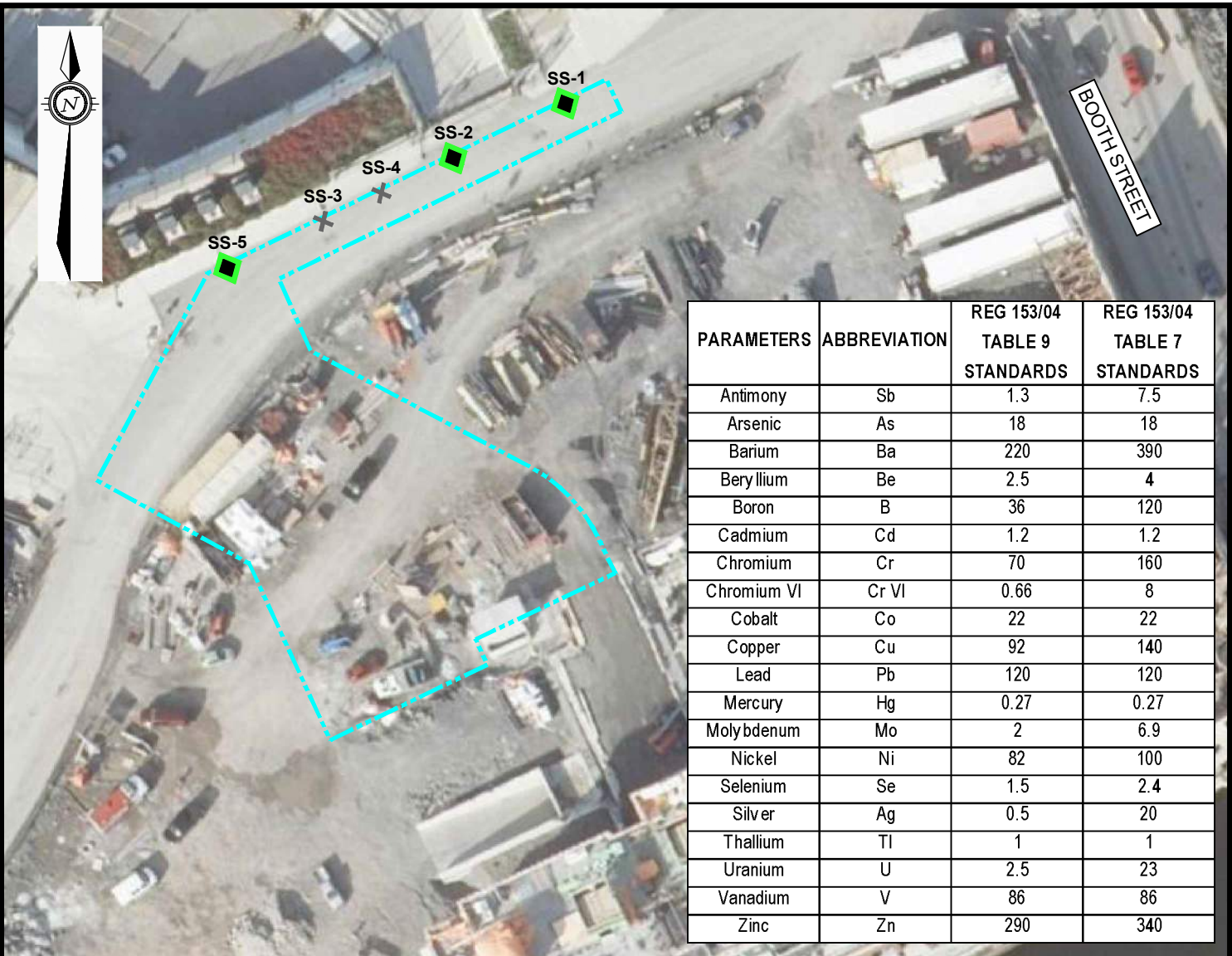
SS-1
 SOIL CONCENTRATION MEETS
 MECP TABLE 7 AND 9 SCS



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 Ottawa, ON K2B 8H6, Canada

| | | |
|--------------------|---|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: SOIL ANALYTICAL RESULTS - PAH & PCB (POST-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 20 |

Filename: \\exp\data\OTT\0TT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:20 AM Plotted by: Severa



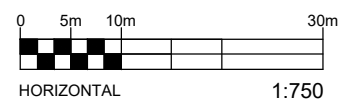
| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|-------------|--------------|------------------------------------|------------------------------------|
| Antimony | Sb | 1.3 | 7.5 |
| Arsenic | As | 18 | 18 |
| Barium | Ba | 220 | 390 |
| Beryllium | Be | 2.5 | 4 |
| Boron | B | 36 | 120 |
| Cadmium | Cd | 1.2 | 1.2 |
| Chromium | Cr | 70 | 160 |
| Chromium VI | Cr VI | 0.66 | 8 |
| Cobalt | Co | 22 | 22 |
| Copper | Cu | 92 | 140 |
| Lead | Pb | 120 | 120 |
| Mercury | Hg | 0.27 | 0.27 |
| Molybdenum | Mo | 2 | 6.9 |
| Nickel | Ni | 82 | 100 |
| Selenium | Se | 1.5 | 2.4 |
| Silver | Ag | 0.5 | 20 |
| Thallium | Tl | 1 | 1 |
| Uranium | U | 2.5 | 23 |
| Vanadium | V | 86 | 86 |
| Zinc | Zn | 290 | 340 |

| Sample ID | Depth (mbgs) | 13-Mar-19 | | | | | | | | | | | | | | | | | | | |
|-----------|--------------|-----------|-----|------|----------|------|----------|------|----------|-----|------|------|----------|----------|------|----------|----------|----------|----------|------|-----------|
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| SS-1 | 0.25 | ND (1.0) | 2.2 | 61.3 | ND (0.5) | 8.3 | ND (0.5) | 9.9 | ND (0.2) | 3.9 | 8.3 | 51.5 | ND (0.1) | ND (1.0) | 9.5 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 14.3 | ND (20.0) |
| Sample ID | Depth (mbgs) | 18-Mar-19 | | | | | | | | | | | | | | | | | | | |
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| SS-2 | 0.5 | ND (1.0) | 2.8 | 156 | ND (0.5) | 12.5 | ND (0.5) | 14.6 | ND (0.2) | 7.0 | 14.1 | 12.6 | ND (0.1) | 1.3 | 15.2 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 10.9 | 22.0 |
| Sample ID | Depth (mbgs) | 25-Mar-19 | | | | | | | | | | | | | | | | | | | |
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| SS-5 | 0.5 | ND (1.0) | 4.1 | 158 | ND (0.5) | 11.3 | ND (0.5) | 12.1 | ND (0.2) | 6.5 | 8.0 | 11.9 | ND (0.1) | 1.8 | 13.7 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 12.5 | 24.0 |

LEGEND

- PROPERTY BOUNDARY
- NORTH WALL EXCAVATION SAMPLES:**
- CONFIRMATORY SOIL SAMPLE (SUBMITTED)
- SOIL SAMPLE NOT SUBMITTED

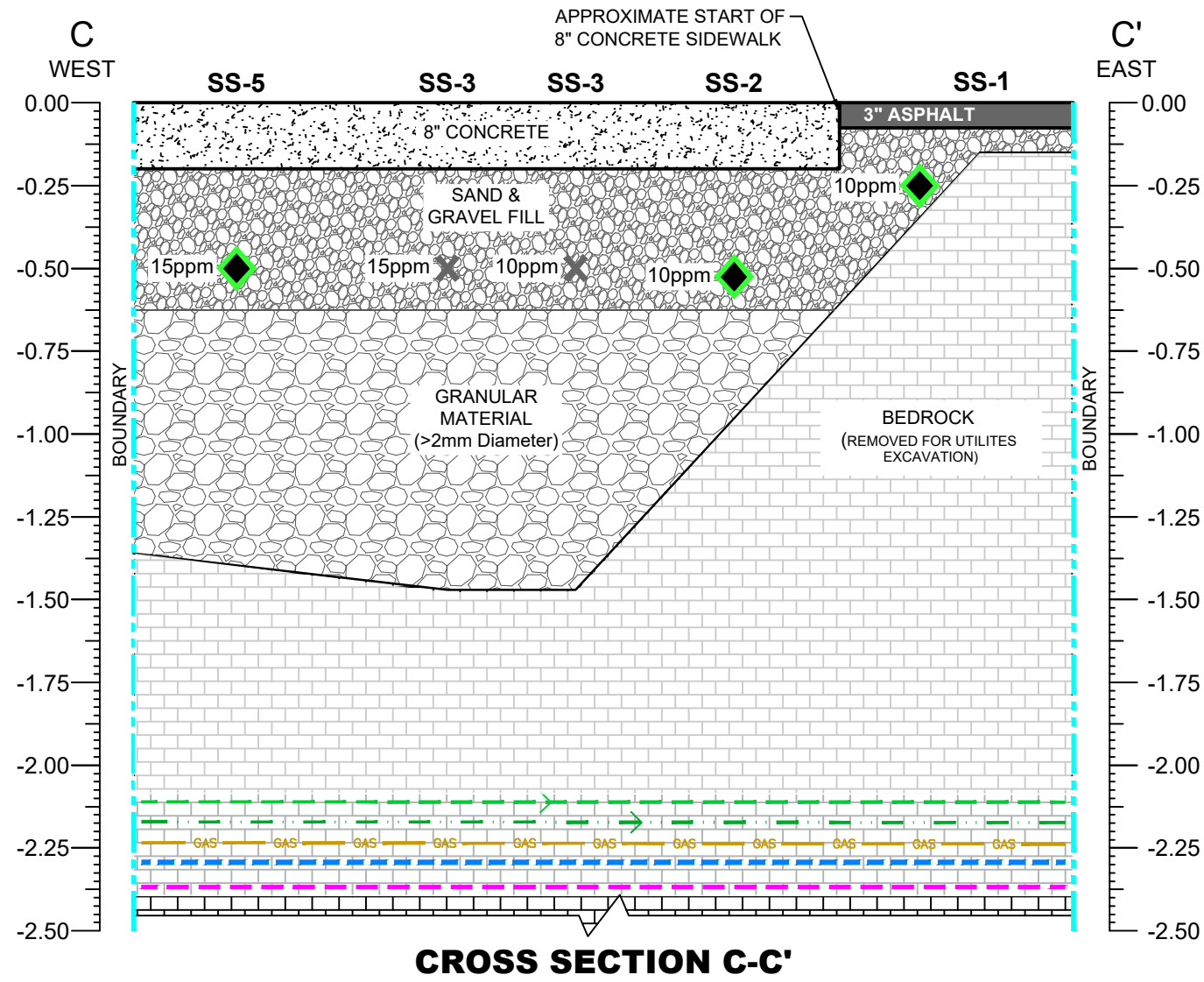
SS-1
 SOIL CONCENTRATION MEETS
 MECF TABLE 7 AND 9 SCS



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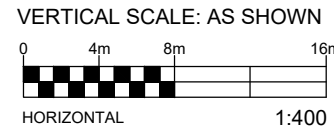
| | | |
|--------------------|--|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: SOIL ANALYTICAL RESULTS - INORGANICS (POST-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 21 |

File name: \\exp\data\OTT\OTT-00250193-ND\60_Execution\65 Drawings\250193-P0 Drawings\ph2 Sections\ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:21 AM Plotted by: SeverA



UTILITIES LEGEND:

- WASTEWATER - STORM
- WASTEWATER - SANITARY
- WATER
- HYDRO
- NATURAL GAS



| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARD | REG 153/04 TABLE 7 STANDARD |
|----------------------------|--------------|-----------------------------|-----------------------------|
| Benzene | B | 0.02 | 0.21 |
| Toluene | T | 0.2 | 2.3 |
| Ethylbenzene | E | 0.05 | 2 |
| Total Xylenes | X | 0.05 | 3.1 |
| F1 | F1 (C6-C10) | 25 | 55 |
| F2 | F2 (C10-C16) | 10 | 98 |
| F3 | F3 (C16-C34) | 240 | 300 |
| F4 | F4 (C34-C50) | 120 | 2800 |
| 1,1-Dichloroethane | 1,1-DCA | 0.05 | 3.5 |
| 1,2-Dichloroethane | 1,2-DCA | 0.05 | 0.05 |
| 1,1-Dichloroethylene | 1,1-DCE | 0.05 | 0.05 |
| Cis-1,2-Dichloroethylene | c-1,2-DCE | 0.05 | 3.4 |
| Trans-1,2-Dichloroethylene | t-1,2-DCE | 0.05 | 0.084 |
| Styrene | ST | 0.05 | 0.7 |
| Tetrachloroethylene | PCE | 0.05 | 0.28 |
| Trichloroethylene | TCE | 0.05 | 0.061 |
| Vinyl Chloride | VC | 0.02 | 0.02 |

| SS-1 | Depth (mbgs) | 13-Mar-19 | | | | | | | | | | | | | | | | |
|------|--------------|-----------|-----------|-----------|-----------|--------|--------|--------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC |
| | 0.25 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | 25 | 14 | - | - | - | - | - | - | - | - | - |
| SS-2 | Depth (mbgs) | 18-Mar-19 | | | | | | | | | | | | | | | | |
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC |
| | 0.5 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | 6 | 86 | 58 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |
| SS-5 | Depth (mbgs) | 25-Mar-19 | | | | | | | | | | | | | | | | |
| | | B | T | E | X | F1 | F2 | F3 | F4 | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | ST | PCE | TCE | VC |
| | 0.5 | ND (0.02) | ND (0.05) | ND (0.05) | ND (0.05) | ND (7) | ND (4) | ND (8) | ND (6) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.02) |

LEGEND

| | | | |
|--|----------|--|----------------------------|
| | CONCRETE | | GRANULAR MATERIAL (>2mm Ø) |
| | ASPHALT | | SAND AND GRAVEL FILL |

NORTH WALL EXCAVATION SAMPLES:

- ◆ CONFIRMATORY SOIL SAMPLE (SUBMITTED)
- ✕ SOIL SAMPLE NOT SUBMITTED
- SS-1 ◆ SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS

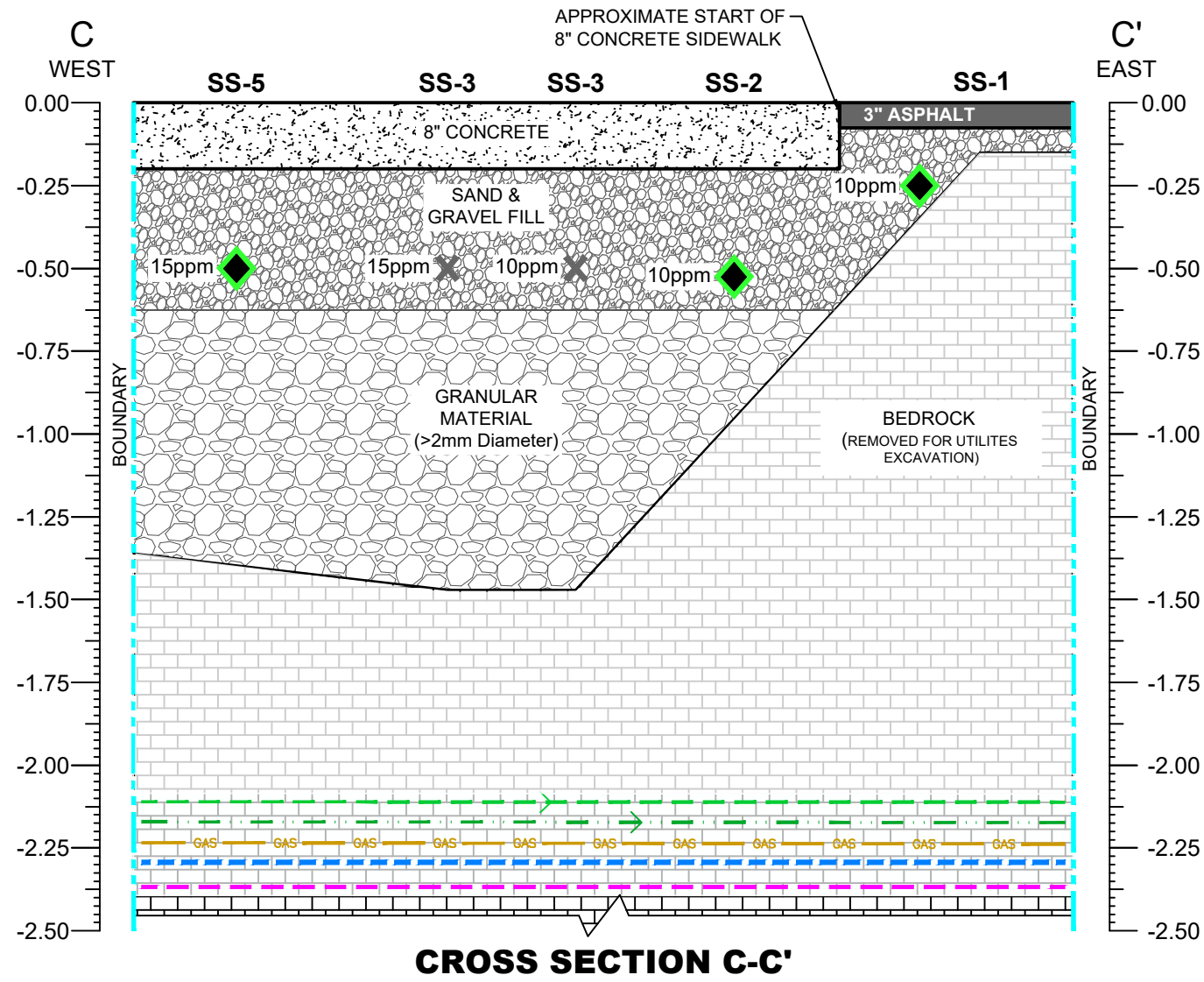


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| | | |
|---------------------|--|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:400 |
| DRAWN BY TM / AS | TITLE: SOIL ANALYTICAL RESULTS CROSS SECTION C-C' - PHC & VOC (POST-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 22 |

File: \\exp\data\OTT\OTT-00250193-NO\60_Execution\65_Drawings\250193-PO Drawings\ph2 Sections\ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:22 AM Plotted by: SeverA



| SS-1 | Depth (mbgs) | 13-Mar-19 | | | | | | | | | | | | | | | | | |
|------|--------------|-----------|-----------|-----------|-------|-----------|---------|-----------|-----------|------|-----------|------|-----------|-----------|-----------|-----------|------|------|-----------|
| | | Ace | Acl | An | B(a)A | B(a)P | B(b/j)F | B(ghi)P | B(k)F | C | DA | FI | F | I(123)P | T-MN | N | P | Py | PCB |
| | 0.25 | 0.03 | ND (0.02) | 0.06 | 0.13 | 0.1 | 0.13 | 0.07 | 0.07 | 0.14 | ND (0.02) | 0.33 | 0.03 | 0.06 | ND (0.04) | ND (0.01) | 0.25 | 0.25 | - |
| SS-2 | Depth (mbgs) | 18-Mar-19 | | | | | | | | | | | | | | | | | |
| | | Ace | Acl | An | B(a)A | B(a)P | B(b/j)F | B(ghi)P | B(k)F | C | DA | FI | F | I(123)P | T-MN | N | P | Py | PCB |
| | 0.5 | ND (0.02) | ND (0.02) | 0.03 | 0.04 | 0.04 | 0.06 | 0.04 | 0.03 | 0.04 | ND (0.02) | 0.12 | ND (0.02) | 0.03 | ND (0.04) | ND (0.01) | 0.09 | 0.09 | ND (0.05) |
| SS-5 | Depth (mbgs) | 25-Mar-19 | | | | | | | | | | | | | | | | | |
| | | Ace | Acl | An | B(a)A | B(a)P | B(b/j)F | B(ghi)P | B(k)F | C | DA | FI | F | I(123)P | T-MN | N | P | Py | PCB |
| | 0.5 | ND (0.02) | ND (0.02) | ND (0.02) | 0.02 | ND (0.02) | 0.03 | ND (0.02) | ND (0.02) | 0.03 | ND (0.02) | 0.05 | ND (0.02) | ND (0.02) | ND (0.04) | ND (0.01) | 0.04 | 0.05 | ND (0.05) |

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|-------------------------|--------------|------------------------------|------------------------------|
| Acenaphthene | Ace | 0.072 | 7.9 |
| Acenaphthylene | Acl | 0.093 | 0.15 |
| Anthracene | An | 0.22 | 0.67 |
| Benzo(a)anthracene | B(a)A | 0.36 | 0.5 |
| Benzo(a)pyrene | B(a)P | 0.3 | 0.3 |
| Benzo(b/j)fluoranthene | B(b/j)F | 0.47 | 0.78 |
| Benzo(g,h,i)perylene | B(ghi)P | 0.68 | 6.6 |
| Benzo(k)fluoranthene | B(k)F | 0.48 | 0.78 |
| Chrysene | C | 2.8 | 7 |
| Dibenz(a,h)anthracene | DA | 0.1 | 0.1 |
| Fluoranthene | FI | 0.69 | 0.69 |
| Fluorene | F | 0.19 | 62 |
| Indeno(1,2,3-cd)pyrene | I(123)P | 0.23 | 0.38 |
| Total Methylnaphthalene | T-MN | 0.59 | 0.99 |
| Naphthalene | N | 0.09 | 0.6 |
| Phenanthrene | P | 0.69 | 6.2 |
| Pyrene | Py | 1 | 78 |
| Total PCBs | PCB | 0.3 | 0.35 |

LEGEND

- CONCRETE
- ASPHALT
- GRANULAR MATERIAL (>2mm Ø)
- SAND AND GRAVEL FILL

NORTH WALL EXCAVATION SAMPLES:

- CONFIRMATORY SOIL SAMPLE (SUBMITTED)
- SOIL SAMPLE NOT SUBMITTED
- SS-1** SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS

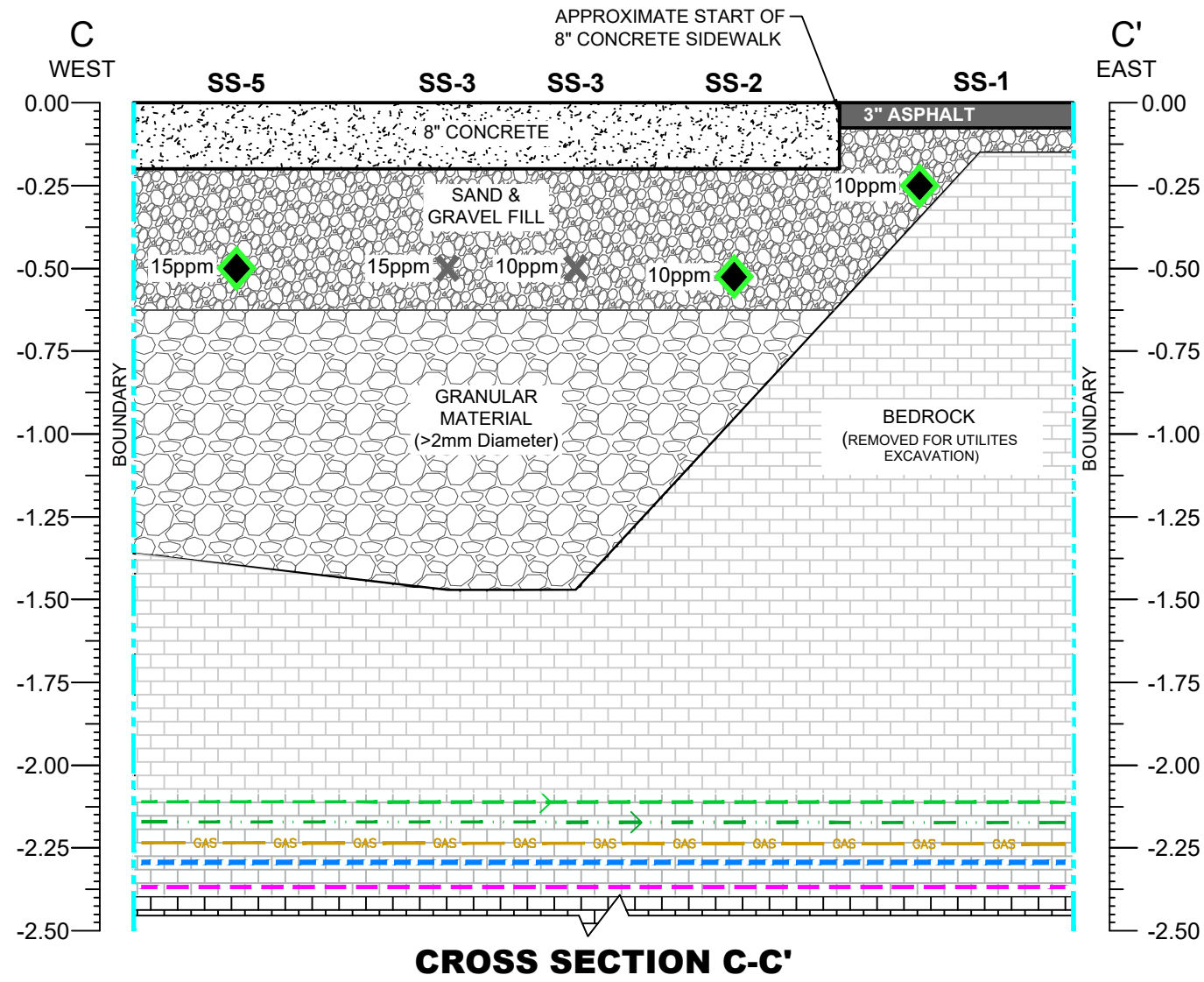


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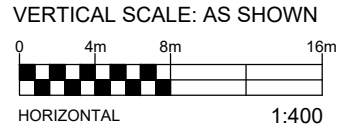
| | | |
|---------------------|--|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:400 |
| DRAWN BY TM / AS | TITLE: SOIL ANALYTICAL RESULTS CROSS SECTION C-C' - PAH & PCB (POST-REMEDIATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 23 |

File name: \\exp\data\OTT\OTT-00250193-ND\60_Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:22 AM Plotted by: SeverA



UTILITIES LEGEND:

- WASTEWATER - STORM
- WASTEWATER - SANITARY
- WATER
- HYDRO
- NATURAL GAS



| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|-------------|--------------|------------------------------|------------------------------|
| Antimony | Sb | 1.3 | 7.5 |
| Arsenic | As | 18 | 18 |
| Barium | Ba | 220 | 390 |
| Beryllium | Be | 2.5 | 4 |
| Boron | B | 36 | 120 |
| Cadmium | Cd | 1.2 | 1.2 |
| Chromium | Cr | 70 | 160 |
| Chromium VI | Cr VI | 0.66 | 8 |
| Cobalt | Co | 22 | 22 |
| Copper | Cu | 92 | 140 |
| Lead | Pb | 120 | 120 |
| Mercury | Hg | 0.27 | 0.27 |
| Molybdenum | Mo | 2 | 6.9 |
| Nickel | Ni | 82 | 100 |
| Selenium | Se | 1.5 | 2.4 |
| Silver | Ag | 0.5 | 20 |
| Thallium | Tl | 1 | 1 |
| Uranium | U | 2.5 | 23 |
| Vanadium | V | 86 | 86 |

| SS-1 | Depth (mbgs) | 13-Mar-19 | | | | | | | | | | | | | | | | | | | |
|------|--------------|-----------|-----|------|----------|------|----------|------|----------|-----|------|------|----------|----------|------|----------|----------|----------|----------|------|-----------|
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| | 0.25 | ND (1.0) | 2.2 | 61.3 | ND (0.5) | 8.3 | ND (0.5) | 9.9 | ND (0.2) | 3.9 | 8.3 | 51.5 | ND (0.1) | ND (1.0) | 9.5 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 14.3 | ND (20.0) |
| SS-2 | Depth (mbgs) | 18-Mar-19 | | | | | | | | | | | | | | | | | | | |
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| | 0.5 | ND (1.0) | 2.8 | 156 | ND (0.5) | 12.5 | ND (0.5) | 14.6 | ND (0.2) | 7.0 | 14.1 | 12.6 | ND (0.1) | 1.3 | 15.2 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 10.9 | 22.0 |
| SS-5 | Depth (mbgs) | 25-Mar-19 | | | | | | | | | | | | | | | | | | | |
| | | Sb | As | Ba | Be | B | Cd | Cr | Cr VI | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Tl | U | V | Zn |
| | 0.5 | ND (1.0) | 4.1 | 158 | ND (0.5) | 11.3 | ND (0.5) | 12.1 | ND (0.2) | 6.5 | 8.0 | 11.9 | ND (0.1) | 1.8 | 13.7 | ND (1.0) | ND (0.3) | ND (1.0) | ND (1.0) | 12.5 | 24.0 |

LEGEND

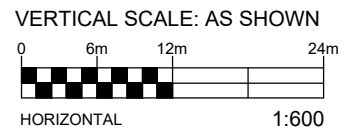
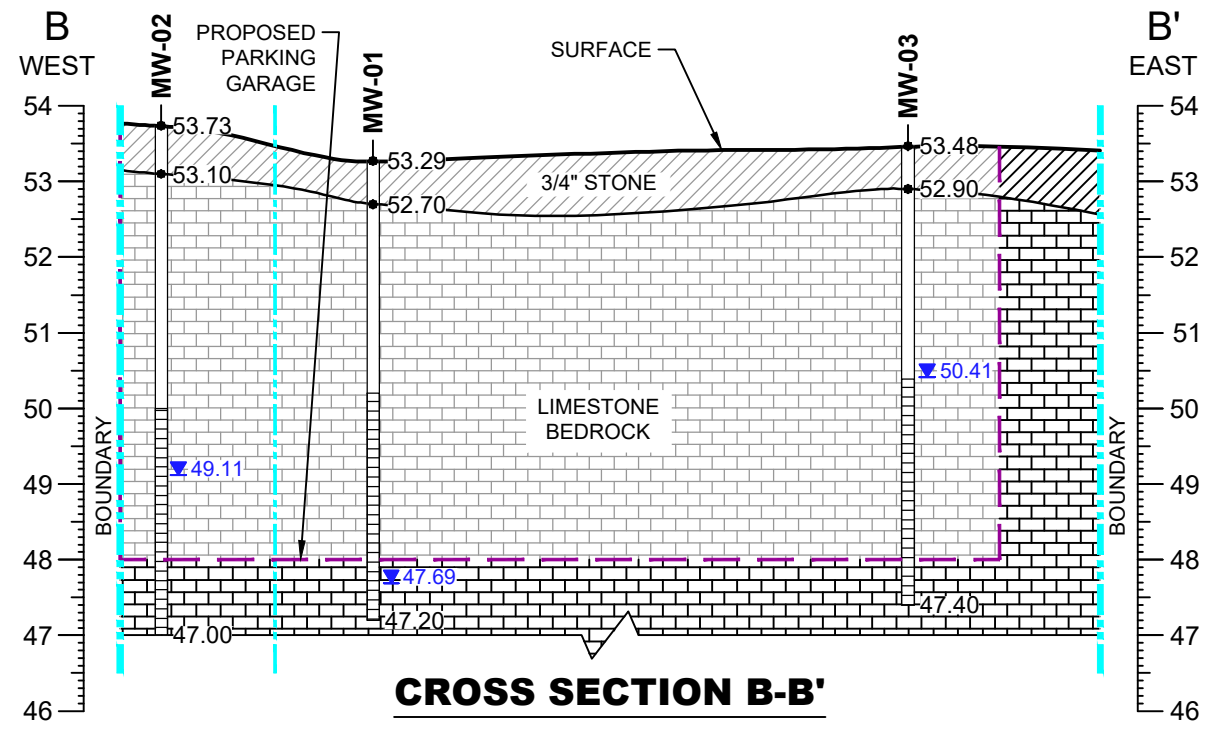
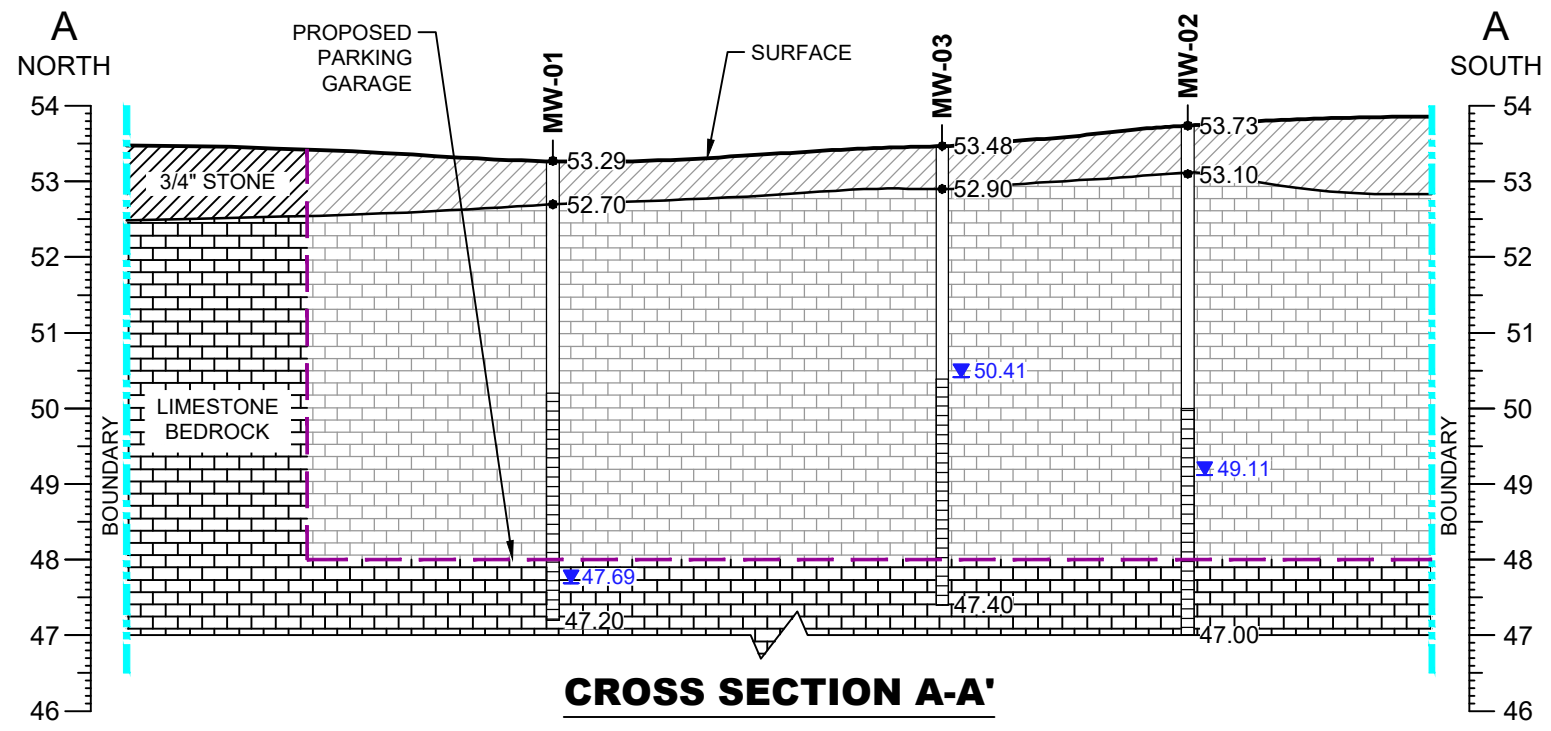
| | | | |
|--|----------|--|----------------------------|
| | CONCRETE | | GRANULAR MATERIAL (>2mm Ø) |
| | ASPHALT | | SAND AND GRAVEL FILL |

- NORTH WALL EXCAVATION SAMPLES:**
- CONFIRMATORY SOIL SAMPLE (SUBMITTED)
 - SOIL SAMPLE NOT SUBMITTED
 - SS-1**
 SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS

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| | | |
|---------------------|--|---|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:400 |
| DRAWN BY TM / AS | | TITLE: SOIL ANALYTICAL RESULTS CROSS SECTION C-C' - INORGANICS (POST-REMEDIATION) |
| | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO |
| | | FIG 24 |

File name: \\exp\data\OTT\011-00250193-NO\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 Plotted by: SeverA
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:22 AM



LEGEND

- 3/4" STONE
- BEDROCK
- GROUNDWATER LEVEL FROM FEBRUARY 2022



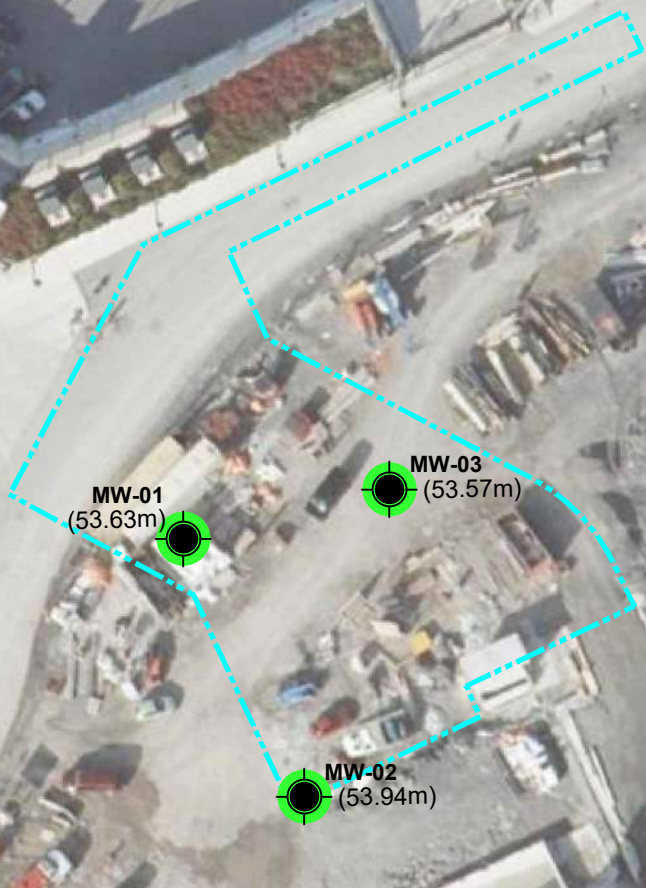
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| | | |
|---------------------|--|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:600 |
| DRAWN BY TM / AS | TITLE: CROSS SECTIONS A-A' AND B-B' (POST-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 25 |

Filename: \\exp_data\OTT\OTT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:20 AM Plotted by: Severa



BOTH STREET



| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|----------------------------|--------------|------------------------------------|------------------------------------|
| Benzene | B | 44 | 0.5 |
| Toluene | T | 14000 | 320 |
| Ethyl benzene | E | 1800 | 54 |
| Total Xylenes | X | 3300 | 72 |
| F1 | F1 (C6-C10) | 420 | 420 |
| F2 | F2 (C10-C16) | 150 | 150 |
| F3 | F3 (C16-C34) | 500 | 500 |
| F4 | F4 (C34-C50) | 500 | 500 |
| Chloroform | CF | 2.4 | 2 |
| 1,1-Dichloroethane | 1,1-DCA | 320 | 11 |
| 1,2-Dichloroethane | 1,2-DCA | 1.6 | 0.5 |
| 1,1-Dichloroethylene | 1,1-DCE | 1.6 | 0.5 |
| Cis-1,2-Dichloroethylene | c-1,2-DCE | 1.6 | 1.6 |
| Trans-1,2-Dichloroethylene | t-1,2-DCE | 1.6 | 1.6 |
| Tetrachloroethylene | PCE | 1.6 | 0.5 |
| Trichloroethylene | TCE | 1.6 | 0.5 |
| Vinyl Chloride | VC | 0.5 | 0.5 |

| BH/MW21-01 | | Screen Interval 3.0 to 6.1 mbs | | | | | | | | | | | | | | | | |
|------------|----------|--------------------------------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|----------|
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC | |
| 31-Aug-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 12-Jan-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |

| BH/MW21-02 | | Screen Interval 3.6 to 6.7 mbs | | | | | | | | | | | | | | | | |
|----------------|----------|--------------------------------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|----------|
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC | |
| 23-Aug-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 6-Jan-22 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 6-Jan-22 (Dup) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |

| BH/MW21-03 | | Screen Interval 3.0 to 6.1 mbs | | | | | | | | | | | | | | | | |
|------------|----------|--------------------------------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|----------|
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC | |
| 23-Aug-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 23-Aug-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 19-Jan-22 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |

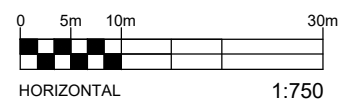
LEGEND

PROPERTY BOUNDARY

MW-01
(53.63m)

POST-REMEDIATION MONITORING
WELL NAME AND LOCATION
(GROUND ELEVATION)

SOIL CONCENTRATION MEETS
MECP TABLE 7 AND 9 SCS



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| | | |
|---------------------------|---|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: GROUNDWATER ANALYTICAL RESULTS - PHC & VOC (POST-REMEDIATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 26 |

Filename: \\exp_data\OTT\OTT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:20 AM Plotted By: Severa



BOTH STREET



| PARAMETERS | ABBREVIATION | REG 153/04 | REG 153/04 |
|-------------------------|--------------|----------------------|----------------------|
| | | TABLE 9 STANDARDS | TABLE 7 STANDARDS |
| Acenaphthene | Ace | 600 | 17 |
| Anthracene | An | 1 | 1 |
| Benzo(a)anthracene | B(a)A | 1.8 | 1.8 |
| Benzo(a)pyrene | B(a)P | 0.81 | 0.81 |
| Benzo(b)fluoranthene | B(b)F | 0.75 | 0.75 |
| Benzo(g,h,i)perylene | B(ghi)P | 0.2 | 0.2 |
| Benzo(k)fluoranthene | B(k)F | 0.4 | 0.4 |
| Chrysene | C | 0.7 | 0.7 |
| Dibenz(a,h)anthracene | DA | 0.4 | 0.4 |
| Fluoranthene | Fl | 73 | 44 |
| Fluorene | F | 290 | 290 |
| Indeno(1,2,3-cd)pyrene | I(123)P | 0.2 | 0.2 |
| Total Methylnaphthalene | T-MN | 1500 | 1500 |
| Naphthalene | N | 1400 | 7 |
| Phenanthrene | P | 380 | 380 |
| Pyrene | Py | 5.7 | 5.7 |

| BH/MW21-01 | | | | | | | | | | | | | | | | | Screen Interval 3.0 to 6.1 mbgs | | | |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|-----------|-----------|-----------|---------------------------------|-----------|-----------|--|
| DATE | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | PCB | | |
| 14-Sep-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.06 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | 0.05 | 0.05 | ND (0.05) | |
| 16-Feb-22 | ND (0.05) | ND (0.05) | 0.01 | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.05 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | 0.05 | 0.05 | ND (0.05) | | |

| BH/MW21-02 | | | | | | | | | | | | | | | | | Screen Interval 3.6 to 6.7 mbgs | | | |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------------------|-----------|--|--|
| DATE | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | PCB | | |
| 23-Aug-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.10) | | |
| 12-Jan-22 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | | |
| 12-Jan-22 (Dup) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | | |

| BH/MW21-03 | | | | | | | | | | | | | | | | | Screen Interval 3.0 to 6.1 mbgs | | | |
|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------------------------|-----------|--|--|
| DATE | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | Fl | F | I(123)P | T-MN | N | P | Py | PCB | | |
| 23-Aug-21 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | | |
| 23-Aug-21 (Dup) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | | |
| 19-Jan-22 | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | | |

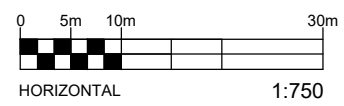
LEGEND

PROPERTY BOUNDARY

MW-01
(53.63m)

POST-REMEDIATION MONITORING WELL NAME AND LOCATION (GROUND ELEVATION)

SOIL CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS



EXP Services Inc. www.exp.com
 t: +1.613.688.1899 | f: +1.613.225.7337
 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

| | | |
|---------------------------|--|---------------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: GROUNDWATER ANALYTICAL RESULTS - PAH & PCB (POST-REMEDIATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 27 |

Filename: \\exp_data\OTT\OTT-00250193-ND\60 Execution\65 Drawings\250193-P0 Drawings\ph2\250193-P0 West Chaudière ph2.dwg
 Last Saved: Apr 22, 2022 10:16 AM Last Plotted: Apr 22, 2022 10:20 AM Plotted By: Severa



BOTH STREET



| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|---------------|--------------|------------------------------------|------------------------------------|
| Antimony | Sb | 16000 | 16000 |
| Arsenic | As | 1500 | 1500 |
| Barium | Ba | 23000 | 23000 |
| Beryllium | Be | 53 | 53 |
| Boron | B | 36000 | 36000 |
| Cadmium | Cd | 2.1 | 2.1 |
| Chromium | Cr | 640 | 640 |
| Chromium (VI) | Cr IV | 110 | 110 |
| Cobalt | Co | 52 | 52 |
| Copper | Cu | 69 | 69 |
| Lead | Pb | 20 | 20 |
| Mercury | Hg | 0.29 | 0.1 |
| Molybdenum | Mo | 7300 | 7300 |
| Nickel | Ni | 390 | 390 |
| Selenium | Se | 50 | 50 |
| Silver | Ag | 1.2 | 1.2 |
| Sodium | Na | 1800000 | 1800000 |
| Thallium | Tl | 400 | 400 |
| Uranium | U | 330 | 330 |
| Vanadium | V | 200 | 200 |
| Zinc | Zn | 890 | 890 |

| BH/MW21-01 | | Screen Interval 3.0 to 6.1 mbgs | | | | | | | | | | | | | | | | | | | |
|-----------------|----------|---------------------------------|-----|----------|-----|----------|--------|---------|----------|-----|----------|----------|-----|----|--------|----------|--------|----------|-----|----------|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 31-Aug-21 | ND (0.5) | ND (1) | 644 | ND (0.5) | 698 | ND (0.1) | ND (1) | ND (10) | 0.9 | 2.0 | ND (0.1) | ND (0.1) | 5.4 | 4 | ND (1) | ND (0.1) | 348000 | ND (0.1) | 1.0 | ND (0.5) | 11 |
| 21-Dec-21 | ND (0.5) | ND (1) | 595 | ND (0.5) | 747 | ND (0.1) | ND (1) | ND (10) | ND (0.5) | 1.2 | ND (0.1) | ND (0.1) | 3.5 | 4 | ND (1) | ND (0.1) | 342000 | ND (0.1) | 1.2 | ND (0.5) | ND (5) |
| 21-Dec-21 (Dup) | ND (0.5) | ND (1) | 615 | ND (0.5) | 748 | ND (0.1) | ND (1) | ND (10) | ND (0.5) | 1.1 | ND (0.1) | ND (0.1) | 3.5 | 4 | ND (1) | ND (0.1) | 348000 | ND (0.1) | 1.2 | ND (0.5) | ND (5) |

| BH/MW21-02 | | Screen Interval 3.6 to 6.7 mbgs | | | | | | | | | | | | | | | | | | | |
|------------|----------|---------------------------------|-----|----------|-----|----------|--------|---------|-----|----------|----------|----------|-----|----|--------|----------|--------|----------|------|----------|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Aug-21 | ND (0.5) | ND (1) | 225 | ND (0.5) | 217 | ND (0.1) | ND (1) | ND (10) | 1.3 | ND (0.5) | ND (0.1) | ND (0.1) | 2.1 | 3 | ND (1) | ND (0.1) | 648000 | ND (0.1) | 0.3 | 0.7 | ND (5) |
| 22-Dec-21 | ND (0.5) | ND (1) | 179 | ND (0.5) | 222 | ND (0.1) | ND (1) | ND (10) | 0.5 | 1.2 | ND (0.1) | ND (0.1) | 4.9 | 4 | ND (1) | ND (0.1) | 462000 | ND (0.1) | 11.8 | ND (0.5) | ND (5) |

| BH/MW21-03 | | Screen Interval 3.0 to 6.1 mbgs | | | | | | | | | | | | | | | | | | | |
|-----------------|----------|---------------------------------|-----|----------|-----|----------|--------|---------|-----|----------|----------|----------|-----|----|--------|----------|--------|----------|-----|-----|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Aug-21 | ND (0.5) | 4 | 210 | ND (0.5) | 143 | ND (0.1) | ND (1) | ND (10) | 1.9 | 0.9 | ND (0.1) | ND (0.1) | 5.0 | 6 | ND (1) | ND (0.1) | 632000 | ND (0.1) | 9.2 | 1.7 | 7 |
| 23-Aug-21 (Dup) | ND (0.5) | ND (1) | 226 | ND (0.5) | 213 | ND (0.1) | ND (1) | ND (10) | 1.2 | ND (0.5) | ND (0.1) | ND (0.1) | 2.1 | 3 | ND (1) | ND (0.1) | 630000 | ND (0.1) | 0.3 | 0.7 | ND (5) |
| 19-Jan-22 | ND (0.5) | ND (1) | 195 | ND (0.5) | 94 | ND (0.1) | ND (1) | ND (10) | 0.6 | ND (0.5) | ND (0.1) | ND (0.1) | 1.7 | 3 | ND (1) | ND (0.1) | 463000 | ND (0.1) | 3.3 | 0.5 | ND (5) |

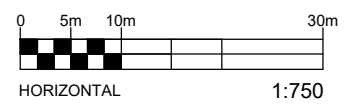
LEGEND

PROPERTY BOUNDARY

MW-01
(53.63m)

POST-REMEDIAL MONITORING
WELL NAME AND LOCATION
(GROUND ELEVATION)

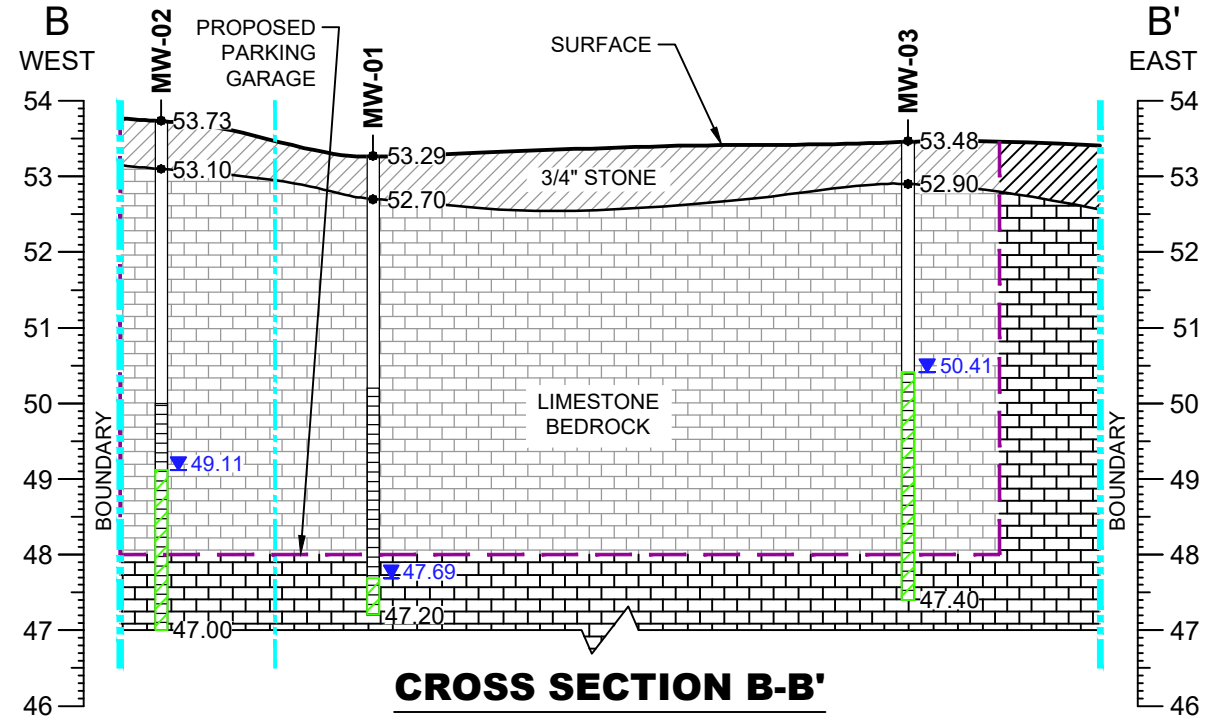
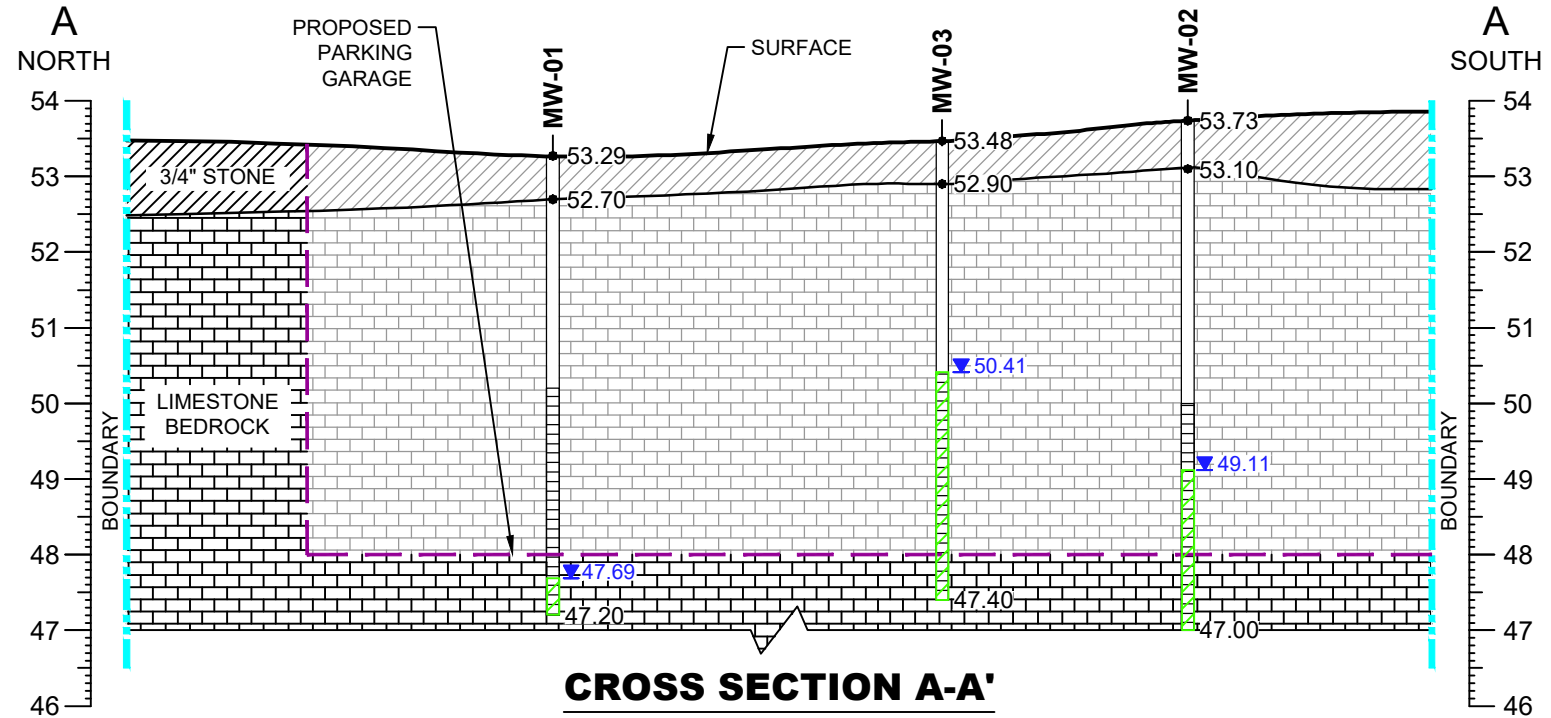
SOIL CONCENTRATION MEETS
MECP TABLE 7 AND 9 SCS



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| | | |
|---------------------------|---|--------------------------------|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:750 |
| DRAWN BY AS | TITLE: GROUNDWATER ANALYTICAL RESULTS - INORGANICS (POST-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO | FIG 28 |

File name: \\exp\data\OTT\OTT-00250193-ND\60_Execution\65_Drawings\250193-P0_Drawings\p2_250193-P0_West_Chaudière_ph2_Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:22 AM Plotted by: Severa



STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|----------------------------|--------------|------------------------------|------------------------------|
| Benzene | B | 44 | 0.5 |
| Toluene | T | 14000 | 320 |
| Ethylbenzene | E | 1800 | 54 |
| Total Xylenes | X | 3300 | 72 |
| F1 | F1 (C6-C10) | 420 | 420 |
| F2 | F2 (C10-C16) | 150 | 150 |
| F3 | F3 (C16-C34) | 500 | 500 |
| F4 | F4 (C34-C50) | 500 | 500 |
| Chloroform | CF | 2.4 | 2 |
| 1,1-Dichloroethane | 1,1-DCA | 320 | 11 |
| 1,2-Dichloroethane | 1,2-DCA | 1.6 | 0.5 |
| 1,1-Dichloroethylene | 1,1-DCE | 1.6 | 0.5 |
| Cis-1,2-Dichloroethylene | c-1,2-DCE | 1.6 | 1.6 |
| Trans-1,2-Dichloroethylene | t-1,2-DCE | 1.6 | 1.6 |
| Tetrachloroethylene | PCE | 1.6 | 0.5 |
| Trichloroethylene | TCE | 1.6 | 0.5 |
| Vinyl Chloride | VC | 0.5 | 0.5 |

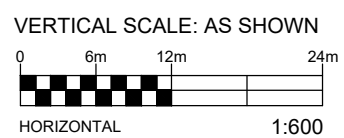
| BH/MW21-01 | Screen Interval 3.0 to 6.1 mbgs | | | | | | | | | | | | | | | | |
|------------|---------------------------------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 31-Aug-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 12-Jan-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |

| BH/MW21-02 | Screen Interval 3.6 to 6.7 mbgs | | | | | | | | | | | | | | | | |
|----------------|---------------------------------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 23-Aug-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 6-Jan-22 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 6-Jan-22 (Dup) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |

| BH/MW21-03 | Screen Interval 3.0 to 6.1 mbgs | | | | | | | | | | | | | | | | |
|------------|---------------------------------|----------|----------|----------|---------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|----------|----------|----------|
| DATE | B | T | E | X | F1 | F2 | F3 | F4 | CF | 1,1-DCA | 1,2-DCA | 1,1-DCE | c-1,2-DCE | t-1,2-DCE | PCE | TCE | VC |
| 23-Aug-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 23-Aug-21 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 19-Jan-22 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (25) | ND (100) | ND (100) | ND (100) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |

LEGEND

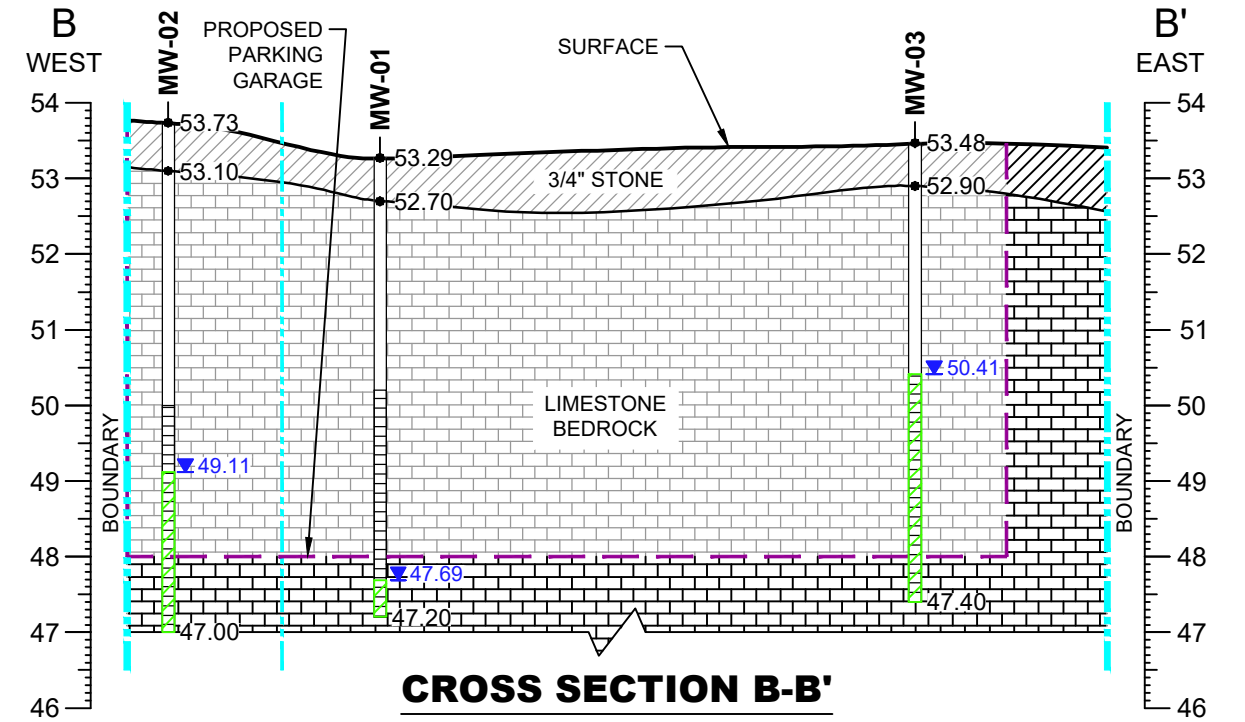
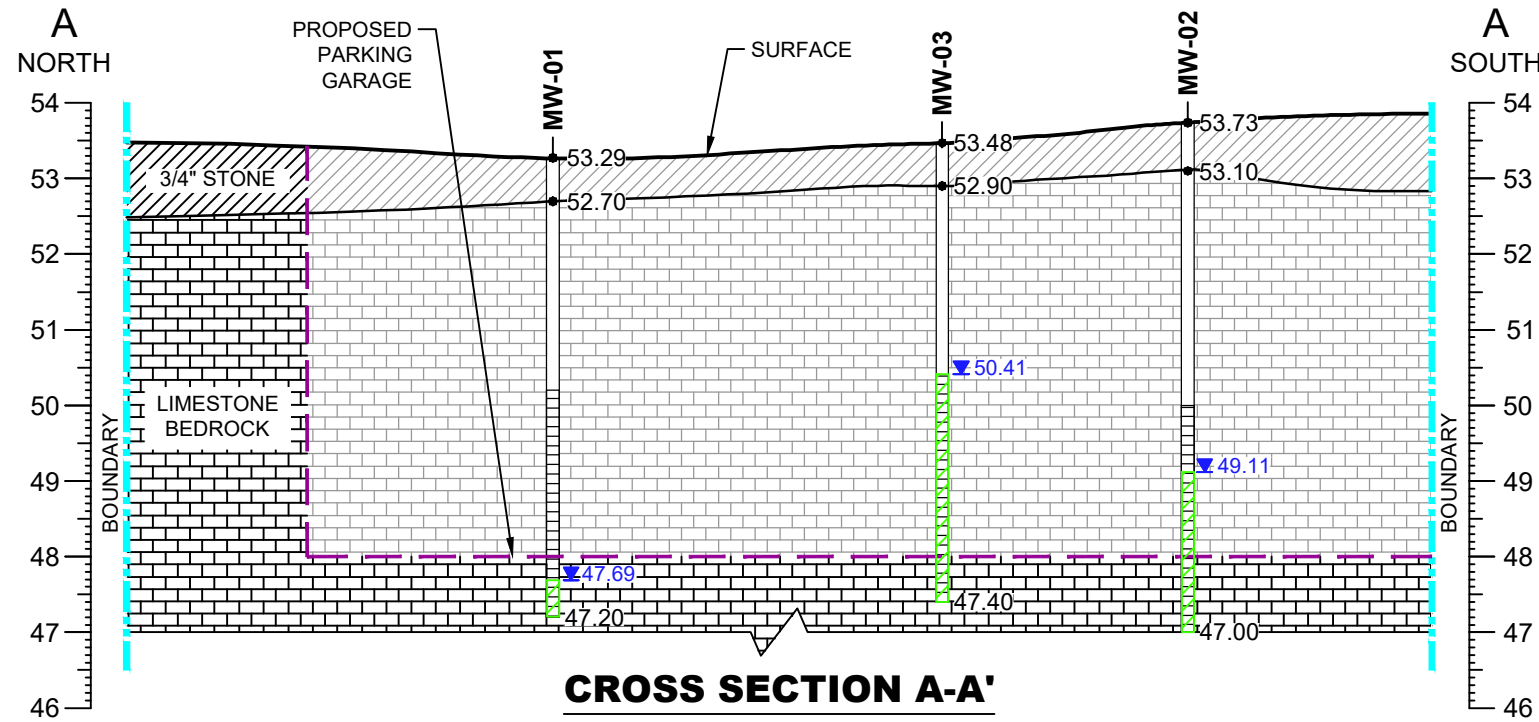
- 3/4" STONE
- BEDROCK
- GROUNDWATER LEVEL FROM FEBRUARY 2022
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

| | | |
|---------------------|--|--|
| DATE APRIL 2022 | CLIENT: WINDMILL DREAM ONTARIO HOLDINGS LP | project no. OTT-00250193-P0 |
| DESIGN LW | CHECKED PS | scale 1:600 |
| DRAWN BY TM / AS | | TITLE: GROUNDWATER CROSS SECTIONS A-A' & B-B' - PHC & VOC (POST-REMEDATION) 315 MIWATE PRIVATE, OTTAWA, ONTARIO |
| | | FIG 29 |

File name: \\exp\data\OTT\OTT-00250193-NO\60_Execution\65 Drawings\250193-PO Drawings\ph2 Sections\ph2_250193-PO West Chaudière ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:22 AM Plotted by: Severa



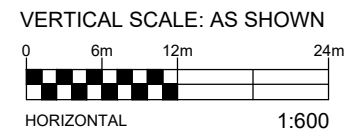
STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|--------------------------|--------------|------------------------------|------------------------------|
| Acenaphthene | Ace | 600 | 17 |
| Anthracene | An | 1 | 1 |
| Benzo(a)anthracene | B(a)A | 1.8 | 1.8 |
| Benzo(a)pyrene | B(a)P | 0.81 | 0.81 |
| Benzo(b)fluoranthene | B(b)F | 0.75 | 0.75 |
| Benzo(g,h,i)perylene | B(ghi)P | 0.2 | 0.2 |
| Benzo(k)fluoranthene | B(k)F | 0.4 | 0.4 |
| Chrysene | C | 0.7 | 0.7 |
| Dibenz(a,h)anthracene | DA | 0.4 | 0.4 |
| Fluoranthene | FI | 73 | 44 |
| Fluorene | F | 290 | 290 |
| Indeno(1,2,3-cd)pyrene | I(123)P | 0.2 | 0.2 |
| Total Methyl naphthalene | T-MN | 1500 | 1500 |
| Naphthalene | N | 1400 | 7 |
| Phenanthrene | P | 380 | 380 |
| Pyrene | Py | 5.7 | 5.7 |

| BH/MW21-01 | | Screen Interval 3.0 to 6.1 mbgs | | | | | | | | | | | | | | | | | |
|-----------------|--|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| DATE | | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | FI | F | I(123)P | T-MN | N | P | Py | PCB |
| 14-Sep-21 | | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.06 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | 0.05 | ND (0.05) |
| 16-Feb-22 | | ND (0.05) | ND (0.05) | 0.01 | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | 0.05 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | 0.05 | 0.05 | ND (0.05) |
| BH/MW21-02 | | Screen Interval 3.6 to 6.7 mbgs | | | | | | | | | | | | | | | | | |
| DATE | | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | FI | F | I(123)P | T-MN | N | P | Py | PCB |
| 23-Aug-21 | | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.10) |
| 12-Jan-22 | | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) |
| 12-Jan-22 (Dup) | | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) |
| BH/MW21-03 | | Screen Interval 3.0 to 6.1 mbgs | | | | | | | | | | | | | | | | | |
| DATE | | Ace | Acl | An | B(a)A | B(a)P | B(b)F | B(ghi)P | B(k)F | C | DA | FI | F | I(123)P | T-MN | N | P | Py | PCB |
| 23-Aug-21 | | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) |
| 23-Aug-21 (Dup) | | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) |
| 19-Jan-22 | | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.01) | ND (0.05) |

LEGEND

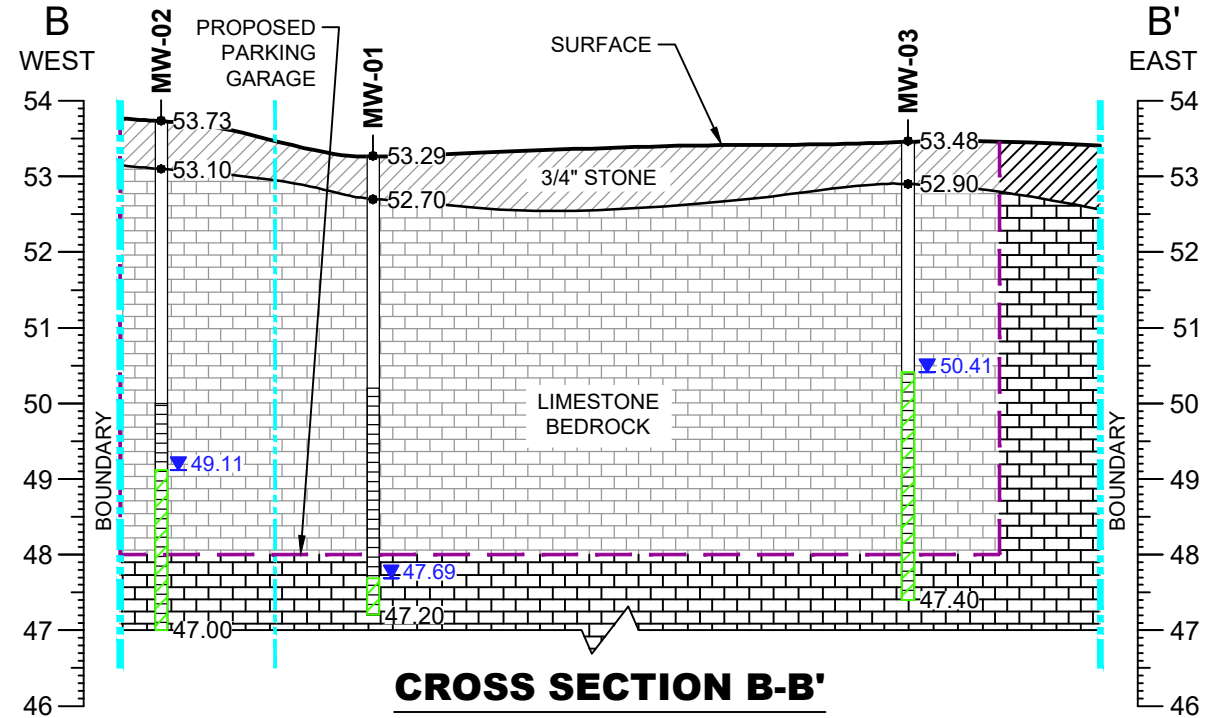
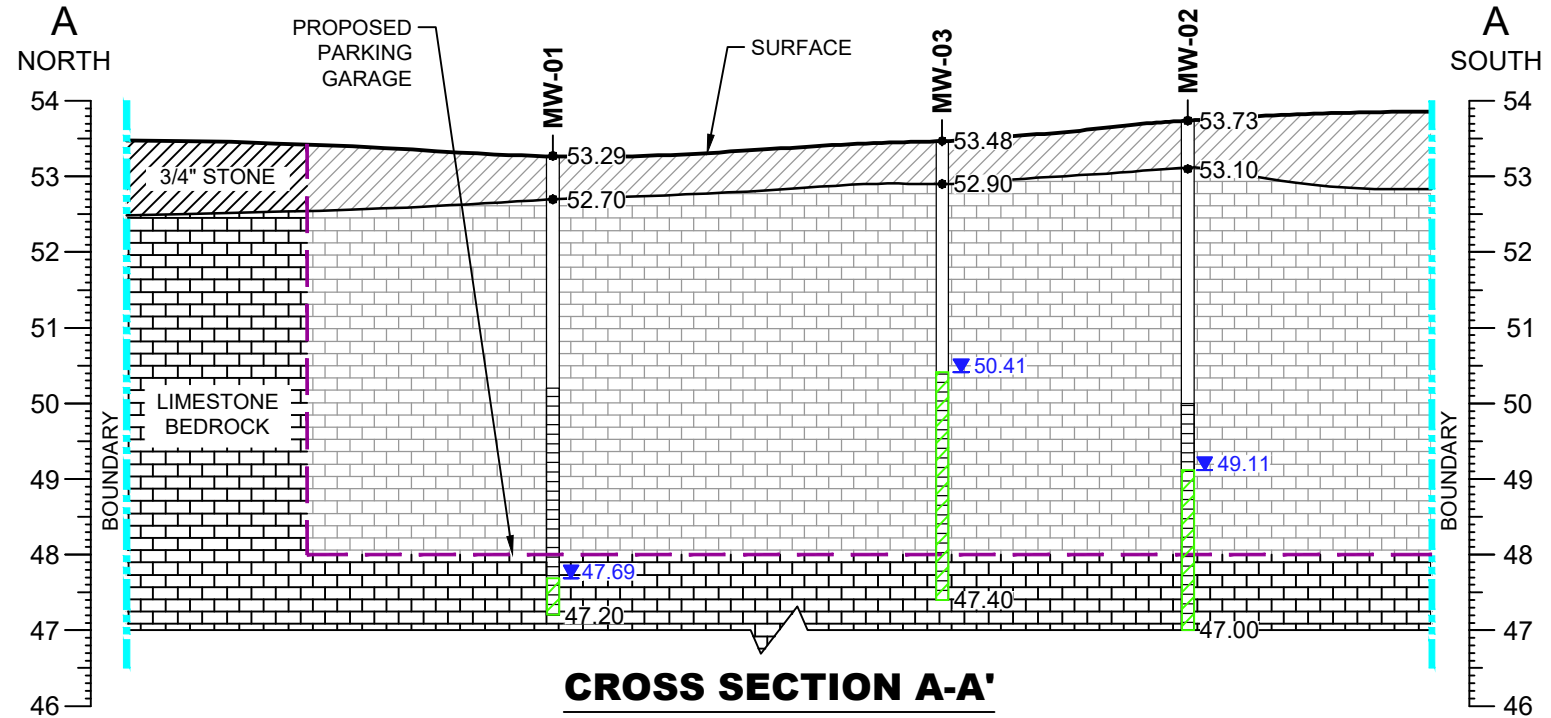
- 3/4" STONE
- BEDROCK
- GROUNDWATER LEVEL FROM FEBRUARY 2022
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



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 2650 Queensview Drive, Suite 100
 Ottawa, ON K2B 8H6, Canada

| | | | | | |
|----------|------------|--|---|-------------|-------------------------------------|
| DATE | APRIL 2022 | CLIENT: | WINDMILL DREAM ONTARIO HOLDINGS LP | project no. | OTT-00250193-PO |
| DESIGN | LW | CHECKED | PS | scale | 1:600 |
| DRAWN BY | TM / AS | GROUNDWATER CROSS SECTIONS A-A' & B-B' - PAH & PCB (POST-REMEDATION) | | | FIG 30 |
| | | TITLE: | | | 315 MIWATE PRIVATE, OTTAWA, ONTARIO |

File name: \\exp\data\OTT\OTT-00250193-NO\60_Execution\65_Drawings\250193-PO Drawings\ph2_250193-PO West Chaudière ph2 Sections.dwg
 Last Saved: Apr 22, 2022 10:15 AM Last Plotted: Apr 22, 2022 10:22 AM Plotted by: Severa



STANDARDS SHOWN ARE MECP TABLE 7 AND 9 FOR RESIDENTIAL PROPERTY USE AND COARSE TEXTURED SOILS

| PARAMETERS | ABBREVIATION | REG 153/04 TABLE 9 STANDARDS | REG 153/04 TABLE 7 STANDARDS |
|---------------|--------------|------------------------------|------------------------------|
| Antimony | Sb | 16000 | 16000 |
| Arsenic | As | 1500 | 1500 |
| Barium | Ba | 23000 | 23000 |
| Beryllium | Be | 53 | 53 |
| Boron | B | 36000 | 36000 |
| Cadmium | Cd | 2.1 | 2.1 |
| Chromium | Cr | 640 | 640 |
| Chromium (VI) | Cr IV | 110 | 110 |
| Cobalt | Co | 52 | 52 |
| Copper | Cu | 69 | 69 |
| Lead | Pb | 20 | 20 |
| Mercury | Hg | 0.29 | 0.1 |
| Molybdenum | Mo | 7300 | 7300 |
| Nickel | Ni | 390 | 390 |
| Selenium | Se | 50 | 50 |
| Silver | Ag | 1.2 | 1.2 |
| Sodium | Na | 1800000 | 1800000 |
| Thallium | Tl | 400 | 400 |
| Uranium | U | 330 | 330 |
| Vanadium | V | 200 | 200 |
| Zinc | Zn | 890 | 890 |

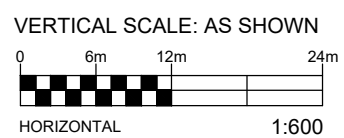
| BH/MW21-01 | | Screen Interval 3.0 to 6.1 m bgs | | | | | | | | | | | | | | | | | | | |
|-----------------|----------|----------------------------------|-----|----------|-----|----------|--------|---------|----------|-----|----------|----------|-----|----|--------|----------|--------|----------|-----|----------|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 31-Aug-21 | ND (0.5) | ND (1) | 644 | ND (0.5) | 698 | ND (0.1) | ND (1) | ND (10) | 0.9 | 2.0 | ND (0.1) | ND (0.1) | 5.4 | 4 | ND (1) | ND (0.1) | 348000 | ND (0.1) | 1.0 | ND (0.5) | 11 |
| 21-Dec-21 | ND (0.5) | ND (1) | 595 | ND (0.5) | 747 | ND (0.1) | ND (1) | ND (10) | ND (0.5) | 1.2 | ND (0.1) | ND (0.1) | 3.5 | 4 | ND (1) | ND (0.1) | 342000 | ND (0.1) | 1.2 | ND (0.5) | ND (5) |
| 21-Dec-21 (Dup) | ND (0.5) | ND (1) | 615 | ND (0.5) | 748 | ND (0.1) | ND (1) | ND (10) | ND (0.5) | 1.1 | ND (0.1) | ND (0.1) | 3.5 | 4 | ND (1) | ND (0.1) | 348000 | ND (0.1) | 1.2 | ND (0.5) | ND (5) |

| BH/MW21-02 | | Screen Interval 3.6 to 6.7 m bgs | | | | | | | | | | | | | | | | | | | |
|------------|----------|----------------------------------|-----|----------|-----|----------|--------|---------|-----|----------|----------|----------|-----|----|--------|----------|--------|----------|------|----------|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Aug-21 | ND (0.5) | ND (1) | 225 | ND (0.5) | 217 | ND (0.1) | ND (1) | ND (10) | 1.3 | ND (0.5) | ND (0.1) | ND (0.1) | 2.1 | 3 | ND (1) | ND (0.1) | 648000 | ND (0.1) | 0.3 | 0.7 | ND (5) |
| 22-Dec-21 | ND (0.5) | ND (1) | 179 | ND (0.5) | 222 | ND (0.1) | ND (1) | ND (10) | 0.5 | 1.2 | ND (0.1) | ND (0.1) | 4.9 | 4 | ND (1) | ND (0.1) | 462000 | ND (0.1) | 11.8 | ND (0.5) | ND (5) |

| BH/MW21-03 | | Screen Interval 3.0 to 6.1 m bgs | | | | | | | | | | | | | | | | | | | |
|-----------------|----------|----------------------------------|-----|----------|-----|----------|--------|---------|-----|----------|----------|----------|-----|----|--------|----------|--------|----------|-----|-----|--------|
| DATE | Sb | As | Ba | Be | B | Cd | Cr | Cr IV | Co | Cu | Pb | Hg | Mo | Ni | Se | Ag | Na | Tl | U | V | Zn |
| 23-Aug-21 | ND (0.5) | 4 | 210 | ND (0.5) | 143 | ND (0.1) | ND (1) | ND (10) | 1.9 | 0.9 | ND (0.1) | ND (0.1) | 5.0 | 6 | ND (1) | ND (0.1) | 632000 | ND (0.1) | 9.2 | 1.7 | 7 |
| 23-Aug-21 (Dup) | ND (0.5) | ND (1) | 226 | ND (0.5) | 213 | ND (0.1) | ND (1) | ND (10) | 1.2 | ND (0.5) | ND (0.1) | ND (0.1) | 2.1 | 3 | ND (1) | ND (0.1) | 630000 | ND (0.1) | 0.3 | 0.7 | ND (5) |
| 19-Jan-22 | ND (0.5) | ND (1) | 195 | ND (0.5) | 94 | ND (0.1) | ND (1) | ND (10) | 0.6 | ND (0.5) | ND (0.1) | ND (0.1) | 1.7 | 3 | ND (1) | ND (0.1) | 463000 | ND (0.1) | 3.3 | 0.5 | ND (5) |

LEGEND

- 3/4" STONE
- BEDROCK
- GROUNDWATER LEVEL FROM FEBRUARY 2022
- GROUNDWATER CONCENTRATION MEETS MECP TABLE 7 AND 9 SCS
- GROUNDWATER CONCENTRATION EXCEEDS MECP TABLE 7 AND 9 SCS



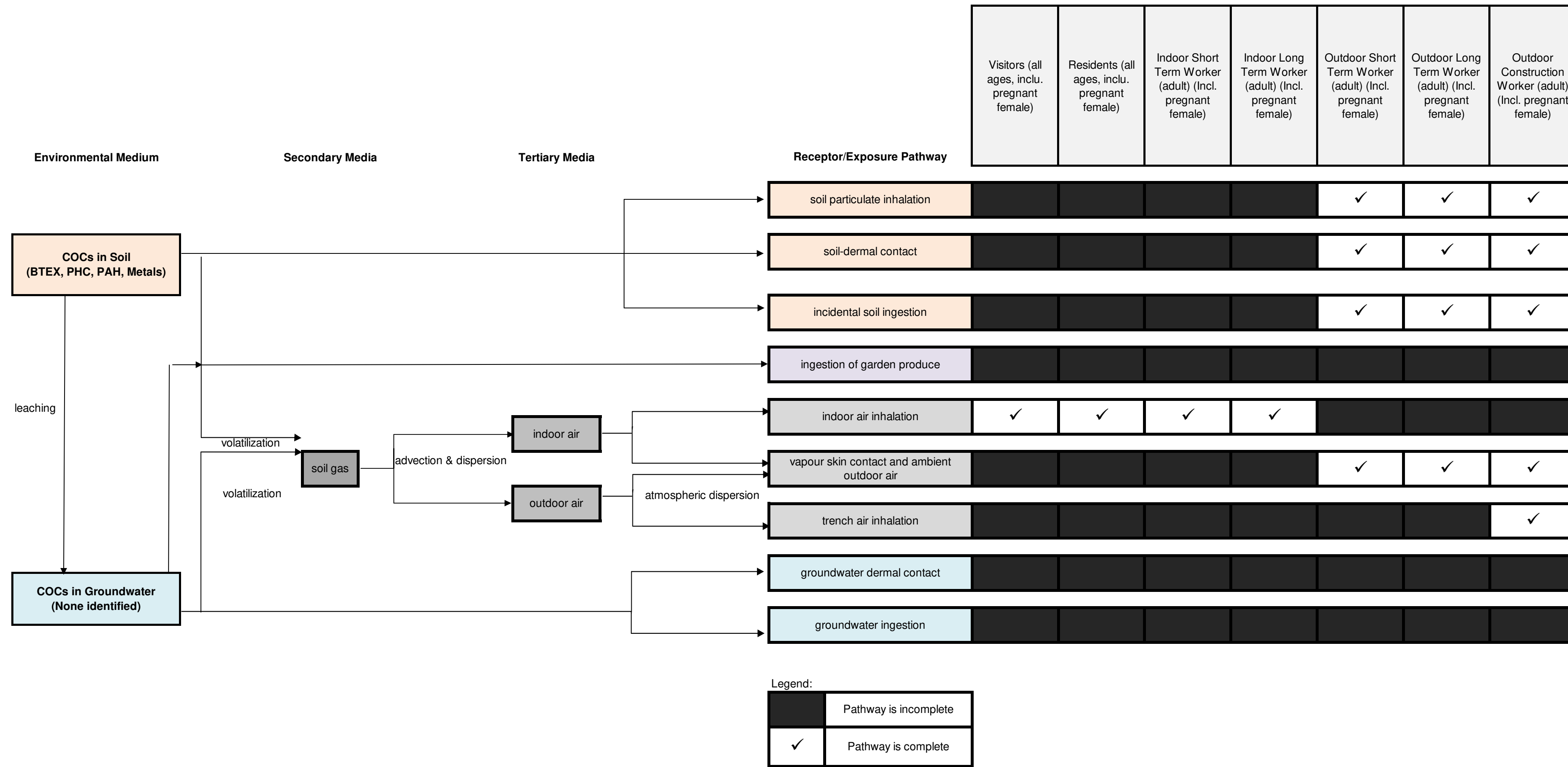
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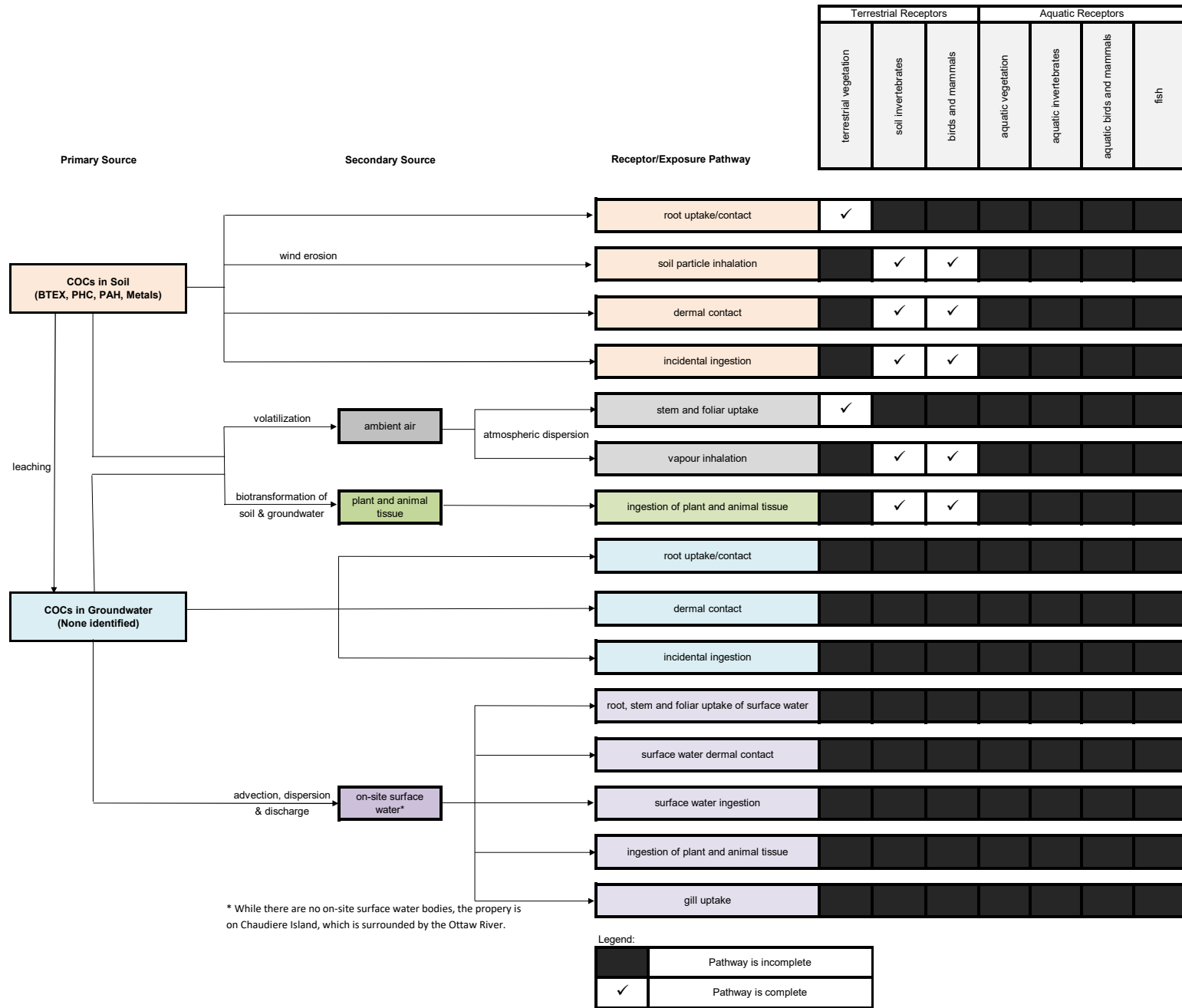
t: +1.613.688.1899 | f: +1.613.225.7337

2650 Queensview Drive, Suite 100

Ottawa, ON K2B 8H6, Canada

| | | | | | |
|----------|------------|---|---|-------------|-----------------|
| DATE | APRIL 2022 | CLIENT: | WINDMILL DREAM ONTARIO HOLDINGS LP | project no. | OTT-00250193-PO |
| DESIGN | LW | CHECKED | PS | scale | 1:600 |
| DRAWN BY | TM / AS | GROUNDWATER CROSS SECTIONS A-A' & B-B' - INORGANICS (POST-REMEDATION) | | | FIG 31 |
| | | TITLE: 315 MIWATE PRIVATE, OTTAWA, ONTARIO | | | |



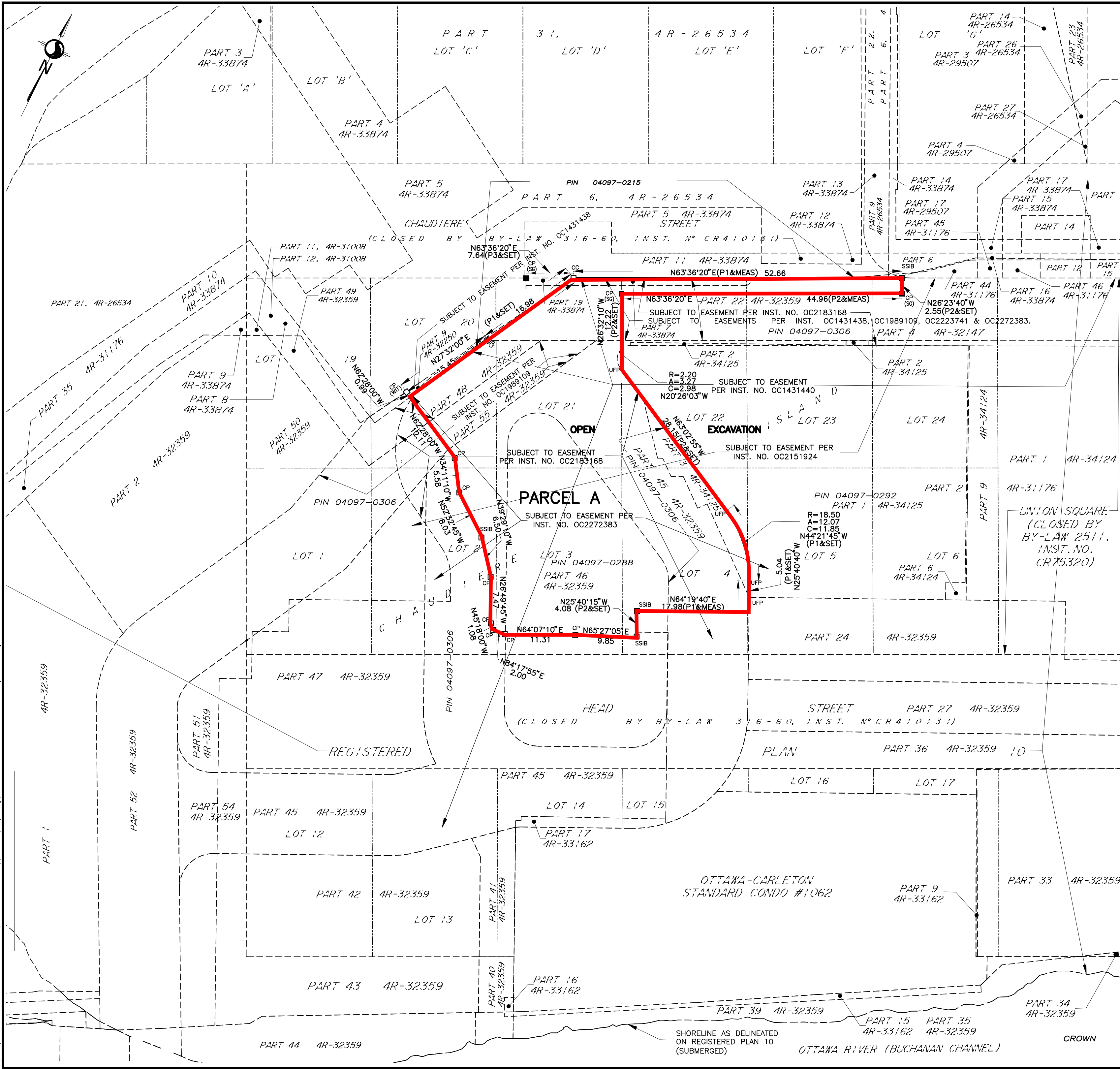


EXP Services Inc.

*Windmill Dream Zibi Ontario Inc.
Phase Two Environmental Site Assessment
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0
April 20, 2022*

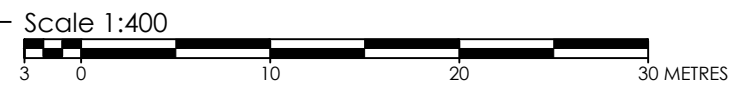
Appendix B: Survey Plan

18 March 2022 9:06 AM
W:\active\161613467\218_WINDMILLDREAM_Ontario.ctb (see 161613416 for files)\reference_pdm\drawing\161613467_1514_Remediation Plan of Survey_PARCEL A.dwg



PLAN OF SURVEY OF
**PART OF LOTS 2, 3, 4, 5, 20, 21, 22,
23 & 24**
CHAUDIERE ISLAND
REGISTERED PLAN 10
(GEOGRAPHIC TOWNSHIP OF NEPEAN)

CITY OF OTTAWA



METRIC CONVERSION
DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES
AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

GRID SCALE CONVERSION
DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING
BY THE COMBINED SCALE FACTOR OF 0.99994.

BEARING NOTE
BEARINGS ARE GRID, DERIVED FROM THE CAN-NET VRS NETWORK OBSERVATIONS
ON NCC HORIZONTAL CONTROL MONUMENTS 19773035 AND 19680191, CENTRAL
MERIDIAN, 76°30' WEST LONGITUDE MTM ZONE 9, NAD83 (ORIGINAL).

19773035 N:5006060.42 E:324888.04
19680191 N:5033564.26 E:388064.94

LEGEND

| SYMBOL | DENOTES | FOUND MONUMENTS |
|--------|---------|------------------------------------|
| ■ | " | SET MONUMENTS |
| □ | " | IRON BAR |
| IB | " | ROUND IRON BAR |
| IB* | " | STANDARD IRON BAR |
| SIB | " | SHORT STANDARD IRON BAR |
| SSIB | " | CUT CROSS |
| CC | " | CONCRETE PIN |
| CP | " | WITNESS |
| WIT | " | PROPERTY IDENTIFICATION NUMBER |
| PIN | " | MEASURED |
| MEAS | " | PROPORTIONED |
| PROP | " | ORIGIN UNKNOWN |
| OU | " | STANTEC GEOMATICS LTD. |
| SG | " | ANNIS O'SULLIVAN & VOLLBECK LTD. |
| ADV | " | OBSERVED REFERENCE POINT |
| ORP | " | UNUSABLE FOR POSTING |
| UPF | " | PLAN 4R-32359 |
| P1 | " | PLAN 4R-32147 |
| P2 | " | PLAN 4R-33874 |
| P3 | " | PLAN 4R-31176 |
| P4 | " | PLAN 4R-32147 |
| P5 | " | PLAN 4R-32147 |
| P6 | " | PLAN BY SG DATED OCTOBER 29, 2020. |

SURVEYOR'S CERTIFICATE
I CERTIFY THAT:
1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS
ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE
UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 31st DAY OF JANUARY, 2022.

March 18, 2022
DATE
R.G. BENNETT
ONTARIO LAND SURVEYOR

Stantec Geomatics Ltd.
CANADA LANDS SURVEYORS
ONTARIO LAND SURVEYORS
1331 CLYDE AVENUE, SUITE 400
OTTAWA, ONTARIO, K2C 3G4
TEL. 613.722.4420 FAX. 613.722.2799
stantec.com

EXP Services Inc.

*Windmill Dream Zibi Ontario Inc.
Phase Two Environmental Site Assessment
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0
April 20, 2022*

Appendix C: Sampling and Analysis Plan

OTT-00250193-P0
Block 206, Zibi Property – Pre-Remediation

Objectives:

The objectives of this project are as follows to file a Record of Site Condition (RSC), supported by the completion of Phase One and Phase Two Environmental Site Assessment (ESA) reports, after assessment and remediation activities occur on Block 206.

Drilling:

A total of 5 BH will be drilled and MW will be installed in each. Based on site information received from client, it is anticipated that depth of drilling will be as follows:

| Estimated Depths of Overburden and Rock Coring | | | | |
|--|--------------|-----------------------------------|---------------------------------------|---------------------------------------|
| Location | Borehole No. | Estimated Overburden Drilling (m) | Estimated Rock Coring/Wash Boring (m) | Estimated Total Depth of Borehole (m) |
| Block 206 | BH/MW21-01 | 1.5 | 3.0 | 4.5 |
| Block 206 | BH/MW21-02 | 1.5 | 3.0 | 4.5 |
| Block 206 | BH/MW21-03 | 1.5 | 3.0 | 4.5 |
| Block 206 | BH/MW21-04 | 1.5 | 3.0 | 4.5 |
| Block 206 | BH/MW21-05 | 1.5 | 3.0 | 4.5 |

- All monitoring wells to be screened across water table.
- Make sure that no screens straddle bedrock-soil interface. In other words, MW must be installed completely within bedrock or completely within overburden (most, if not all, will be in bedrock).
- As drilling progresses, log each sample, describing soil type, colour, staining, odour, petroleum vapour.

Soil Sampling:

- Soil samples should be submitted to Parcel as follows:

| BH ID | Sample Depth | Parameters | Other |
|------------|--------------|--|---|
| BH/MW21-01 | Surficial | VOC, PHC F1 to F4, PAH, PCB, Metals by ICP, Hg, Cr(VI), free cyanide | Two soil samples <1.5 m bgs should be submitted for analysis of pH (also, if soil deeper than 1.5 m bgs is present, two soil samples from that depth should also be submitted) One field duplicate from the area that will be remediated by excavation should be submitted. One composite sample for leachate analysis collected from the area that will be remediated by excavation should be submitted. |
| BH/MW21-01 | Worst Case | | |
| BH/MW21-02 | Surficial | | |
| BH/MW21-02 | Worst Case | | |
| BH/MW21-03 | Surficial | | |
| BH/MW21-03 | Worst Case | | |
| BH/MW21-04 | Surficial | | |
| BH/MW21-04 | Worst Case | | |
| BH/MW21-05 | Surficial | | |

| | | | |
|------------|------------|--|--|
| BH/MW21-05 | Worst Case | | |
|------------|------------|--|--|

- “Surficial samples” are samples that are within 0.6 metres of ground surface.
- “Worst case samples” are determined in the field, based on the following considerations: (1) presence of staining; (2) presence of odours; (3) petroleum vapour concentration. If the worst-case sample cannot be identified based on those factors, submit the sample at water table depth or the sample immediately above bedrock surface.
- Depending on the amount of overburden, there may only be one sample submitted per BH
- One composite sample for leachate analysis should be submitted, as described above. Leachate parameters include VOC, PAH, PCB, Inorganic Parameters and Ignitability.
- Samples should be submitted to Paracel within 48 hours of sample collection. In other words, two days worth of samples should be submitted at the same time.

Monitor Development:

- Develop wells at least 3 x well volumes or until clear
- Do not purge if monitor contains LNAPL. Contact Patricia Stelmack immediately if you see any.
- Purged water to be stored in a drum to be collected by CWW

Low Flow Groundwater Sampling

- Monitor all 5 monitoring wells and record petroleum vapours, depth to water, and depth to LNAPL, if any
- All groundwater samples should be submitted to Paracel as follows:
 - VOC
 - PHC F1 to F4
 - PAH
 - PCB
 - Metals by ICP
 - Hg
 - Cr (VI)
 - Free cyanide
- Be careful to sample from near top of water table and use low flow rate to avoid collecting any fine sediment
- Prior to sampling, ensure the following field parameters are stable (per the field measurement table): pH, conductivity, turbidity, DO, temperature and ORP
- EXP will survey ground elevations and top of pipe elevations, as well as UTM coordinates

OTT-00250193-P0
Block 206, Zibi Property – Post-Remediation

Objectives:

The objectives of this project are to file a Record of Site Condition (RSC), supported by the completion of Phase One and Phase Two Environmental Site Assessment (ESA) reports, after assessment and remediation activities occur on Block 206

Drilling:

A total of 3 BH will be drilled and MW will be installed in each. Based on site information received from client, it is anticipated that depth of drilling will be as follows:

| Estimated Depths of Overburden and Rock Coring | | | | |
|--|--------------|-----------------------------------|---------------------------------------|---------------------------------------|
| Location | Borehole No. | Estimated Overburden Drilling (m) | Estimated Rock Coring/Wash Boring (m) | Estimated Total Depth of Borehole (m) |
| Block 206 | BH/MW21-01 | N/A | 6.0 | 6.0 |
| Block 206 | BH/MW21-02 | N/A | 6.0 | 6.0 |
| Block 206 | BH/MW21-03 | N/A | 6.0 | 6.0 |

- All monitoring wells to be screened across water table.
- As drilling progresses, log each sample, describing soil type, colour, staining, odour, petroleum vapour.

Soil Sampling:

- All soil has been removed from the site.

Monitor Development:

- Develop wells at least 3 x well volumes or until clear
- Do not purge if monitor contains LNAPL. Contact Patricia Stelmack immediately if you see any.

Low Flow Groundwater Sampling

- Monitor all 3 monitoring wells and record petroleum vapours, depth to water, and depth to LNAPL, if any
- All groundwater samples should be submitted to Paracel as follows:

| MW ID | Parameters | Other |
|------------|--|---|
| BH/MW21-01 | VOC, PHC F1 to F4, PAH, PCB, Metals by ICP, Hg, Cr(VI), pH | One field duplicate shall be submitted. |
| BH/MW21-02 | VOC, PHC F1 to F4, PAH, PCB, Metals by ICP, Hg, Cr(VI), pH | |
| BH/MW21-03 | VOC, PHC F1 to F4, PAH, PCB, Metals by ICP, Hg, Cr(VI), pH | |

- Be careful to sample from near top of water table and use low flow rate to avoid collecting any fine sediment
- Prior to sampling, ensure the following field parameters are stable (per the field measurement table): pH, conductivity, turbidity, DO, temperature and ORP

EXP Services Inc.

Windmill Dream Zibi Ontario Inc.

Phase Two Environmental Site Assessment

315 Miwàte Private, West Chaudière Island, Ottawa, Ontario

OTT-00250193-P0

April 20, 2022

Appendix D: Borehole Logs

Explanation of Terms Used on Borehole Records

SOIL DESCRIPTION

Terminology describing common soil genesis:

Topsoil: mixture of soil and humus capable of supporting good vegetative growth.

Peat: fibrous fragments of visible and invisible decayed organic matter.

Fill: where fill is designated on the borehole log it is defined as indicated by the sample recovered during the boring process. The reader is cautioned that fills are heterogeneous in nature and variable in density or degree of compaction. The borehole description may therefore not be applicable as a general description of site fill materials. All fills should be expected to contain obstruction such as wood, large concrete pieces or subsurface basements, floors, tanks, etc.; none of these may have been encountered in the boreholes. Since boreholes cannot accurately define the contents of the fill, test pits are recommended to provide supplementary information. Despite the use of test pits, the heterogeneous nature of fill will leave some ambiguity as to the exact composition of the fill. Most fills contain pockets, seams, or layers of organically contaminated soil. This organic material can result in the generation of methane gas and/or significant ongoing and future settlements. Fill at this site may have been monitored for the presence of methane gas and, if so, the results are given on the borehole logs. The monitoring process does not indicate the volume of gas that can be potentially generated nor does it pinpoint the source of the gas. These readings are to advise of the presence of gas only, and a detailed study is recommended for sites where any explosive gas/methane is detected. Some fill material may be contaminated by toxic/hazardous waste that renders it unacceptable for deposition in any but designated land fill sites; unless specifically stated the fill on this site has not been tested for contaminants that may be considered toxic or hazardous. This testing and a potential hazard study can be undertaken if requested. In most residential/commercial areas undergoing reconstruction, buried oil tanks are common and are generally not detected in a conventional geotechnical site investigation.

Till: the term till on the borehole logs indicates that the material originates from a geological process associated with glaciation. Because of this geological process the till must be considered heterogeneous in composition and as such may contain pockets and/or seams of material such as sand, gravel, silt or clay. Till often contains cobbles (60 to 200 mm) or boulders (over 200 mm). Contractors may therefore encounter cobbles and boulders during excavation, even if they are not indicated by the borings. It should be appreciated that normal sampling equipment cannot differentiate the size or type of any obstruction. Because of the horizontal and vertical variability of till, the sample description may be applicable to a very limited zone; caution is therefore essential when dealing with sensitive excavations or dewatering programs in till materials.

Terminology describing soil structure:

Desiccated: having visible signs of weathering by oxidization of clay minerals, shrinkage cracks, etc.

Stratified: alternating layers of varying material or color with the layers greater than 6 mm thick.

Laminated: alternating layers of varying material or color with the layers less than 6 mm thick.

Fissured: material breaks along plane of fracture.

Varved: composed of regular alternating layers of silt and clay.

Slickensided: fracture planes appear polished or glossy, sometimes striated.

Blocky: cohesive soil that can be broken down into small angular lumps which resist further breakdown.

Lensed: inclusion of small pockets of different soil, such as small lenses of sand scattered through a mass of clay; not thickness.

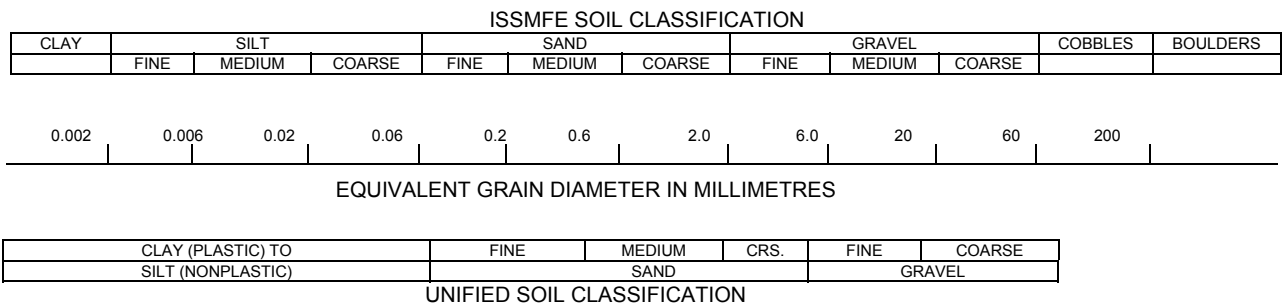
Seam: a thin, confined layer of soil having different particle size, texture, or color from materials above and below.

Homogeneous: same color and appearance throughout.

Well Graded: having wide range in grain sized and substantial amounts of all predominantly on grain size.

Uniformly Graded: predominantly on grain size.

All soil sample descriptions included in this report follow the ASTM D2487-11 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System). The system divides soils into three major categories: (1) coarse grained, (2) fine-grained, and (3) highly organic. The soil is then subdivided based on either gradation or plasticity characteristics. The system provides a group symbol (e.g. SM) and group name (e.g. silty sand) for identification. The classification excludes particles larger than 76 mm. Please note that, with the exception of those samples where a grain size analysis has been made, all samples are classified visually in accordance with ASTM D2488-09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Visual classification is not sufficiently accurate to provide exact grain sizing or precise differentiation between size classification systems. Others may use different classification systems; one such system is the ISSMFE Soil Classification.



Terminology describing materials outside the USCS, (e.g. particles larger than 76 mm, visible organic matter, construction debris) is based upon the proportion of these materials present and as described below in accordance with Note 16 in ASTM D2488-09a:

Table a: Percent or Proportion of Soil, Pp

| | Criteria |
|--------|--|
| Trace | Particles are present but estimated to be less than 5% |
| Few | $5 \leq Pp \leq 10\%$ |
| Little | $15 \leq Pp \leq 25\%$ |
| Some | $30 \leq Pp \leq 45\%$ |
| Mostly | $50 \leq Pp \leq 100\%$ |

The standard terminology to describe cohesionless soils includes the compactness as determined by the Standard Penetration Test 'N' value:

Table b: Apparent Density of Cohesionless Soil

| | 'N' Value (blows/0.3 m) |
|------------|-------------------------|
| Very Loose | $N < 5$ |
| Loose | $5 \leq N < 10$ |
| Compact | $10 \leq N < 30$ |
| Dense | $30 \leq N < 50$ |
| Very Dense | $50 \leq N$ |

The standard terminology to describe cohesive soils includes consistency, which is based on undrained shear strength as measured by insitu vane tests, penetrometer tests, unconfined compression tests or similar field and laboratory analysis, Standard Penetration Test 'N' values can also be used to provide an approximate indication of the consistency and shear strength of fine grained, cohesive soils:

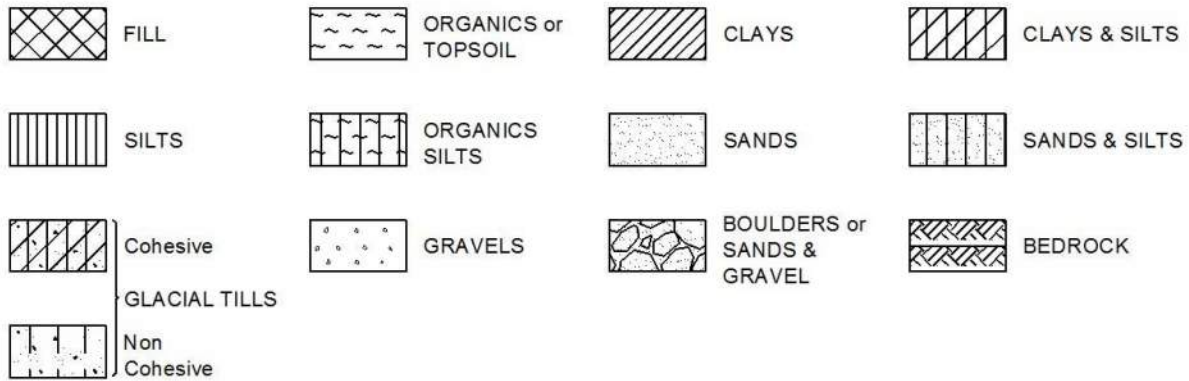
Table c: Consistency of Cohesive Soil

| Consistency | Vane Shear Measurement (kPa) | 'N' Value |
|-------------|------------------------------|-----------|
| Very Soft | <12.5 | <2 |
| Soft | 12.5-25 | 2-4 |
| Firm | 25-50 | 4-8 |
| Stiff | 50-100 | 8-15 |
| Very Stiff | 100-200 | 15-30 |
| Hard | >200 | >30 |

Note: 'N' Value - The Standard Penetration Test records the number of blows of a 140 pound (64kg) hammer falling 30 inches (760mm), required to drive a 2 inch (50.8mm) O.D. split spoon sampler 1 foot (305mm). For split spoon samples where full penetration is not achieved, the number of blows is reported over the sampler penetration in meters (e.g. 50/0.15).

STRATA PLOT

Strata plots symbolize the soil or bedrock description. They are combinations of the following basic symbols:



WATER LEVEL MEASUREMENT



Open Borehole or Test Pit



Monitoring Well, Piezometer or Standpipe

Log of Borehole BH/MW21-01



Project No: OTT-00250193-P0
 Project: Phase II Environmental Site Assessment
 Location: 4 Booth Street, Ottawa, ON
 Date Drilled: March 15th and 16th, 2021
 Drill Type: CME Truck Mount
 Datum: Geodetic
 Logged by: JE Checked by: PS

Figure No. 4
 Page. 1 of 1

- Split Spoon Sample
- Auger Sample
- SPT (N) Value
- Dynamic Cone Test
- Shelby Tube
- Shear Strength by Vane Test
- Combustible Vapour Reading
- Natural Moisture Content
- Atterberg Limits
- Undrained Triaxial at % Strain at Failure
- Shear Strength by Penetrometer Test

| G W L | S O B Y L | SOIL DESCRIPTION | Geodetic m | D e p t h | Standard Penetration Test N Value | | | | Combustible Vapour Reading (ppm) | | | Natural Unit Wt. kN/m ³ | |
|-------------|-----------------------|---|---------------|-----------------------|-----------------------------------|----|----|----|----------------------------------|-----|-----|--|--|
| | | | | | Shear Strength kPa | | | | Natural Moisture Content % | | | | |
| | | | | | 20 | 40 | 60 | 80 | 250 | 500 | 750 | | |
| | | SAND AND GRAVEL FILL Brown, dry, slight odour | 53.712 | 0 | | | | | | | | | |
| | | WOOD Brown, dry, no odours or staining | 53.1 | | | | | | | | | | |
| | | LIMESTONE BEDROCK | 52.8 | 1 | | | | | | | | | |
| | | | | 2 | | | | | | | | | |
| | | | | 3 | | | | | | | | | |
| | | | | 4 | | | | | | | | | |
| | | | | 5 | | | | | | | | | |
| | | | 47.7 | 6 | | | | | | | | | |
| | | Borehole Terminated at 6.0 m Depth | | | | | | | | | | | |

LOG OF BOREHOLE BH LOGS - ZIBI.GPJ TROW OTTAWA GDT 4/1/21

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - A 37mm PVC monitoring well was installed upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-00250193-P0

| WATER LEVEL RECORDS | | |
|---------------------|-----------------|------------------|
| Date | Water Level (m) | Hole Open To (m) |
| March 23rd, 2021 | 3.3 | |

| CORE DRILLING RECORD | | | |
|----------------------|-----------|--------|-------|
| Run No. | Depth (m) | % Rec. | RQD % |
| | | | |

Log of Borehole BH/MW21-02



Project No: OTT-00250193-P0
 Project: Phase II Environmental Site Assessment
 Location: 4 Booth Street, Ottawa, ON
 Date Drilled: March 15th and 16th, 2021
 Drill Type: CME Truck Mount
 Datum: Geodetic
 Logged by: JE Checked by: PS

Figure No. 4
 Page. 1 of 1

- Split Spoon Sample
- Auger Sample
- SPT (N) Value
- Dynamic Cone Test
- Shelby Tube
- Shear Strength by Vane Test
- Combustible Vapour Reading
- Natural Moisture Content
- Atterberg Limits
- Undrained Triaxial at % Strain at Failure
- Shear Strength by Penetrometer Test

| GWL | SOIL LOG | SOIL DESCRIPTION | Geodetic m | Depth | Standard Penetration Test N Value | | | | Combustible Vapour Reading (ppm) | | | Natural Unit Wt. kN/m ³ | | | |
|-----|----------|---|------------|-------|-----------------------------------|----|----|----|----------------------------------|-----|-----|------------------------------------|---|----|----|
| | | | | | Shear Strength kPa | | | | 250 | 500 | 750 | | Natural Moisture Content % Atterberg Limits (% Dry Weight) | | |
| | | | | | 20 | 40 | 60 | 80 | 20 | 40 | 60 | | 20 | 40 | 60 |
| | | SAND AND GRAVEL FILL Grey, dry, no odours or staining | 53.552 | 0 | | | | | | | | | | | |
| | | LIMESTONE BEDROCK | 53.0 | 1 | | | | | | | | | | | |
| | | | | 2 | | | | | | | | | | | |
| | | | | 3 | | | | | | | | | | | |
| | | | | 4 | | | | | | | | | | | |
| | | | | 5 | | | | | | | | | | | |
| | | | | 6 | | | | | | | | | | | |
| | | Borehole Terminated at 6.5 m Depth | 47.1 | | | | | | | | | | | | |

LOG OF BOREHOLE BH LOGS - ZIBI.GPJ TROW/OTTAWA.GDT 4/1/21

- NOTES:
1. Borehole data requires interpretation by EXP before use by others
 2. A 37mm PVC monitoring well was installed upon completion.
 3. Field work was supervised by an EXP representative.
 4. See Notes on Sample Descriptions
 5. Log to be read with EXP Report OTT-00250193-P0

| WATER LEVEL RECORDS | | |
|---------------------|-----------------|------------------|
| Date | Water Level (m) | Hole Open To (m) |
| March 23rd, 2021 | 5.8 | |

| CORE DRILLING RECORD | | | |
|----------------------|-----------|--------|-------|
| Run No. | Depth (m) | % Rec. | RQD % |
| | | | |

Log of Borehole BH/MW21-03



Project No: OTT-00250193-P0

Figure No. 4

Project: Phase II Environmental Site Assessment

Page. 1 of 1

Location: 4 Booth Street, Ottawa, ON

Date Drilled: March 15th and 16th, 2021

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME Truck Mount

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic

Dynamic Cone Test

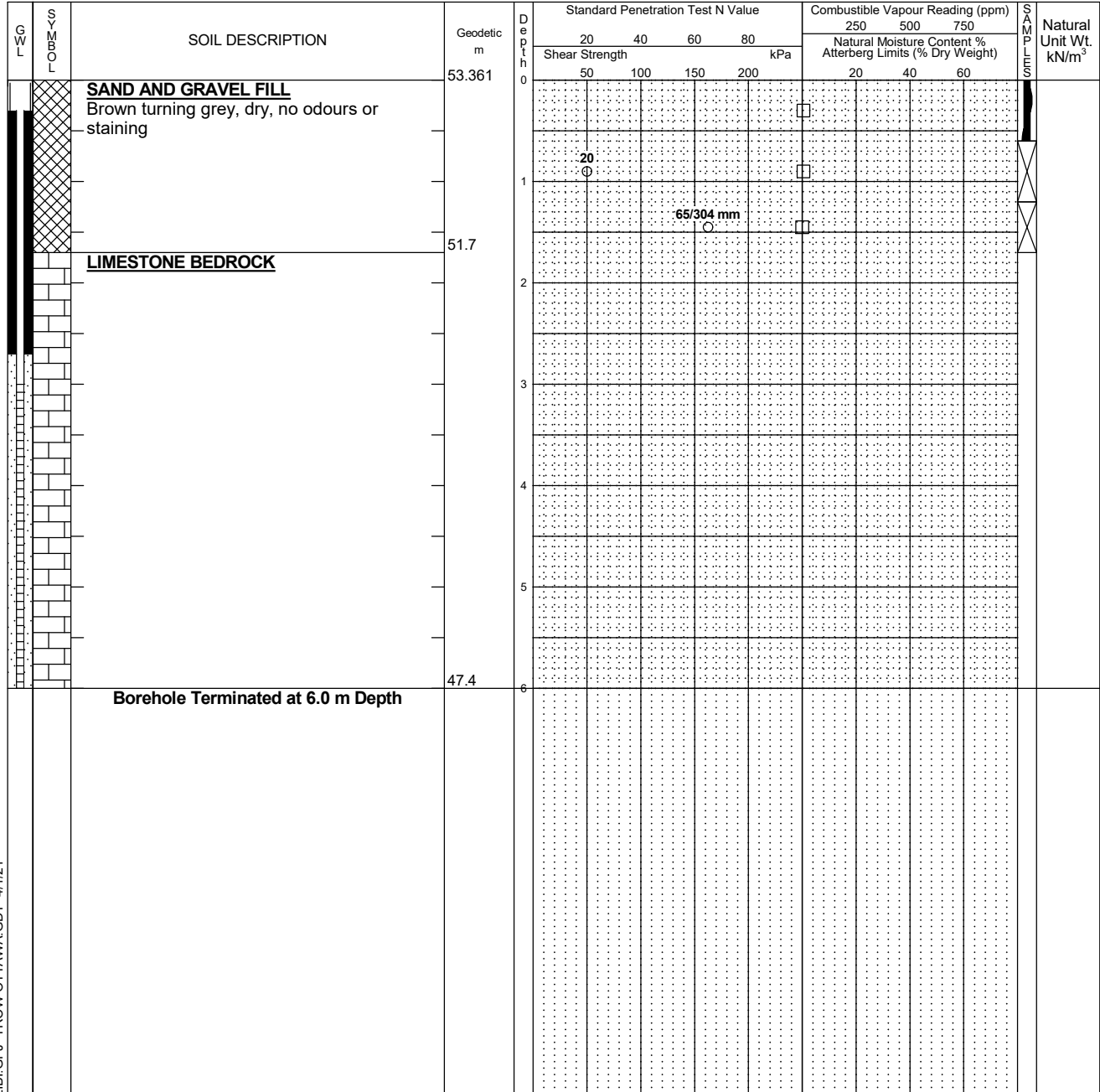
Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: JE Checked by: PS

Shear Strength by Vane Test



LOG OF BOREHOLE BH LOGS - ZIBI.GPJ TROW/OTTAWA.GDT 4/1/21

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - A 37mm PVC monitoring well was installed upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-00250193-P0

| WATER LEVEL RECORDS | | |
|---------------------|-----------------|------------------|
| Date | Water Level (m) | Hole Open To (m) |
| March 23rd, 2021 | 2.3 | |

| CORE DRILLING RECORD | | | |
|----------------------|-----------|--------|-------|
| Run No. | Depth (m) | % Rec. | RQD % |
| | | | |

Log of Borehole BH/MW21-04



Project No: OTT-00250193-P0

Figure No. 4

Project: Phase II Environmental Site Assessment

Page. 1 of 1

Location: 4 Booth Street, Ottawa, ON

Date Drilled: March 15th and 16th, 2021

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME Truck Mount

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic

Dynamic Cone Test

Undrained Triaxial at

Shelby Tube

% Strain at Failure

Logged by: JE Checked by: PS

Shear Strength by Vane Test

Shear Strength by Penetrometer Test

| GWL | SOIL DESCRIPTION | Geodetic m | Depth | Standard Penetration Test N Value | | | | Combustible Vapour Reading (ppm) | | | Natural Unit Wt. kN/m ³ |
|-----|--|------------|-------|-----------------------------------|----|----|----|--|-----|-----|------------------------------------|
| | | | | Shear Strength kPa | | | | 250 | 500 | 750 | |
| | | | | 20 | 40 | 60 | 80 | Natural Moisture Content % Atterberg Limits (% Dry Weight) | | | |
| | SAND AND GRAVEL FILL Brown, dry, no odours or staining | 53.712 | 0 | | | | | | | | |
| | CLAYEY SAND AND GRAVEL Grey, moist, some odour | 53.1 | | | | | | | | | |
| | SAND AND GRAVEL Some crushed bedrock, grey, dry, no odours or staining | 52.8 | | | | | | | | | |
| | LIMESTONE BEDROCK | 52.6 | | | | | | | | | |
| | | | 1 | | | | | | | | |
| | | | 2 | | | | | | | | |
| | | | 3 | | | | | | | | |
| | | | 4 | | | | | | | | |
| | | | 5 | | | | | | | | |
| | | | 6 | | | | | | | | |
| | Borehole Terminated at 6.1 m Depth | 47.6 | | | | | | | | | |

LOG OF BOREHOLE BH LOGS - ZIBI.GPJ TROW OTTAWA GDT 4/1/21

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - A 37mm PVC monitoring well was installed upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-00250193-P0

| WATER LEVEL RECORDS | | |
|---------------------|-----------------|------------------|
| Date | Water Level (m) | Hole Open To (m) |
| March 23rd, 2021 | 5.2 | |

| CORE DRILLING RECORD | | | |
|----------------------|-----------|--------|-------|
| Run No. | Depth (m) | % Rec. | RQD % |
| | | | |

Log of Borehole BH/MW21-05



Project No: OTT-00250193-P0
 Project: Phase II Environmental Site Assessment
 Location: 4 Booth Street, Ottawa, ON
 Date Drilled: March 17th, 2021
 Drill Type: CME Truck Mount
 Datum: Geodetic
 Logged by: JE Checked by: PS

Figure No. 4
 Page. 1 of 1

- Split Spoon Sample
- Auger Sample
- SPT (N) Value
- Dynamic Cone Test
- Shelby Tube
- Shear Strength by Vane Test
- Combustible Vapour Reading
- Natural Moisture Content
- Atterberg Limits
- Undrained Triaxial at % Strain at Failure
- Shear Strength by Penetrometer Test

| GWL | SOIL LOG | SOIL DESCRIPTION | Geodetic m | Depth | Standard Penetration Test N Value | | | | Combustible Vapour Reading (ppm) | | | Natural Unit Wt. kN/m ³ | |
|-----|----------|---|------------|-------|-----------------------------------|----|----|----|----------------------------------|-----|-----|------------------------------------|--|
| | | | | | Shear Strength kPa | | | | Natural Moisture Content % | | | | |
| | | | | | 20 | 40 | 60 | 80 | 250 | 500 | 750 | | |
| | | SAND AND GRAVEL FILL Brown, dry, no odours or staining | 53.414 | 0 | | | | | | | | | |
| | | SILTY SAND AND GRAVEL Brown, moist, no odours or staining | 52.8 | | | | | | | | | | |
| | | LIMESTONE BEDROCK | 52.5 | 1 | | | | | | | | | |
| | | | | 2 | | | | | | | | | |
| | | | | 3 | | | | | | | | | |
| | | | | 4 | | | | | | | | | |
| | | | | 5 | | | | | | | | | |
| | | | 47.4 | 6 | | | | | | | | | |
| | | Borehole Terminated at 6.0 m Depth | | | | | | | | | | | |

LOG OF BOREHOLE BH LOGS - ZIBI.GPJ TROW OTTAWA GDT 4/1/21

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - A 37mm PVC monitoring well was installed upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-00250193-P0

| WATER LEVEL RECORDS | | |
|---------------------|-----------------|------------------|
| Date | Water Level (m) | Hole Open To (m) |
| March 23rd, 2021 | 2.8 | |

| CORE DRILLING RECORD | | | |
|----------------------|-----------|--------|-------|
| Run No. | Depth (m) | % Rec. | RQD % |
| | | | |

Log of Borehole BH/MW21-01



Project No: OTT-00250193-P0

Figure No. 4

Project: Phase II Environmental Site Assessment

Page. 1 of 1

Location: 4 Booth Street, Ottawa, ON

Date Drilled: April 28th, 2021

Split Spoon Sample

Combustible Vapour Reading

Drill Type: CME Truck Mount

Auger Sample

Natural Moisture Content

SPT (N) Value

Atterberg Limits

Datum: Geodetic

Dynamic Cone Test

Undrained Triaxial at % Strain at Failure

Shelby Tube

Shear Strength by Penetrometer Test

Logged by: JE Checked by: PS

Shear Strength by Vane Test

| GWL | SOIL LOG | SOIL DESCRIPTION | Geodetic m | Depth | Standard Penetration Test N Value | | | | Combustible Vapour Reading (ppm) | | | Natural Unit Wt. kN/m ³ |
|-----|----------|--|------------|-------|-----------------------------------|----|----|----|---|-----|-----|------------------------------------|
| | | | | | Shear Strength kPa | | | | 250 | 500 | 750 | |
| | | | | | 20 | 40 | 60 | 80 | Natural Moisture Content % Atterberg Limits (% Dry Weight) | | | |
| | | SAND AND GRAVEL FILL Brown, dry, no odours or staining | 53.287 | 0 | | | | | | | | |
| | | LIMESTONE AND SHALE BEDROCK | 52.7 | 1 | | | | | | | | |
| | | | | 2 | | | | | | | | |
| | | | | 3 | | | | | | | | |
| | | | | 4 | | | | | | | | |
| | | | | 5 | | | | | | | | |
| | | | | 6 | | | | | | | | |
| | | Borehole Terminated at 6.1 m Depth | 47.2 | 6 | | | | | | | | |

LOG OF BOREHOLE BH LOGS - BLOCK 206 POST REMEDIATION GPJ TROW OTTAWA.GDT 1/31/22

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - A 37mm PVC monitoring well was installed upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-00250193-P0

| WATER LEVEL RECORDS | | |
|---------------------|-----------------|------------------|
| Date | Water Level (m) | Hole Open To (m) |
| | | |

| CORE DRILLING RECORD | | | |
|----------------------|-----------|--------|-------|
| Run No. | Depth (m) | % Rec. | RQD % |
| | | | |

Log of Borehole BH/MW21-02



Project No: OTT-00250193-P0
 Project: Phase II Environmental Site Assessment
 Location: 4 Booth Street, Ottawa, ON
 Date Drilled: April 28th, 2021
 Drill Type: CME Truck Mount
 Datum: Geodetic
 Logged by: JE Checked by: PS

Figure No. 4
 Page. 1 of 1

- Split Spoon Sample
- Auger Sample
- SPT (N) Value
- Dynamic Cone Test
- Shelby Tube
- Shear Strength by Vane Test
- Combustible Vapour Reading
- Natural Moisture Content
- Atterberg Limits
- Undrained Triaxial at % Strain at Failure
- Shear Strength by Penetrometer Test

| GWL | SOIL LOG | SOIL DESCRIPTION | Geodetic m | Depth | Standard Penetration Test N Value | | | | Combustible Vapour Reading (ppm) | | | Natural Unit Wt. kN/m ³ | |
|-----|----------|--|------------|-------|-----------------------------------|----|----|----|---|-----|-----|------------------------------------|--|
| | | | | | Shear Strength kPa | | | | 250 | 500 | 750 | | |
| | | | | | 20 | 40 | 60 | 80 | Natural Moisture Content % Atterberg Limits (% Dry Weight) | | | | |
| | | SAND AND GRAVEL FILL Brown, dry, no odours or staining | 53.732 | 0 | | | | | | | | | |
| | | LIMESTONE AND SHALE BEDROCK | 53.1 | 1 | | | | | | | | | |
| | | | | 2 | | | | | | | | | |
| | | | | 3 | | | | | | | | | |
| | | | | 4 | | | | | | | | | |
| | | | | 5 | | | | | | | | | |
| | | | | 6 | | | | | | | | | |
| | | Borehole Terminated at 6.7 m Depth | 47.0 | | | | | | | | | | |

LOG OF BOREHOLE BH LOGS - BLOCK 206 POST REMEDIATION GPJ TROW OTTAWA.GDT 1/31/22

- NOTES:
- Borehole data requires interpretation by EXP before use by others
 - A 37mm PVC monitoring well was installed upon completion.
 - Field work was supervised by an EXP representative.
 - See Notes on Sample Descriptions
 - Log to be read with EXP Report OTT-00250193-P0

| WATER LEVEL RECORDS | | |
|---------------------|-----------------|------------------|
| Date | Water Level (m) | Hole Open To (m) |
| | | |

| CORE DRILLING RECORD | | | |
|----------------------|-----------|--------|-------|
| Run No. | Depth (m) | % Rec. | RQD % |
| | | | |

Log of Borehole BH/MW21-03



Project No: OTT-00250193-P0
 Project: Phase II Environmental Site Assessment
 Location: 4 Booth Street, Ottawa, ON
 Date Drilled: April 28th, 2021
 Drill Type: CME Truck Mount
 Datum: Geodetic
 Logged by: JE Checked by: PS

Figure No. 4
 Page. 1 of 1

- Split Spoon Sample
- Auger Sample
- SPT (N) Value
- Dynamic Cone Test
- Shelby Tube
- Shear Strength by Vane Test
- Combustible Vapour Reading
- Natural Moisture Content
- Atterberg Limits
- Undrained Triaxial at % Strain at Failure
- Shear Strength by Penetrometer Test

| G W L | S O B Y L | SOIL DESCRIPTION | Geodetic m | D e p t h | Standard Penetration Test N Value | | | | Combustible Vapour Reading (ppm) | | | S O I L T E M P E R A T U R E | Natural Unit Wt. kN/m ³ |
|-------------|-----------------------|--|---------------|-----------------------|-----------------------------------|----|----|----|---|-----|-----|---|--|
| | | | | | Shear Strength kPa | | | | 250 | 500 | 750 | | |
| | | | | | 20 | 40 | 60 | 80 | Natural Moisture Content % Atterberg Limits (% Dry Weight) | | | | |
| 50 | 100 | 150 | 200 | 20 | 40 | 60 | | | | | | | |
| | | SAND AND GRAVEL FILL Brown, dry, no odours or staining | 53.477 | 0 | | | | | | | | | |
| | | LIMESTONE AND SHALE BEDROCK | 52.9 | 1 | | | | | | | | | |
| | | | | 2 | | | | | | | | | |
| | | | | 3 | | | | | | | | | |
| | | | | 4 | | | | | | | | | |
| | | | | 5 | | | | | | | | | |
| | | | | 6 | | | | | | | | | |
| | | Borehole Terminated at 6.1 m Depth | 47.4 | | | | | | | | | | |

LOG OF BOREHOLE BH LOGS - BLOCK 206 POST REMEDIATION GPJ TROW OTTAWA.GDT 1/31/22

- NOTES:
1. Borehole data requires interpretation by EXP before use by others
 2. A 37mm PVC monitoring well was installed upon completion.
 3. Field work was supervised by an EXP representative.
 4. See Notes on Sample Descriptions
 5. Log to be read with EXP Report OTT-00250193-P0

| WATER LEVEL RECORDS | | |
|---------------------|-----------------|------------------|
| Date | Water Level (m) | Hole Open To (m) |
| | | |

| CORE DRILLING RECORD | | | |
|----------------------|-----------|--------|-------|
| Run No. | Depth (m) | % Rec. | RQD % |
| | | | |

EXP Services Inc.

*Windmill Dream Zibi Ontario Inc.
Phase Two Environmental Site Assessment
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0
April 20, 2022*

Appendix E: Remediation

E.1 Where any Action has been Taken to Reduce the Concentration of Contaminants on, in or under a Phase II Property

The Remediation Program was performed following requirements given under Ontario Regulation 153/04, as amended, (Regulation 153/04) and in accordance with generally accepted professional practices.

E.2 Remedial Actions

The remediation consisted of the excavation and removal of all overburden soils at 315 Miwàte Private. For the purposes of the remediation and environmental assessment program, the contaminants of potential concern (COPC) were based on the findings of the Phase One Environmental Site Assessment that was conducted for the RSC property. The COPC were VOC, PHC F1 to F4, PAH, PCB, and inorganic parameters.

In March 2019, the Phase Two property owner retained Tomlinson Development Corporation to install utilities (water, sewer, gas, hydro) for future development along Chaudière Private (formerly Perley Street). From March 5 to 25, 2019, EXP observed excavation activities and took soil samples for characterization of the utility trench which ran along the north boundary of the Phase Two property. Beneath the concrete sidewalk and asphalt roadway, sand and gravel fill material was present to a depth of approximately 0.6 metres below ground surface (m bgs). Bedrock was present at a depth of approximately 0.2 to 1.5 metres below ground surface (m bgs). Granular material, which was comprised of material that had particles larger than 2 mm, was present from a depth of 0.6 m bgs to bedrock. The total depth of the utility excavation was 2.4 m bgs. All excavated material was temporarily stockpiled on East Chaudière Island and was subsequently disposed of off-site in 2019. The utility trench was backfilled with material that was larger than 2 mm in diameter.

The 2021 remedial excavation program included excavating and stockpiling impacted soil for off-site disposal. The remedial excavation extended to the utility trench, from which all soil was removed in 2019, and extended horizontally beyond the property boundaries in all other directions and vertically to bedrock surface. With the exception of the soil at the northern property boundary, as described above, all soil was removed from the Phase Two property.

This remediation program commenced on March 29, 2021 and concluded on May 18, 2021. Excavation GTS was retained by the Phase Two property owner to complete the remedial excavation. Soil excavation and removal activities occurred over five days during this period, including March 29 to 31 and May 17 and 18. No soil was brought to the Phase Two property, as the excavation was backfilled with materials that were larger than 2 mm in diameter.

Approximately 2,431.87 tonnes of impacted soil and granular material were excavated and removed from the north part of the Phase Two property in 2019. This soil was temporarily stockpiled on East Chaudière Island and was disposed off-site in conjunction with remedial activities that occurred at 125 Zaida Eddy Private (RSC 228673). In conjunction with 2021 remedial activities, approximately 3,720.67 tonnes of impacted soil and 30.5 tonnes of impacted concrete were removed by excavation from the Phase Two property. All soil, concrete, and granular materials were disposed of as non-hazardous waste at the City of Ottawa Trail Road facility.

Over the course of the remediation program, no contaminants were created or introduced to the subject property.

No groundwater treatment was required for the remedial excavation program.

No dewatering of the excavation was required. Ground water was neither treated on site nor removed from the subject property during the remediation program.

Following completion of the remedial excavation, three boreholes were drilled within the boundaries of the subject property and monitoring wells were installed for the purpose of assessing post-remedial groundwater quality at the subject property.

The method of borehole advancement is described in Section 4.2 of the report. The monitoring and sampling of the post-remedial monitoring wells is discussed in section 4.6 and 4.7 of the report.

E.3 Free Flowing Product

No free-flowing liquid petroleum was observed during the investigation.

E.4 Confirmation Sampling and Analysis

All soil was removed from the Phase Two property, with the exception of the north wall of the utility trench beneath Chaudière Private. The excavation extended off-site along three property boundaries and the floor of the excavation consisted of limestone bedrock. Therefore, no confirmatory soil sampling was required in these locations. Confirmatory samples were collected from the north wall of the utilities trench excavated along the north boundary of the Phase Two property. Soil analytical results for the confirmatory samples are presented in Tables 4 to 6, and on Figures 19 to 24.

The results of laboratory analysis of confirmation ground water samples collected during two quarterly, post-remedial groundwater sampling events are provided in Tables 10 to 12 and on Figures 26 to 31 of the report. A discussion of the results is provided in Section 5.6 of the report. Construction details, elevations of the monitors, and results of water level measurements taken during the post-remedial sampling events are provided in Sections 4. And 4.6 of the report.

All confirmation samples were placed into sealed laboratory prepared glass bottles and vials, labelled, and transported to the laboratory stored in a cooler with ice at less than 10° C. All laboratory analyses were completed by Paracel Laboratories Ltd. (Paracel), a Standards Council of Canada (SCC) accredited laboratory. Paracel performed the work following formal written methods and procedures. Copies of the laboratory Certificates of Analysis are provided in Appendix G.

- The results of analyses for all confirmation ground water samples
- Delineation of the lateral and vertical extent of contaminants in ground water
- Sampling points, sample identification numbers, sampling depth intervals
- Concentrations of contaminants
- Stratigraphy from ground surface to the deepest aquifer or aquitard investigated

Post-remedial soil and ground water maximum concentration data for all parameters analyzed are provided in Tables 13 and 14.

E.5 Conclusions

Approximately 2,431.87 tonnes of impacted soil and granular material were excavated and removed from the north part of the Phase Two property in 2019. This soil was temporarily stockpiled on East Chaudière Island and was disposed off-site in conjunction with remedial activities that occurred at 125 Zaida Eddy Private (RSC 228673). In conjunction with 2021 remedial activities, approximately 3720.67 tonnes of impacted soil and 30.5 tonnes of impacted concrete were removed by excavation from the Phase Two property. All soil, concrete, and granular materials were disposed of as non-hazardous waste at the City of Ottawa Trail Road facility.

Confirmatory samples collected from the north wall of the utility trench beneath Chaudière Private were within the applicable Table 7 and Table 9 SCS for all parameters that were analyzed. No additional post-remedial soil sampling was required as all soil was removed from the RSC property. All imported fill consisted of granular material. All post-remedial groundwater samples were within the applicable Table 7 and Table 9 SCS for all parameters that were analyzed.

EXP Services Inc.

*Windmill Dream Zibi Ontario Inc.
Phase Two Environmental Site Assessment
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0
April 20, 2022*

Appendix F: Soil Excavated at or Brought to the Phase Two Property



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Perley Street

Date: 7-Jun-19

EXP Project #: OTT-00250193-P0

Contractor: Tomlinson

EXP Field Supervisor: Mark Devlin

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|--|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Tomlinson | T103 | AP52736 | Triaxle | 7:37 | 7:40 | 20.53 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 2 | Tomlinson | T105 | AP52740 | Triaxle | 7:43 | 7:47 | 23.32 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 3 | Tomlinson | T101 | AP852734 | Triaxle | 7:50 | 7:51 | 22.78 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 4 | PMG | 16-16 | AL20947 | Triaxle | 8:00 | 8:15 | 22.63 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 5 | Tomlinson | NA | D289982 | Triaxle | 8:50 | 9:08 | 25.98 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 6 | Tomlinson | T105 | AP52740 | Triaxle | 9:37 | 9:40 | 20.71 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 7 | Tomlinson | T101 | AP852734 | Triaxle | 9:48 | 9:51 | 20.47 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 8 | PMG | 16-16 | AL20947 | Triaxle | 9:52 | 9:55 | 22.57 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 9 | Tomlinson | T103 | AP52736 | Triaxle | 9:58 | 10:03 | 23.86 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 10 | Tomlinson | T105 | AP52740 | Triaxle | 11:04 | 11:06 | 22.95 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 11 | Tomlinson | T101 | AP852734 | Triaxle | 1:06 | 11:09 | 26.37 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 12 | Tomlinson | NA | D289982 | Triaxle | 11:13 | 11:17 | 21.84 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 13 | PMG | 16-16 | AL20947 | Triaxle | 11:11 | 11:20 | 20.82 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 14 | Tomlinson | T103 | AP52736 | Triaxle | 11:26 | 11:30 | 25.89 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 15 | Tomlinson | T105 | AP52740 | Triaxle | 12:44 | 12:54 | 21.58 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 16 | Tomlinson | T101 | AP852734 | Triaxle | 1:00 | 1:02 | 18.98 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 17 | Tomlinson | NA | D289982 | Triaxle | 1:02 | 1:04 | 19.75 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 18 | PMG | 16-16 | AL20947 | Triaxle | 1:04 | 1:10 | 20.35 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Perley Street

Date: 10-Jun-19

EXP Project #: OTT-00250193-P0

Contractor: Tomlinson

EXP Field Supervisor: Mark Devlin

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|--|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Tomlinson | T103 | AP52736 | Triaxle | 7:05 | 7:10 | 19.18 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 2 | Tomlinson | T101 | AP852734 | Triaxle | 7:25 | 7:30 | 19.61 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 3 | PMG | 16-16 | AL20947 | Triaxle | 7:30 | 7:33 | 19.04 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 4 | Tomlinson | T105 | AP52740 | Triaxle | 7:37 | 7:45 | 20.94 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 5 | Tomlinson | NA | D289982 | Triaxle | 8:00 | 8:10 | 17.9 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 6 | Tomlinson | T103 | AP52736 | Triaxle | 9:05 | 9:14 | 18.93 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 7 | Tomlinson | T101 | AP852734 | Triaxle | 9:19 | 9:20 | 19.13 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 8 | PMG | 16-16 | AL20947 | Triaxle | 9:25 | 9:30 | 20.45 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 9 | Tomlinson | T105 | AP52740 | Triaxle | 9:30 | 9:35 | 18.87 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 10 | Tomlinson | NA | D289982 | Triaxle | 10:13 | 10:16 | 19.47 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 11 | Tomlinson | T103 | AP52736 | Triaxle | 11:03 | 11:06 | 19.9 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 12 | Tomlinson | T101 | AP852734 | Triaxle | 11:15 | 11:18 | 16.97 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 13 | PMG | 16-16 | AL20947 | Triaxle | 11:25 | 11:30 | 18.32 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 14 | Tomlinson | T105 | AP52740 | Triaxle | 11:46 | 11:49 | 16.22 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 15 | Tomlinson | NA | D289982 | Triaxle | 12:41 | 12:45 | 17.74 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 16 | Tomlinson | T103 | AP52736 | Triaxle | 1:10 | 1:13 | 16.68 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 17 | Tomlinson | T101 | AP852734 | Triaxle | 1:19 | 1:22 | 18.66 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 18 | PMG | 16-16 | AL20947 | Triaxle | 1:30 | 1:34 | 18.07 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 19 | Tomlinson | T105 | AP52740 | Triaxle | 2:11 | 2:14 | 19.2 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 20 | Tomlinson | NA | D289982 | Triaxle | 3:10 | 3:15 | 24.71 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 21 | Tomlinson | T103 | AP52736 | Triaxle | 3:22 | 3:26 | 26.5 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 22 | Tomlinson | T101 | AP852734 | Triaxle | 3:35 | 3:40 | 26.47 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Perley Street

Date: 11-Jun-19

EXP Project #: OTT-00250193-P0

Contractor: Tomlinson

EXP Field Supervisor: Mark Devlin

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|--|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Tomlinson | T103 | AP52736 | Triaxle | 7:00 | 7:07 | 20.72 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 2 | Tomlinson | T105 | AP52740 | Triaxle | 7:08 | 7:12 | 17.65 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 3 | PMG | 16-16 | AL20947 | Triaxle | 7:10 | 7:20 | 19.53 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 4 | Tomlinson | T101 | AP85273 | Triaxle | 7:20 | 7:23 | 17.23 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 5 | Tomlinson | NA | D289982 | Triaxle | 7:41 | 7:45 | 18.8 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 6 | Tomlinson | T103 | AP52736 | Triaxle | 8:42 | 8:42 | 19.89 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 7 | Tomlinson | T105 | AP52740 | Triaxle | 8:55 | 8:58 | 19.47 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 8 | PMG | 16-16 | AL20947 | Triaxle | 8:59 | 9:02 | 18.55 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 9 | Tomlinson | T101 | AP85273 | Triaxle | 9:23 | 9:26 | 17.71 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 10 | Tomlinson | NA | D289982 | Triaxle | 9:49 | 9:56 | 18.58 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 11 | Tomlinson | T103 | AP52736 | Triaxle | 10:02 | 10:05 | 18.57 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 12 | Tomlinson | T105 | AP52740 | Triaxle | 10:15 | 10:20 | 18.18 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 13 | PMG | 16-16 | AL20947 | Triaxle | 10:21 | 10:25 | 18.35 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 14 | Tomlinson | T101 | AP85273 | Triaxle | 11:25 | 11:00 | 19.23 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 15 | PMG | 16-16 | AL20947 | Triaxle | 11:30 | 11:33 | 20.95 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 16 | Tomlinson | T101 | AP85273 | Triaxle | 11:34 | 11:38 | 19.12 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 17 | Tomlinson | NA | D289982 | Triaxle | 11:45 | 11:48 | 18.69 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 18 | Tomlinson | T103 | AP52736 | Triaxle | 12:48 | 12:52 | 19.81 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 19 | Tomlinson | T105 | AP52740 | Triaxle | 1:00 | 1:06 | 23.77 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 20 | PMG | 16-16 | AL20947 | Triaxle | 1:07 | 1:08 | 18.31 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 21 | Tomlinson | T101 | AP85273 | Triaxle | 1:09 | 1:11 | 17.99 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 22 | PMG | 16-16 | AL20947 | Triaxle | 1:16 | 1:17 | 17.85 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 23 | Tomlinson | T101 | AP85273 | Triaxle | 2:18 | 2:20 | 19.42 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 24 | PMG | 16-16 | AL20947 | Triaxle | 2:22 | 2:25 | 18.25 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 25 | Tomlinson | T101 | AP85273 | Triaxle | 2:32 | 2:40 | 17.65 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Perley Street

Date: 12-Jun-19

EXP Project #: OTT-00250193-P0

Contractor: Tomlinson

EXP Field Supervisor: Mark Devlin

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|--|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Tomlinson | T103 | AP52736 | Triaxle | 7:10 | 7:23 | 17.59 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 2 | Tomlinson | T105 | AP52740 | Triaxle | 7:23 | 7:27 | 19.74 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 3 | PMG | 16-16 | AL20947 | Triaxle | 7:29 | 7:33 | 18.89 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 4 | Tomlinson | T101 | AP85273 | Triaxle | 7:43 | 7:48 | 16.92 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 5 | Tomlinson | NA | D289982 | Triaxle | 8:59 | 9:04 | 18.95 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 6 | Tomlinson | T103 | AP52736 | Triaxle | 9:06 | 9:10 | 18 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 7 | Tomlinson | T105 | AP52740 | Triaxle | 9:08 | 9:14 | 16.73 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 8 | PMG | 16-16 | AL20947 | Triaxle | 9:26 | 9:30 | 17.86 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 9 | Tomlinson | T101 | AP85273 | Triaxle | 9:08 | 10:21 | 19.36 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 10 | Tomlinson | NA | D289982 | Triaxle | 9:26 | 10:31 | 18.6 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 11 | Tomlinson | T103 | AP52736 | Triaxle | 10:16 | 10:35 | 18.19 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 12 | Tomlinson | T105 | AP52740 | Triaxle | 10:26 | 11:02 | 20.34 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 13 | PMG | 16-16 | AL20947 | Triaxle | 10:31 | 11:41 | 20.04 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 14 | Tomlinson | T101 | AP85273 | Triaxle | 10:56 | 11:49 | 18.2 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Perley Street

Date: 13-Jun-19

EXP Project #: OTT-00250193-P0

Contractor: Tomlinson

EXP Field Supervisor: Mark Devlin

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|--|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Tomlinson | T105 | AP52740 | Triaxle | 7:10 | 7:15 | 17.37 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 2 | Tomlinson | T103 | AP52736 | Triaxle | 7:15 | 7:17 | 17.28 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 3 | PMG | 16-16 | AL20947 | Triaxle | 7:17 | 7:21 | 16.46 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 4 | Tomlinson | T101 | AP85273 | Triaxle | 7:21 | 7:28 | 15.84 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 5 | Benoit | 90 | AK56550 | Triaxle | 7:21 | 7:25 | 17.7 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 6 | Tomlinson | NA | D289982 | Triaxle | 7:46 | 7:50 | 15.33 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 7 | Tomlinson | T105 | AP52740 | Triaxle | 8:49 | 8:53 | 18.41 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 8 | Tomlinson | T103 | AP52736 | Triaxle | 8:51 | 8:56 | 15.99 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 9 | PMG | 16-16 | AL20947 | Triaxle | 8:57 | 9:01 | 17.84 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 10 | Tomlinson | T101 | AP85273 | Triaxle | 9:03 | 9:07 | 18.19 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 11 | Benoit | 90 | AK56550 | Triaxle | 9:07 | 9:15 | 20.66 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 12 | Tomlinson | NA | D289982 | Triaxle | 9:25 | 9:26 | 22.57 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 13 | Tomlinson | T105 | AP52740 | Triaxle | 10:20 | 10:24 | 20.35 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 14 | Tomlinson | T103 | AP52736 | Triaxle | 10:22 | 10:27 | 20.32 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 15 | PMG | 16-16 | AL20947 | Triaxle | 10:26 | 10:31 | 19.55 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 16 | Tomlinson | T101 | AP85273 | Triaxle | 10:31 | 10:34 | 19.76 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 17 | Benoit | 90 | AK56550 | Triaxle | 10:36 | 10:40 | 19.87 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 18 | Tomlinson | NA | D289982 | Triaxle | 11:13 | 11:17 | 18.71 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 19 | Tomlinson | T105 | AP52740 | Triaxle | 11:37 | 11:41 | 19.64 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 20 | Tomlinson | T103 | AP52736 | Triaxle | 11:41 | 11:43 | 19.63 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 21 | PMG | 16-16 | AL20947 | Triaxle | 11:55 | 11:58 | 18.65 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 22 | Tomlinson | T101 | AP85273 | Triaxle | 11:57 | 12:02 | 20.06 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 23 | Benoit | 90 | AK56550 | Triaxle | 12:02 | 12:05 | 18.47 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 24 | Tomlinson | NA | D289982 | Triaxle | 12:45 | 12:50 | 20.09 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 25 | Tomlinson | T105 | AP52740 | Triaxle | 12:50 | 12:55 | 17.81 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 26 | Tomlinson | T103 | AP52736 | Triaxle | 1:06 | 1:10 | 18.41 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 27 | PMG | 16-16 | AL20947 | Triaxle | 1:14 | 1:17 | 20.39 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |

| | | | | | | | | |
|----|-----------|-------|----------|---------|------|------|-------|--|
| 28 | Tomlinson | T101 | AP852734 | Triaxle | 1:19 | 1:23 | 20.21 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 29 | Benoit | 90 | AK56550 | Triaxle | 1:34 | 1:48 | 21.89 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 30 | Tomlinson | NA | D289982 | Triaxle | 2:08 | 2:12 | 23.77 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 31 | Tomlinson | T105 | AP52740 | Triaxle | 2:23 | 2:27 | 20.05 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 32 | Tomlinson | T103 | AP52736 | Triaxle | 2:27 | 2:31 | 19.54 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 33 | PMG | 16-16 | AL20947 | Triaxle | 2:39 | 2:42 | 17.48 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 34 | Tomlinson | T101 | AP852734 | Triaxle | 2:43 | 2:47 | 18.02 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 35 | Benoit | 90 | AK56550 | Triaxle | 3:04 | 3:08 | 19.36 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Perley Street

Date: 14-Jun-19

EXP Project #: OTT-00250193-P0

Contractor: Tomlinson

EXP Field Supervisor: Mark Devlin

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|--|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Tomlinson | T101 | AP852734 | Triaxle | 7:02 | 7:05 | 16.73 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 2 | Tomlinson | T228 | AT93768 | Triaxle | 7:05 | 7:07 | 15.29 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 3 | Tomlinson | T105 | AP52740 | Triaxle | 7:05 | 7:10 | 19.42 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 4 | Tomlinson | T103 | AP52736 | Triaxle | 7:07 | 7:15 | 19.13 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 5 | PMG | 16-16 | AL20947 | Triaxle | 7:12 | 7:20 | 16.79 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 6 | Tomlinson | T101 | AP852734 | Triaxle | 7:22 | 7:26 | 19.94 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 7 | Tomlinson | T228 | AT93768 | Triaxle | 7:34 | 7:36 | 19.47 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 8 | Tomlinson | T105 | AP52740 | Triaxle | 8:28 | 8:30 | 19.08 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 9 | Tomlinson | T103 | AP52736 | Triaxle | 8:29 | 8:33 | 19.84 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 10 | PMG | 16-16 | AL20947 | Triaxle | 8:35 | 8:38 | 20.65 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 11 | Tomlinson | T103 | AP52736 | Triaxle | 8:37 | 8:42 | 18.31 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 12 | Tomlinson | T105 | AP52740 | Triaxle | 8:47 | 8:50 | 32.06 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 13 | PMG | 16-16 | AL20947 | Triaxle | 9:02 | 9:06 | 20.52 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 14 | Tomlinson | T101 | AP852734 | Triaxle | 9:08 | 9:13 | 23.13 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Perley Street

Date: 17-Jun-19

EXP Project #: OTT-00250193-P0

Contractor: Tomlinson

EXP Field Supervisor: Mark Devlin

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|--|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Tomlinson | T103 | AP52736 | Triaxle | 7:00 | 7:07 | 19.8 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 2 | Tomlinson | T101 | AP852734 | Triaxle | 7:08 | 7:12 | 19.68 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 3 | PMG | 16-16 | AL20947 | Triaxle | 7:10 | 7:20 | 21.54 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 4 | Tomlinson | T105 | AP52740 | Triaxle | 7:20 | 7:23 | 21.93 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 5 | Benoit | 90 | AK56550 | Triaxle | 7:41 | 7:45 | 22.78 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 6 | Tomlinson | T103 | AP52736 | Triaxle | 8:42 | 8:42 | 23.16 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 7 | Tomlinson | T105 | AP52740 | Triaxle | 8:55 | 8:58 | 19.98 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 8 | PMG | 16-16 | AL20947 | Triaxle | 8:59 | 9:02 | 19.76 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 9 | Tomlinson | T101 | AP852734 | Triaxle | 9:23 | 9:26 | 21.12 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 10 | Tomlinson | NA | D289982 | Triaxle | 9:49 | 9:56 | 23.54 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 11 | Tomlinson | T103 | AP52736 | Triaxle | 10:02 | 10:05 | 22.98 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 12 | Tomlinson | T103 | AP52736 | Triaxle | 10:15 | 10:20 | 19.27 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 13 | Tomlinson | T101 | AP852734 | Triaxle | 10:21 | 10:25 | 20.86 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 14 | PMG | 16-16 | AL20947 | Triaxle | 11:25 | 11:00 | 21.1 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |
| 15 | Tomlinson | T105 | AP52740 | Triaxle | 11:30 | 11:33 | 21.7 | Stockpiled on Block 211, removed in conjunction with RSC #228673 |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 29-Mar-21

EXP Project #: OTT-00250193-P0

Contractor: Excavation GTS

EXP Field Supervisor: Jeremy Eckert

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Gauvreau | 20-02 | L848044 | Triaxle | 7:00 | 7:07 | 20 | |
| 2 | Gauvreau | 19-33 | L683060 | Triaxle | 7:00 | 7:13 | 18.14 | |
| 3 | Gauvreau | 14-17 | L711973 | Triaxle | 7:00 | 7:20 | 21.77 | |
| 4 | Gauvreau | 19-11 | L619965 | Triaxle | 7:00 | 7:25 | 19.46 | |
| 5 | Gauvreau | 20-04 | L808876 | Semi | 7:00 | 7:35 | 30.48 | |
| 6 | Gauvreau | 20-04 | L711950 | Triaxle | 7:15 | 7:40 | 21.03 | |
| 7 | Gauvreau | 19-23 | L712145 | Semi | 7:40 | 7:45 | 20.18 | |
| 8 | Gauvreau | 20-02 | L848044 | Triaxle | 8:15 | 8:20 | 20.39 | |
| 9 | Gauvreau | 19-33 | L683060 | Triaxle | 8:27 | 8:30 | 22.92 | |
| 10 | Gauvreau | 14-17 | L711973 | Triaxle | 8:30 | 8:35 | 21.6 | |
| 11 | Gauvreau | 19-11 | L619965 | Triaxle | 8:33 | 8:40 | 21.78 | |
| 12 | Gauvreau | 20-04 | L808876 | Semi | 8:45 | 8:50 | 26.9 | |
| 13 | Gauvreau | 21-16 | L771658 | Triaxle | 8:50 | 8:56 | 22.89 | |
| 14 | Gauvreau | 19-23 | L712145 | Semi | 8:59 | 9:10 | 23.05 | |
| 15 | Gauvreau | 20-02 | L848044 | Triaxle | 9:25 | 9:30 | 22.76 | |
| 16 | Gauvreau | 19.33 | L683060 | Triaxle | 9:33 | 9:37 | 22.36 | |
| 17 | Gauvreau | 14-17 | L711973 | Triaxle | 9:39 | 9:42 | 22.3 | |
| 18 | Gauvreau | 19-11 | L619965 | Triaxle | 9:45 | 9:50 | 22.66 | |
| 19 | Gauvreau | 12-28 | L711950 | Triaxle | 9:47 | 9:53 | 20.5 | |
| 20 | Gauvreau | 20-04 | L808876 | Semi | 10:00 | 10:07 | 27.31 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 29-Mar-21

EXP Project #: OTT-00250193-P0

Contractor: Excavation GTS

EXP Field Supervisor: Jeremy Eckert

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 21 | Gauvreau | 19-23 | L712145 | Semi | 10:21 | 10:30 | 24.27 | |
| 22 | Gauvreau | 20-02 | L848044 | Triaxle | 10:35 | 10:40 | 21.54 | |
| 23 | Gauvreau | 21-16 | L771658 | Triaxle | 10:37 | 10:42 | 17.82 | |
| 24 | Gauvreau | 19-33 | L683060 | Triaxle | 10:40 | 10:45 | 18.9 | |
| 25 | Gauvreau | 14-17 | L711973 | Triaxle | 10:49 | 10:54 | 25.54 | |
| 26 | Gauvreau | 19-11 | L619965 | Triaxle | 10:56 | 11:02 | 20.7 | |
| 27 | Gauvreau | 19-23 | L712145 | Semi | 11:38 | 11:45 | 29.96 | |
| 28 | Gauvreau | 19-31 | L711981 | Triaxle | 11:45 | 11:48 | 18.73 | |
| 29 | Gauvreau | 20-02 | L848044 | Triaxle | 11:45 | 11:51 | 17.83 | |
| 30 | Gauvreau | 21-16 | L771658 | Triaxle | 11:48 | 11:54 | 23.47 | |
| 31 | Gauvreau | 19-33 | L683060 | Triaxle | 11:51 | 11:58 | 20.16 | |
| 32 | Gauvreau | 14-17 | L711973 | Triaxle | 11:58 | 12:01 | 21.6 | |
| 33 | Gauvreau | 12-28 | L711950 | Triaxle | 12:04 | 12:36 | 18.31 | |
| 34 | Gauvreau | 19-11 | L619965 | Triaxle | 12:12 | 12:38 | 18.81 | |
| 35 | Gauvreau | 20-04 | L808876 | Semi | 12:57 | 13:03 | 26.55 | |
| 36 | Gauvreau | 19-23 | L712145 | Semi | 12:59 | 13:08 | 21.9 | |
| 37 | Gauvreau | 19-31 | L711981 | Triaxle | 13:06 | 13:12 | 15.77 | |
| 38 | Gauvreau | 20-02 | L848044 | Triaxle | 13:10 | 13:14 | 19.13 | |
| 39 | Gauvreau | 21-16 | L771658 | Triaxle | 13:10 | 13:17 | 18.25 | |
| 40 | Gauvreau | 19-33 | L683060 | Triaxle | 13:14 | 13:20 | 17.22 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 29-Mar-21

EXP Project #: OTT-00250193-P0

Contractor: Excavation GTS

EXP Field Supervisor: Jeremy Eckert

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 41 | Gauvreau | 14-17 | L711973 | Triaxle | 13:15 | 13:24 | 18.42 | |
| 42 | Gauvreau | 12-28 | L711950 | Triaxle | 13:44 | 13:48 | 19.35 | |
| 43 | Gauvreau | 19-11 | L619965 | Triaxle | 13:45 | 13:53 | 13.17 | |
| 44 | Gauvreau | 20-04 | L808876 | Semi | 14:25 | 14:28 | 24.5 | |
| 45 | Gauvreau | 19-23 | L712145 | Semi | 14:30 | 14:35 | 25.8 | |
| 46 | Gauvreau | 19-31 | L711981 | Triaxle | 14:30 | 14:39 | 17.86 | |
| 47 | Gauvreau | 20-02 | L848044 | Triaxle | 14:35 | 14:40 | 18.25 | |
| 48 | Gauvreau | 21-16 | L771658 | Triaxle | 14:38 | 14:44 | 21.72 | |
| 49 | Gauvreau | 14-17 | L711973 | Triaxle | 14:38 | 14:48 | 18.54 | |
| 50 | Gauvreau | 19-33 | L683060 | Triaxle | 14:41 | 14:52 | 22.93 | |
| 51 | Gauvreau | 12-28 | L711950 | Triaxle | 14:50 | 14:55 | 18.56 | |
| 52 | Gauvreau | 19-11 | L619965 | Triaxle | 14:56 | 14:59 | 19.67 | |
| 53 | Gauvreau | 20-04 | L808864 | Semi | 15:40 | 15:43 | 22.76 | |
| 54 | Gauvreau | 19-23 | L712145 | Semi | 15:45 | 15:50 | 24.69 | |
| 55 | Gauvreau | 19-31 | L711981 | Triaxle | 15:52 | 15:54 | 17.02 | |
| 56 | Gauvreau | 20-02 | L848044 | Triaxle | 15:53 | 15:57 | 19.86 | |
| 57 | Gauvreau | 21-16 | L771658 | Triaxle | 15:55 | 16:01 | 18.98 | |
| 58 | Gauvreau | 19-33 | L683060 | Triaxle | 15:57 | 16:03 | 18.52 | |
| 59 | Gauvreau | 12-28 | L711950 | Triaxle | 15:58 | 16:07 | 17.39 | |
| 60 | Gauvreau | 19-11 | L619965 | Triaxle | 16:04 | 16:10 | 18.23 | |
| 61 | Gauvreau | 14-17 | L711973 | Triaxle | 16:12 | 16:15 | 22.08 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 30-Mar-21

EXP Project #: OTT-00250193-P0

Contractor: Excavation GTS

EXP Field Supervisor: Philip Oliveira

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Gauvreau | 19-11 | L619965 | Triaxle | 7:00 | 7:02 | 17.26 | |
| 2 | Gauvreau | 19-33 | L683060 | Triaxle | 7:02 | 7:06 | 17.62 | |
| 3 | Gauvreau | 20-02 | L848044 | Triaxle | 7:06 | 7:09 | 18.68 | |
| 4 | Gauvreau | 14-17 | L711973 | Triaxle | 7:09 | 7:11 | 18.09 | |
| 5 | Gauvreau | 20-04 | L808876 | Semi | 7:15 | 7:19 | 22.12 | |
| 6 | Gauvreau | 19-23 | L712145 | Semi | 7:21 | 7:25 | 22.85 | |
| 7 | Gauvreau | 20-05 | L848045 | Triaxle | 7:56 | 7:58 | 16.94 | |
| 8 | Gauvreau | 19-31 | L711981 | Triaxle | 8:17 | 8:20 | 19.41 | |
| 9 | Gauvreau | 19-33 | L683060 | Triaxle | 8:21 | 8:23 | 21.55 | |
| 10 | Gauvreau | 19-11 | L619965 | Triaxle | 8:28 | 8:30 | 17.97 | |
| 11 | Gauvreau | 14-17 | L711973 | Triaxle | 8:31 | 8:33 | 19.1 | |
| 12 | Gauvreau | 20-02 | L848044 | Triaxle | 8:33 | 8:36 | 19.67 | |
| 13 | Gauvreau | 20-04 | L808876 | Semi | 8:37 | 8:41 | 24.48 | |
| 14 | Gauvreau | 19-23 | L712145 | Semi | 8:43 | 8:48 | 22.04 | |
| 15 | Gauvreau | 20-05 | L848045 | Triaxle | 9:15 | 9:18 | 21.21 | |
| 16 | Gauvreau | 19-31 | L711981 | Triaxle | 9:26 | 9:29 | 20.16 | |
| 17 | Gauvreau | 19-33 | L683060 | Triaxle | 9:30 | 9:34 | 20.84 | |
| 18 | Gauvreau | 19-11 | L619965 | Triaxle | 9:38 | 9:40 | 16.32 | |
| 19 | Gauvreau | 14-17 | L711973 | Triaxle | 9:40 | 9:43 | 18.23 | |
| 20 | Gauvreau | 20-02 | L848044 | Triaxle | 9:43 | 9:48 | 18.75 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 30-Mar-21

EXP Project #: OTT-00250193-P0

Contractor: Excavation GTS

EXP Field Supervisor: Philip Oliveira

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 21 | Gauvreau | 20-04 | L808876 | Semi | 9:56 | 10:00 | 26.13 | |
| 22 | Gauvreau | 19-23 | L712145 | Semi | 10:13 | 10:17 | 24.04 | |
| 23 | Gauvreau | 20-05 | L848045 | Triaxle | 10:29 | 10:32 | 16.51 | |
| 24 | Gauvreau | 19-31 | L711981 | Triaxle | 10:34 | 10:37 | 17.23 | |
| 25 | Gauvreau | 19-33 | L683060 | Triaxle | 10:38 | 10:41 | 20.92 | |
| 26 | Gauvreau | 19-11 | L619965 | Triaxle | 10:52 | 10:56 | 17.5 | |
| 27 | Gauvreau | 14-17 | L711973 | Triaxle | 10:57 | 11:02 | 15.73 | |
| 28 | Gauvreau | 20-02 | L848044 | Triaxle | 11:03 | 11:07 | 20.29 | |
| 29 | Gauvreau | 20-04 | L808876 | Semi | 11:14 | 11:19 | 25.9 | |
| 30 | Gauvreau | 19-23 | L712145 | Semi | 11:39 | 11:43 | 28.11 | |
| 31 | Gauvreau | 19-31 | L711981 | Triaxle | 11:46 | 11:49 | 15.8 | |
| 32 | Gauvreau | 20-05 | L848045 | Triaxle | 11:50 | 11:52 | 18.43 | |
| 33 | Gauvreau | 19-33 | L683060 | Triaxle | 11:53 | 11:57 | 19.73 | |
| 34 | Gauvreau | 19-11 | L619965 | Triaxle | 12:32 | 12:36 | 19.39 | |
| 35 | Gauvreau | 14-17 | L711973 | Triaxle | 12:36 | 12:39 | 17.8 | |
| 36 | Gauvreau | 20-02 | L848044 | Triaxle | 12:39 | 12:44 | 18.78 | |
| 37 | Gauvreau | 20-04 | L808876 | Semi | 12:47 | 12:54 | 22.03 | |
| 38 | Gauvreau | 19-33 | L683060 | Triaxle | 12:57 | 13:07 | 17.52 | |
| 39 | Gauvreau | 19-31 | L711981 | Triaxle | 13:09 | 13:17 | 18.24 | |
| 40 | Gauvreau | 19-23 | L712145 | Semi | 13:20 | 13:25 | 17.18 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 30-Mar-21

EXP Project #: OTT-00250193-P0

Contractor: Excavation GTS

EXP Field Supervisor: Philip Oliveira

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 41 | Gauvreau | 20-05 | L848045 | Triaxle | 13:27 | 13:31 | 15.22 | |
| 42 | Gauvreau | 19-11 | L619965 | Triaxle | 13:48 | 13:51 | 13.25 | |
| 43 | Gauvreau | 14-17 | L711973 | Triaxle | 13:53 | 13:55 | 14.93 | |
| 44 | Gauvreau | 20-02 | L848044 | Triaxle | 13:55 | 14:00 | 18.54 | |
| 45 | Gauvreau | 20-04 | L808876 | Semi | 14:12 | 14:17 | 22.03 | |
| 46 | Gauvreau | 19-33 | L683060 | Triaxle | 14:18 | 14:22 | 17.95 | |
| 47 | Gauvreau | 19-31 | L711981 | Triaxle | 14:40 | 14:44 | 17.19 | |
| 48 | Gauvreau | 19-23 | L712145 | Semi | 14:51 | 14:57 | 21.39 | |
| 49 | Gauvreau | 20-05 | L848045 | Triaxle | 14:57 | 15:00 | 19.41 | |
| 50 | Gauvreau | 14-17 | L711973 | Triaxle | 15:01 | 15:05 | 17.06 | |
| 51 | Gauvreau | 19-11 | L619965 | Triaxle | 15:07 | 15:11 | 18.14 | |
| 52 | Gauvreau | 20-02 | L848044 | Triaxle | 15:13 | 15:15 | 19.9 | |
| 53 | Gauvreau | 19-33 | L683060 | Triaxle | 15:28 | 15:31 | 19.75 | |
| 54 | Gauvreau | 20-04 | L808876 | Semi | 15:33 | 15:37 | 20.41 | |
| 55 | Gauvreau | 19-31 | L711981 | Triaxle | 16:00 | 16:04 | 14.08 | |
| 56 | Gauvreau | 14-17 | L711973 | Triaxle | 16:25 | 16:28 | 14.72 | |
| 57 | Gauvreau | 19-11 | L619965 | Triaxle | 16:28 | 16:32 | 14.65 | |
| 58 | Gauvreau | 20-05 | L848045 | Triaxle | 16:34 | 16:38 | 14.71 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 31-Mar-21

EXP Project #: OTT-00250193-P0

Contractor: Excavation GTS

EXP Field Supervisor: Philip Oliveira

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Gauvreau | 20-02 | L848044 | Triaxle | 7:17 | 7:22 | 18.92 | |
| 2 | Gauvreau | 19-23 | L712145 | Semi | 7:23 | 7:28 | 21.38 | |
| 3 | Gauvreau | 14-17 | L711973 | Triaxle | 7:42 | 7:45 | 17.17 | |
| 4 | Gauvreau | 19-33 | L683060 | Triaxle | 7:46 | 7:51 | 19.34 | |
| 5 | Gauvreau | 19-11 | L619965 | Triaxle | 7:52 | 7:57 | 17 | |
| 6 | Gauvreau | 20-02 | L848044 | Triaxle | 8:41 | 8:55 | 19.45 | |
| 7 | Gauvreau | 19-23 | L712145 | Semi | 8:55 | 9:08 | 24.47 | |
| 8 | Gauvreau | 14-17 | L711973 | Triaxle | 9:10 | 9:25 | 20.06 | |
| 9 | Gauvreau | 19-33 | L683060 | Triaxle | 9:26 | 9:34 | 20.38 | |
| 10 | Gauvreau | 19-31 | L711981 | Triaxle | 9:36 | 9:55 | 18.99 | |
| 11 | Gauvreau | 21-16 | L771658 | Triaxle | 9:56 | 10:04 | 19.33 | |
| 12 | Gauvreau | 19-11 | L619965 | Triaxle | 11:12 | 11:18 | 18.52 | |
| 13 | Gauvreau | 20-04 | L808876 | Semi | 11:18 | 11:24 | 26.88 | |
| 14 | Gauvreau | 20-02 | L848044 | Triaxle | 11:25 | 11:34 | 20.49 | |
| 15 | Gauvreau | 19-31 | L711981 | Triaxle | 11:35 | 11:45 | 23.32 | |
| 16 | Gauvreau | 19-11 | L619965 | Triaxle | 12:30 | 12:39 | 21.14 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 31-Mar-21

EXP Project #: OTT-00250193-P0

Contractor: Excavation GTS

EXP Field Supervisor: Philip Oliveira

Soil Disposal Location: Demolition Piche, Gatineau

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|----------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | Gauvreau | 21-16 | L771658 | Triaxle | 8:10 | 8:19 | 15.5 | Concrete |
| 2 | Gauvreau | 20-04 | L808876 | Semi | 8:20 | 8:32 | 15 | Concrete |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 17-May-21

EXP Project #: OTT-00250193-P0

Contractor: Akman

EXP Field Supervisor: Jeremy Eckert

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | McCune | 17-03 | BA72564 | Triaxle | 7:15 | 7:20 | 24 | |
| 2 | Swaby | 767-1 | BC88525 | Triaxle | 7:20 | 7:25 | 25.51 | |
| 3 | Akman | 14 | BE35699 | Triaxle | 7:30 | 7:32 | 23.31 | |
| 4 | Lesway | 710 | BD27125 | Triaxle | 9:20 | 9:25 | 21.79 | |
| 5 | Lesway | 710 | BD27125 | Triaxle | 11:35 | 11:45 | 22.13 | |
| 6 | Akman | 14 | BE35699 | Triaxle | 11:40 | 11:51 | 20.96 | |
| 7 | Swaby | 767-1 | BC88525 | Triaxle | 11:53 | 12:00 | 22.48 | |
| 8 | McCune | 17-03 | BA72564 | Triaxle | 12:35 | 12:41 | 22.73 | |
| 9 | Swaby | 767-1 | BC88525 | Triaxle | 13:24 | 13:30 | 23.09 | |
| 10 | Akman | 14 | BE35699 | Triaxle | 13:33 | 13:39 | 25.4 | |
| 11 | McCune | 17-03 | BA72564 | Triaxle | 14:07 | 14:13 | 23.12 | |
| 12 | Swaby | 767-1 | BC88525 | Triaxle | 14:54 | 15:00 | 24.21 | |
| 13 | Akman | 14 | BE35699 | Triaxle | 15:00 | 15:07 | 24.98 | |
| 14 | McCune | 17-03 | BA72564 | Triaxle | 15:38 | 15:45 | 24.19 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 18-May-21

EXP Project #: OTT-00250193-P0

Contractor: Akman

EXP Field Supervisor: Jeremy Eckert

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | McCune | 17-03 | BA72564 | Triaxle | 7:05 | 7:07 | 22.65 | |
| 2 | Swaby | 767-1 | BC88525 | Triaxle | 7:05 | 7:10 | 22.26 | |
| 3 | Pavetech | 551 | BE21569 | Triaxle | 7:05 | 7:13 | 21.64 | |
| 4 | Akman | 14 | BE35699 | Triaxle | 7:28 | 7:32 | 23.46 | |
| 5 | Lesway | 710 | BD72125 | Triaxle | 7:32 | 7:34 | 22.44 | |
| 6 | McCune | 17-03 | BA72564 | Triaxle | 8:30 | 8:35 | 24.31 | |
| 7 | Pavetech | 551 | BE21569 | Triaxle | 8:38 | 8:41 | 27.28 | |
| 8 | Swaby | 767-1 | BC88525 | Triaxle | 8:45 | 8:50 | 25.11 | |
| 9 | Akman | 14 | BE35699 | Triaxle | 8:50 | 8:55 | 23.64 | |
| 10 | Lesway | 710 | BD72125 | Triaxle | 9:03 | 9:07 | 21.99 | |
| 11 | Pavetech | 551 | BE21569 | Triaxle | 10:05 | 10:10 | 25.7 | |
| 12 | Swaby | 767-1 | BC88525 | Triaxle | 10:15 | 10:20 | 25.11 | |
| 13 | Lesway | 710 | BD72125 | Triaxle | 10:33 | 10:40 | 18.92 | |
| 14 | Akman | 14 | BE35699 | Triaxle | 10:38 | 10:50 | 24.43 | |
| 15 | Pavetech | 551 | BE21569 | Triaxle | 11:29 | 11:35 | 28.99 | |
| 16 | Swaby | 767-1 | BC88525 | Triaxle | 11:39 | 11:45 | 23.77 | |
| 17 | Akman | 14 | BE35699 | Triaxle | 11:56 | 12:10 | 24.45 | |
| 18 | Pavetech | 551 | BE21569 | Triaxle | 13:00 | 13:10 | 24.92 | |
| 19 | Lesway | 710 | BD72125 | Triaxle | 13:09 | 13:15 | 24.7 | |
| 20 | Akman | 14 | BE35699 | Triaxle | 13:45 | 14:00 | 24.73 | |
| 21 | Swaby | 767-1 | BC88525 | Triaxle | 13:45 | 14:15 | 22.14 | |
| 22 | Pavetech | 551 | BE21569 | Triaxle | 14:35 | 14:45 | 26.88 | |
| 23 | Swaby | 767-1 | BC88525 | Triaxle | 15:18 | 15:25 | 23.19 | |
| 24 | Swaby | 767-1 | BC88525 | Triaxle | 16:35 | 16:40 | 19.59 | |



Table E1 - SOIL DISPOSAL TRACKING SHEET (SDTS)

Site Location: Zibi Block 206

Date: 19-May-21

EXP Project #: OTT-00250193-P0

Contractor: Akman

EXP Field Supervisor: Philip Oliveira

Soil Disposal Location: Trail Road Landfill

| Load Number | Soil Hauler Information | | | | Arrival Time | Departure Time | Quantity of Soil or Material Disposed (tonnes) | Notes |
|-------------|-------------------------|------------------|---------------|------------|--------------|----------------|--|-------|
| | Company | Truck Vehicle ID | License Plate | Truck Type | | | | |
| 1 | McCune | 17-03 | BA72564 | Triaxle | 7:14 | 7:18 | 22.26 | |
| 2 | Akman | 14 | BE35699 | Triaxle | 7:26 | 7:29 | 24.28 | |
| 3 | Swaby | 767 | AY86401 | Triaxle | 8:40 | 8:43 | 22.97 | |
| 4 | McCune | 17-03 | BA72564 | Triaxle | 8:52 | 8:56 | 20.72 | |
| 5 | Akman | 14 | BE35699 | Triaxle | 9:00 | 9:06 | 16.28 | |

EXP Services Inc.

Windmill Dream Zibi Ontario Inc.

Phase Two Environmental Site Assessment

315 Miwàte Private, West Chaudière Island, Ottawa, Ontario

OTT-00250193-P0

April 20, 2022

Appendix G: Analytical Summary Tables

Table 1 - Pre-Remediation Analytical Results in Soil - PHC and VOC
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | BH/MW21-01-01 | BH/MW21-02-01 | BH/MW21-03-01 | D206 (Duplicate BH/MW21-03-01) | BH/MW21-03-02 | BH/MW21-04-01 | BH/MW21-04-02 | BH/MW21-05-01 |
|--|----------|---------------------------|---------------------------|---------------|---------------|---------------|-----------------------------------|---------------|---------------|---------------|---------------|
| | | | | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 |
| Sampling Date | | | | 0.0 to 0.6 | 0.0 to 0.6 | 0.0 to 0.6 | 0.0 to 0.6 | 0.6 to 1.2 | 0.0 to 0.6 | 0.6 to 0.8 | 0.0 to 0.6 |
| Sample Depth (mbgs) | | | | 0.0 to 0.6 | 0.0 to 0.6 | 0.0 to 0.6 | 0.0 to 0.6 | 0.6 to 1.2 | 0.0 to 0.6 | 0.6 to 0.8 | 0.0 to 0.6 |
| Parcel ID | | Bold | Orange | 2112349-01 | 2112349-02 | 2112349-03 | 2112349-04 | 2112349-05 | 2112349-06 | 2112349-07 | 2112654-01 |
| Analysis Date | | | | 18-Mar-21 | 18-Mar-21 | 18-Mar-21 | 18-Mar-21 | 18-Mar-21 | 18-Mar-21 | 18-Mar-21 | 18-Mar-21 |
| Parcel Certificate of Analysis | | | | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 |
| Volatile Organic Compounds | | | | | | | | | | | |
| Acetone | ug/g dry | 0.5 | 16 | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) |
| Benzene | ug/g dry | 0.02 | 0.21 | 0.78 | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) |
| Bromodichloromethane | ug/g dry | 0.05 | 13 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Bromoform | ug/g dry | 0.05 | 0.27 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Bromomethane | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Carbon Tetrachloride | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Chlorobenzene | ug/g dry | 0.05 | 2.4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Chloroform | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Dibromochloromethane | ug/g dry | 0.05 | 9.4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Dichlorodifluoromethane | ug/g dry | 0.05 | 16 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,2-Dichlorobenzene | ug/g dry | 0.05 | 3.4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,3-Dichlorobenzene | ug/g dry | 0.05 | 4.8 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,4-Dichlorobenzene | ug/g dry | 0.05 | 0.083 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,1-Dichloroethane | ug/g dry | 0.05 | 3.5 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,2-Dichloroethane | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,1-Dichloroethylene | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| cis-1,2-Dichloroethylene | ug/g dry | 0.05 | 3.4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| trans-1,2-Dichloroethylene | ug/g dry | 0.05 | 0.084 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,2-Dichloropropane | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| cis-1,3-Dichloropropylene | ug/g dry | NV | NV | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| trans-1,3-Dichloropropylene | ug/g dry | NV | NV | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,3-Dichloropropene, total | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Ethylbenzene | ug/g dry | 0.05 | 2 | 0.11 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Ethylene dibromide (dibromoethane, 1,2-) | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Hexane | ug/g dry | 0.05 | 2.8 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Methyl Ethyl Ketone (2-Butanone) | ug/g dry | 0.5 | 16 | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) |
| Methyl Isobutyl Ketone | ug/g dry | 0.5 | 1.7 | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) | ND (0.50) |
| Methyl tert-butyl ether | ug/g dry | 0.05 | 0.75 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Methylene Chloride | ug/g dry | 0.05 | 0.1 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Styrene | ug/g dry | 0.05 | 0.7 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,1,1,2-Tetrachloroethane | ug/g dry | 0.05 | 0.058 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,1,2,2-Tetrachloroethane | ug/g dry | 0.05 | 0.5 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Tetrachloroethylene | ug/g dry | 0.05 | 0.28 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Toluene | ug/g dry | 0.2 | 2.3 | 0.93 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,1,1-Trichloroethane | ug/g dry | 0.05 | 0.38 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,1,2-Trichloroethane | ug/g dry | 0.05 | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Trichloroethylene | ug/g dry | 0.05 | 0.061 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Trichlorofluoromethane | ug/g dry | 0.25 | 4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Vinyl Chloride | ug/g dry | 0.02 | 0.02 | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) |
| m/p-Xylene | ug/g dry | NV | NV | 0.57 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| o-Xylene | ug/g dry | NV | NV | 0.21 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Xylenes, total | ug/g dry | 0.05 | 3.1 | 0.79 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Petroleum Hydrocarbons | | | | | | | | | | | |
| F1 PHC (C6 - C10) - BTEX* | ug/g dry | 25 | 55 | ND (7) | ND (7) | ND (7) | ND (7) | ND (7) | ND (7) | ND (7) | ND (7) |
| F2 PHC (C10-C16) | ug/g dry | 10 | 98 | ND (4) | ND (4) | ND (4) | ND (4) | ND (4) | 121 | 61 | ND (4) |
| F3 PHC (C16-C34) | ug/g dry | 240 | 300 | 623 | 52 | 46 | 56 | 38 | 293 | 315 | 94 |
| F4 PHC (C34-C50)** | ug/g dry | 120 | 2800 | 1370 | 36 | 28 | 34 | 34 | 746 | 681 | 102 |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- * F1 fraction does not include BTEX.
- ** In instances where the PHC F2 to F4 chromatogram did not reach baseline, the F4 fraction result shown is the highest value obtained via the gas chromatograph/flame ionization detection method or the gravimetric method.
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Bold** Indicates soil exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Orange** Indicates soil exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 4 - Post-Remediation Analytical Results in Soil - PHC and VOC
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | SS-1 | SS-2 | SS-5 | TB-0314 | TB-0319 | TB0326 |
|--|----------|---------------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | | | 13-Mar-2019 | 18-Mar-2019 | 25-Mar-2019 | 13-Mar-2019 | 25-Mar-2019 | 25-Mar-2019 |
| Sampling Date | | | | 0.25 | 0.5 | 0.5 | N/A | N/A | N/A |
| Sample Depth (mbgs) | | | | 1911439-01 | 1912284-01 | 1913226-01 | 1911439-02 | 1912284-02 | 1913226-02 |
| Parcel ID | | Bold | Orange | 18-Mar-19 | 23-Mar-19 | 29-Mar-19 | 18-Mar-19 | 23-Mar-19 | 29-Mar-19 |
| Analysis Date | | | | 1911439 | 1912284 | 1913226 | 1911439 | 1912284 | 191322 |
| Parcel Certificate of Analysis | | | | | | | | | |
| Volatile Organic Compounds | | | | | | | | | |
| Acetone | ug/g dry | 0.5 | 16 | - | ND (0.50) | ND (0.50) | - | ND (0.50) | ND (0.50) |
| Benzene | ug/g dry | 0.02 | 0.21 | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) | ND (0.02) |
| Bromodichloromethane | ug/g dry | 0.05 | 13 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Bromoform | ug/g dry | 0.05 | 0.27 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Bromomethane | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Carbon Tetrachloride | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Chlorobenzene | ug/g dry | 0.05 | 2.4 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Chloroform | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Dibromochloromethane | ug/g dry | 0.05 | 9.4 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Dichlorodifluoromethane | ug/g dry | 0.05 | 16 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,2-Dichlorobenzene | ug/g dry | 0.05 | 3.4 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,3-Dichlorobenzene | ug/g dry | 0.05 | 4.8 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,4-Dichlorobenzene | ug/g dry | 0.05 | 0.083 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,1-Dichloroethane | ug/g dry | 0.05 | 3.5 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,2-Dichloroethane | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,1-Dichloroethylene | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| cis-1,2-Dichloroethylene | ug/g dry | 0.05 | 3.4 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| trans-1,2-Dichloroethylene | ug/g dry | 0.05 | 0.084 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,2-Dichloropropane | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| cis-1,3-Dichloropropylene | ug/g dry | NV | NV | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| trans-1,3-Dichloropropylene | ug/g dry | NV | NV | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,3-Dichloropropene, total | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Ethylbenzene | ug/g dry | 0.05 | 2 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Ethylene dibromide (dibromoethane, 1,2-) | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Hexane | ug/g dry | 0.05 | 2.8 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Methyl Ethyl Ketone (2-Butanone) | ug/g dry | 0.5 | 16 | - | ND (0.50) | ND (0.50) | - | ND (0.50) | ND (0.50) |
| Methyl Isobutyl Ketone | ug/g dry | 0.5 | 1.7 | - | ND (0.50) | ND (0.50) | - | ND (0.50) | ND (0.50) |
| Methyl tert-butyl ether | ug/g dry | 0.05 | 0.75 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Methylene Chloride | ug/g dry | 0.05 | 0.1 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Styrene | ug/g dry | 0.05 | 0.7 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,1,1,2-Tetrachloroethane | ug/g dry | 0.05 | 0.058 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,1,2,2-Tetrachloroethane | ug/g dry | 0.05 | 0.5 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Tetrachloroethylene | ug/g dry | 0.05 | 0.28 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Toluene | ug/g dry | 0.2 | 2.3 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1,1,1-Trichloroethane | ug/g dry | 0.05 | 0.38 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| 1,1,2-Trichloroethane | ug/g dry | 0.05 | 0.05 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Trichloroethylene | ug/g dry | 0.05 | 0.061 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Trichlorofluoromethane | ug/g dry | 0.25 | 4 | - | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) |
| Vinyl Chloride | ug/g dry | 0.02 | 0.02 | - | ND (0.02) | ND (0.02) | - | ND (0.02) | ND (0.02) |
| m/p-Xylene | ug/g dry | NV | NV | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| o-Xylene | ug/g dry | NV | NV | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Xylenes, total | ug/g dry | 0.05 | 3.1 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Petroleum Hydrocarbons | | | | | | | | | |
| F1 PHC (C6 - C10) - BTEX* | ug/g dry | 25 | 55 | ND (7) | ND (7) | ND (7) | ND (7) | ND (7) | ND (7) |
| F2 PHC (C10-C16) | ug/g dry | 10 | 98 | ND (4) | 6 | ND (4) | - | - | - |
| F3 PHC (C16-C34) | ug/g dry | 240 | 300 | 25 | 86 | ND (8) | - | - | - |
| F4 PHC (C34-C50)** | ug/g dry | 120 | 2800 | 14 | 58 | ND (6) | - | - | - |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- * F1 fraction does not include BTEX.
- ** In instances where the PHC F2 to F4 chromatogram did not reach baseline, the F4 fraction result shown is the highest value obtained via the gas chromatograph/flame ionization detection method or the gravimetric method.
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Bold** Indicates soil exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Orange** Indicates soil exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 5 - Post-Remediation Analytical Results in Soil - PAH and PCB
 315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | SS-1 | SS-2 | SS-5 |
|--------------------------------|----------|---------------------------|---------------------------|-------------|-------------|-------------|
| Sampling Date | | | | 13-Mar-2019 | 18-Mar-2019 | 25-Mar-2019 |
| Sample Depth (mbgs) | | | | 0.25 | 0.5 | 0.5 |
| Parcel ID | | Bold | Orange | 1911439-01 | 1912284-01 | 1913226-01 |
| Analysis Date | | | | 18-Mar-19 | 21-Mar-19 | 1-Apr-19 |
| Parcel Certificate of Analysis | | | | 1911439 | 1912284 | 1913226 |
| Semi-Volatiles | | | | | | |
| Acenaphthene | ug/g dry | 0.072 | 7.9 | 0.03 | ND (0.02) | ND (0.02) |
| Acenaphthylene | ug/g dry | 0.093 | 0.15 | ND (0.02) | ND (0.02) | ND (0.02) |
| Anthracene | ug/g dry | 0.22 | 0.67 | 0.06 | 0.03 | ND (0.02) |
| Benzo[a]anthracene | ug/g dry | 0.36 | 0.5 | 0.13 | 0.04 | 0.02 |
| Benzo[a]pyrene | ug/g dry | 0.3 | 0.3 | 0.1 | 0.04 | ND (0.02) |
| Benzo[b]fluoranthene | ug/g dry | 0.47 | 0.78 | 0.13 | 0.06 | 0.03 |
| Benzo[g,h,i]perylene | ug/g dry | 0.68 | 6.6 | 0.07 | 0.04 | ND (0.02) |
| Benzo[k]fluoranthene | ug/g dry | 0.48 | 0.78 | 0.07 | 0.03 | ND (0.02) |
| Chrysene | ug/g dry | 2.8 | 7 | 0.14 | 0.04 | 0.03 |
| Dibenzo[a,h]anthracene | ug/g dry | 0.1 | 0.1 | ND (0.02) | ND (0.02) | ND (0.02) |
| Fluoranthene | ug/g dry | 0.69 | 0.69 | 0.33 | 0.12 | 0.05 |
| Fluorene | ug/g dry | 0.19 | 62 | 0.03 | ND (0.02) | ND (0.02) |
| Indeno[1,2,3-cd]pyrene | ug/g dry | 0.23 | 0.38 | 0.06 | 0.03 | ND (0.02) |
| 1-Methylnaphthalene | ug/g dry | 0.59 | 0.99 | ND (0.02) | ND (0.02) | ND (0.02) |
| 2-Methylnaphthalene | ug/g dry | 0.59 | 0.99 | ND (0.02) | ND (0.02) | ND (0.02) |
| Methylnaphthalene (1&2) | ug/g dry | 0.59 | 0.99 | ND (0.04) | ND (0.04) | ND (0.04) |
| Naphthalene | ug/g dry | 0.09 | 0.6 | ND (0.01) | ND (0.01) | ND (0.01) |
| Phenanthrene | ug/g dry | 0.69 | 6.2 | 0.25 | 0.09 | 0.04 |
| Pyrene | ug/g dry | 1 | 78 | 0.25 | 0.09 | 0.05 |
| PCBs | | | | | | |
| PCBs Total | ug/g dry | 0.3 | 0.35 | - | ND (0.05) | ND (0.05) |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Indicates soil exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Indicates soil exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 6 - Post-Remediation Analytical Results in Soil - Metals
 315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | SS-1 | SS-2 | SS-5 |
|--------------------------------|----------|---------------------------|---------------------------|-------------|-------------|-------------|
| Sampling Date | | | | 13-Mar-2019 | 18-Mar-2019 | 25-Mar-2019 |
| Sample Depth (mbgs) | | | | 0.25 | 0.5 | 0.5 |
| Parcel ID | | Bold | Orange | 1911439-01 | 1912284-01 | 1913226-01 |
| Analysis Date | | | | 18-Mar-19 | 21-Mar-19 | 29-Mar-19 |
| Parcel Certificate of Analysis | | | | 1911439 | 1912284 | 1913226 |
| Metals | | | | | | |
| Antimony | ug/g dry | 1.3 | 7.5 | ND (1.0) | ND (1.0) | ND (1.0) |
| Arsenic | ug/g dry | 18 | 18 | 2.2 | 2.8 | 4.1 |
| Barium | ug/g dry | 220 | 390 | 61.3 | 156 | 158 |
| Beryllium | ug/g dry | 2.5 | 4 | ND (0.5) | ND (0.5) | ND (0.5) |
| Boron | ug/g dry | 36 | 120 | 8.3 | 12.5 | 11.3 |
| Boron, Hot Water Soluble | ug/g dry | 1.5 | 1.5 | - | 0.5 | ND (0.5) |
| Cadmium | ug/g dry | 1.2 | 1.2 | ND (0.5) | ND (0.5) | ND (0.5) |
| Chromium | ug/g dry | 70 | 160 | 9.9 | 14.6 | 12.1 |
| Chromium (VI) | ug/g dry | 0.66 | 8 | ND (0.2) | ND (0.2) | ND (0.2) |
| Cobalt | ug/g dry | 22 | 22 | 3.9 | 7.0 | 6.5 |
| Copper | ug/g dry | 92 | 140 | 8.3 | 14.1 | 8.0 |
| Lead | ug/g dry | 120 | 120 | 51.5 | 12.6 | 11.9 |
| Mercury | ug/g dry | 0.27 | 0.27 | ND (0.1) | ND (0.1) | ND (0.1) |
| Molybdenum | ug/g dry | 2 | 6.9 | ND (1.0) | 1.3 | 1.8 |
| Nickel | ug/g dry | 82 | 100 | 9.5 | 15.2 | 13.7 |
| Selenium | ug/g dry | 1.5 | 2.4 | ND (1.0) | ND (1.0) | ND (1.0) |
| Silver | ug/g dry | 0.5 | 20 | ND (0.3) | ND (0.3) | ND (0.3) |
| Thallium | ug/g dry | 1 | 1 | ND (1.0) | ND (1.0) | ND (1.0) |
| Uranium | ug/g dry | 2.5 | 23 | ND (1.0) | ND (1.0) | ND (1.0) |
| Vanadium | ug/g dry | 86 | 86 | 14.3 | 10.9 | 12.5 |
| Zinc | ug/g dry | 290 | 340 | ND (20.0) | 22.0 | 24.0 |
| Inorganics | | | | | | |
| Conductivity | uS/cm | 700 | 700 | - | 330 | - |
| SAR | NV | 5 | 5 | - | 1.95 | - |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Indicates soil exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Indicates soil exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 7 - Pre-Remediation Analytical Results in Groundwater - PHC and VOC
 315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | BH/MW21-01 | BH/MW21-02 | BH/MW21-03 | BH/MW21-04 | BH/MW21-05 | D206 (Duplicate BH/MW21-05) | FB24 | Trip Blank |
|--|-------|---------------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|--------------------------------|-------------|-------------|
| Sampling Date | | | | 23-Mar-2021 | 24-Mar-2021 | 23-Mar-2021 | 24-Mar-2021 | 23-Mar-2021 | 23-Mar-2021 | 25-Mar-2021 | 19-Mar-2021 |
| Screen Depth (mbgs) | | | | 3.0 to 6.0 | 3.5 to 6.5 | 3.0 to 6.0 | 3.1 to 6.1 | 3.0 to 6.0 | 3.0 to 6.0 | N/A | N/A |
| Parcel ID | | Bold | Dark Orange | 2113436-01 | 2113436-02 | 2113436-03 | 2113433-01 | 2113433-02 | 2113433-03 | 2113438-01 | 2113438-02 |
| Analysis Date | | | | 26-Mar-2021 | 26-Mar-2021 | 26-Mar-2021 | 26-Mar-2021 | 26-Mar-2021 | 26-Mar-2021 | 26-Mar-2021 | 26-Mar-2021 |
| Parcel Certificate of Analysis | | | | 2112436 | 2112436 | 2112436 | 2113433 | 2113433 | 2113433 | 2113438 | 2113438 |
| Volatile Organic Compounds | | | | | | | | | | | |
| Acetone | ug/L | 100000 | 100000 | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) |
| Benzene | ug/L | 44 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Bromodichloromethane | ug/L | 67000 | 67000 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Bromoform | ug/L | 380 | 5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Bromomethane | ug/L | 5.6 | 0.89 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Carbon Tetrachloride | ug/L | 0.79 | 0.2 | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) |
| Chlorobenzene | ug/L | 500.00 | 140 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Chloroform | ug/L | 2.4 | 2 | 0.6 | ND (0.5) | ND (0.5) | 3.1 | 1.9 | 2.0 | ND (0.5) | ND (0.5) |
| Dibromochloromethane | ug/L | 65000 | 65000 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Dichlorodifluoromethane | ug/L | 3500 | 3500 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| 1,2-Dichlorobenzene | ug/L | 4600 | 150 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,3-Dichlorobenzene | ug/L | 7600 | 7600 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,4-Dichlorobenzene | ug/L | 8 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1-Dichloroethane | ug/L | 320 | 11 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,2-Dichloroethane | ug/L | 1.6 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1-Dichloroethylene | ug/L | 1.6 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| cis-1,2-Dichloroethylene | ug/L | 1.6 | 1.6 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| trans-1,2-Dichloroethylene | ug/L | 1.6 | 1.6 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,2-Dichloropropane | ug/L | 16 | 0.58 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| cis-1,3-Dichloropropylene | ug/L | NV | NV | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| trans-1,3-Dichloropropylene | ug/L | NV | NV | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,3-Dichloropropene, total | ug/L | 5.2 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Ethylbenzene | ug/L | 1800 | 54 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Ethylene dibromide (dibromoethane, 1,2-) | ug/L | 0.25 | 0.2 | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) |
| Hexane | ug/L | 51 | 5 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Methyl Ethyl Ketone (2-Butanone) | ug/L | 470000 | 21000 | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) |
| Methyl Isobutyl Ketone | ug/L | 140000 | 5200 | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) |
| Methyl tert-butyl ether | ug/L | 190 | 15 | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) |
| Methylene Chloride | ug/L | 610 | 26 | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) |
| Styrene | ug/L | 1300 | 43 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1,1,2-Tetrachloroethane | ug/L | 3.3 | 1.1 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1,1,2,2-Tetrachloroethane | ug/L | 3.2 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Tetrachloroethylene | ug/L | 1.6 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Toluene | ug/L | 14000 | 320 | ND (0.5) | ND (0.5) | ND (0.5) | 1.1 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1,1-Trichloroethane | ug/L | 640 | 23 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1,2-Trichloroethane | ug/L | 4.7 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Trichloroethylene | ug/L | 1.6 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Trichlorofluoromethane | ug/L | 2000 | 2000 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Vinyl Chloride | ug/L | 0.5 | 0.50 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| m/p-Xylene | ug/L | NV | NV | ND (0.5) | ND (0.5) | ND (0.5) | 0.9 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| o-Xylene | ug/L | NV | NV | ND (0.5) | ND (0.5) | ND (0.5) | 0.7 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Xylenes, total | ug/L | 3300 | 72 | ND (0.5) | ND (0.5) | ND (0.5) | 1.6 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Petroleum Hydrocarbons | | | | | | | | | | | |
| F1 PHC (C6 - C10) - BTEX* | ug/L | 420 | 420 | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) |
| F2 PHC (C10-C16) | ug/L | 150 | 150 | ND (100) | ND (177) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | - |
| F3 PHC (C16-C34) | ug/L | 500 | 500 | ND (100) | ND (177) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | - |
| F4 PHC (C34-C50)** | ug/L | 500 | 500 | ND (100) | ND (177) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | - |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- * F1 fraction does not include BTEX.
- ** In instances where the PHC F2 to F4 chromatogram did not reach baseline, the F4 fraction result shown is the highest value obtained via the gas chromatograph/flame ionization detection method or the gravimetric method.
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Bold** Indicates groundwater exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Dark Orange** Indicates groundwater exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 8 - Pre-Remediation Analytical Results in Groundwater - PAH and PCB
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | BH/MW21-01 | BH/MW21-02 | BH/MW21-03 | BH/MW21-04 | BH/MW21-05 | D206 (Duplicate BH/MW21-05) | FB24 |
|--------------------------------|-------------|---------------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|-----------------------------------|-------------|
| Sampling Date | | Bold | Dark Orange | 23-Mar-2021 | 24-Mar-2021 | 23-Mar-2021 | 24-Mar-2021 | 23-Mar-2021 | 23-Mar-2021 | 25-Mar-2021 |
| Screen Depth (mbgs) | 3.0 to 6.0 | | | 3.5 to 6.5 | 3.0 to 6.0 | 3.1 to 6.1 | 3.0 to 6.0 | 3.0 to 6.0 | N/A | |
| Parcel ID | 2113436-01 | | | 2113436-02 | 2113436-03 | 2113433-01 | 2113433-02 | 2113433-03 | 2113438-01 | |
| Analysis Date | 30-Mar-2021 | | | 30-Mar-2021 | 30-Mar-2021 | 30-Mar-2021 | 30-Mar-2021 | 30-Mar-2021 | 30-Mar-2021 | |
| Parcel Certificate of Analysis | 2112436 | | | 2112436 | 2112436 | 2113433 | 2113433 | 2113433 | 2113438 | |
| Semi-Volatiles | | | | | | | | | | |
| Acenaphthene | ug/L | 600 | 17 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Acenaphthylene | ug/L | 1.4 | 1 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Anthracene | ug/L | 1 | 1 | 0.02 | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) |
| Benzo[a]anthracene | ug/L | 1.8 | 1.8 | 0.04 | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) |
| Benzo[a]pyrene | ug/L | 0.81 | 0.81 | 0.03 | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) |
| Benzo[b]fluoranthene | ug/L | 0.75 | 0.75 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Benzo[g,h,i]perylene | ug/L | 0.2 | 0.2 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Benzo[k]fluoranthene | ug/L | 0.4 | 0.4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Chrysene | ug/L | 0.7 | 0.7 | 0.08 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Dibenzo[a,h]anthracene | ug/L | 0.4 | 0.4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Fluoranthene | ug/L | 73 | 44 | 0.10 | ND (0.01) | 0.04 | ND (0.01) | 0.02 | 0.03 | ND (0.01) |
| Fluorene | ug/L | 290 | 290 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Indeno[1,2,3-cd]pyrene | ug/L | 0.2 | 0.2 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1-Methylnaphthalene | ug/L | 1500 | 1500 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 2-Methylnaphthalene | ug/L | 1500 | 1500 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Methylnaphthalene (1&2) | ug/L | 1500 | 1500 | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) |
| Naphthalene | ug/L | 1400 | 7 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Phenanthrene | ug/L | 380 | 380 | 0.09 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Pyrene | ug/L | 5.7 | 5.7 | 0.12 | ND (0.01) | 0.08 | ND (0.01) | 0.05 | 0.05 | ND (0.01) |
| PCBs | | | | | | | | | | |
| PCBs Total | ug/L | 0.2 | 0.2 | ND (0.05) | N/A | ND (0.05) | ND (0.15) | ND (0.05) | ND (0.05) | ND (0.05) |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Indicates groundwater exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Indicates groundwater exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 9 - Pre-Remediation Analytical Results in Groundwater - Inorganics
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | BH/MW21-01 | BH/MW21-03 | BH/MW21-04 | BH/MW21-05 | D206 (Duplicate BH/MW21-05) | FB24 |
|--------------------------------|-------------|---------------------------|---------------------------|-------------|-------------|-------------|-------------|-----------------------------------|-------------|
| Sampling Date | | | Bold | Dark Orange | 23-Mar-2021 | 23-Mar-2021 | 24-Mar-2021 | 23-Mar-2021 | 23-Mar-2021 |
| Screen Depth (mbgs) | 3.0 to 6.0 | 3.0 to 6.0 | | | 3.1 to 6.1 | 3.0 to 6.0 | 3.0 to 6.0 | N/A | |
| Parcel ID | 2113436-01 | 2113436-03 | | | 2113433-01 | 2113433-02 | 2113433-03 | 2113438-01 | |
| Analysis Date | 26-Mar-2021 | 26-Mar-2021 | | | 26-Mar-2021 | 26-Mar-2021 | 26-Mar-2021 | 26-Mar-2021 | |
| Parcel Certificate of Analysis | 2112436 | 2112436 | | | 2113433 | 2113433 | 2113433 | 2113438 | |
| Metals | | | | | | | | | |
| Mercury | ug/L | 0.29 | 0.1 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) |
| Antimony | ug/L | 16000 | 16000 | ND (0.5) | 0.9 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Arsenic | ug/L | 1500 | 1500 | ND (1) | 2 | 1 | ND (1) | ND (1) | ND (1) |
| Barium | ug/L | 23000 | 23000 | 350 | 161 | 700 | 1200 | 1160 | ND (1) |
| Beryllium | ug/L | 53 | 53 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Boron | ug/L | 36000 | 36000 | 77 | 61 | 92 | 77 | 76 | ND (10) |
| Cadmium | ug/L | 2.1 | 2.1 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) |
| Chromium | ug/L | 640 | 640 | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Chromium (VI) | ug/L | 110 | 110 | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) |
| Cobalt | ug/L | 52 | 52 | 3.4 | 1.4 | 0.8 | 3.7 | 3.6 | ND (0.5) |
| Copper | ug/L | 69 | 69 | 1.5 | 0.9 | 4.2 | 2.5 | 2.3 | 0.7 |
| Lead | ug/L | 20 | 20 | 0.4 | 0.2 | 1.0 | ND (0.1) | ND (0.1) | ND (0.1) |
| Molybdenum | ug/L | 7300 | 7300 | 5.9 | 17.8 | 6.8 | 1.4 | 1.5 | ND (0.5) |
| Nickel | ug/L | 390 | 390 | 11 | 23 | 5 | 6 | 5 | ND (1) |
| Selenium | ug/L | 50 | 50 | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Silver | ug/L | 1.2 | 1.2 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) |
| Sodium | ug/L | 1800000 | 1800000 | 884000 | 181000 | 553000 | 617000 | 606000 | 219 |
| Thallium | ug/L | 400 | 400 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | 0.1 | ND (0.1) |
| Uranium | ug/L | 330 | 330 | 1.7 | 1.7 | 2.6 | 1.1 | 1.1 | ND (0.1) |
| Vanadium | ug/L | 200 | 200 | ND (0.5) | 5.9 | 1.2 | ND (0.5) | ND (0.5) | ND (0.5) |
| Zinc | ug/L | 890 | 890 | ND (5) | ND (5) | ND (5) | 21 | 21 | ND (5) |
| General Inorganics | | | | | | | | | |
| pH | ug/L | NV | NV | 7.2 | 8.0 | 8.1 | 7.2 | 7.3 | 6.9 |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Indicates groundwater exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Indicates groundwater exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 10 - Post Remediation Analytical Results in Groundwater - PHC and VOC
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | MW21-01 | MW21-01 | MW21-02 | MW21-02 | Duplicate (Field Duplicate MW21-02) | MW21-03 | MW21-03 | D206 (Field Duplicate) | FB23 | Field Blank | TB23 | Trip Blank |
|--|-------|---------------------------|---------------------------|-------------|-------------|-------------|------------|-------------------------------------|-------------|-------------|------------------------|-------------|-------------|-------------|------------|
| | | Bold | Dark Orange | 31-Aug-2021 | 16-Feb-2022 | 23-Aug-2021 | 6-Jan-2022 | 6-Jan-2022 | 23-Aug-2021 | 19-Jan-2022 | 23-Aug-2021 | 23-Aug-2021 | 6-Jan-2022 | 23-Aug-2021 | 6-Jan-2022 |
| Sampling Date | | | | 31-Aug-2021 | 16-Feb-2022 | 23-Aug-2021 | 6-Jan-2022 | 6-Jan-2022 | 23-Aug-2021 | 19-Jan-2022 | 23-Aug-2021 | 23-Aug-2021 | 6-Jan-2022 | 23-Aug-2021 | 6-Jan-2022 |
| Screen Depth (mbgs) | | | | 3.0 to 6.1 | 3.0 to 6.1 | 3.6 to 6.7 | 3.6 to 6.7 | 3.6 to 6.7 | 3.0 to 6.1 | 3.0 to 6.1 | 3.0 to 6.1 | N/A | N/A | N/A | N/A |
| Parcel ID | | | | 2136274-03 | 2208458-01 | 2135219-01 | 2202236-01 | 2202236-02 | 2135221-02 | 2204302-01 | 2135221-01 | 2135216-01 | 2202236-03 | 2135216-02 | 2202236-04 |
| Analysis Date | | | | 2-Sep-2021 | 22-Feb-2022 | 26-Aug-2021 | 8-Jan-2022 | 8-Jan-2022 | 26-Aug-2021 | 21-Jan-2022 | 26-Aug-2021 | 26-Aug-2021 | 8-Jan-2022 | 26-Aug-2021 | 8-Jan-2022 |
| Parcel Certificate of Analysis | | | | 2136274 | 2208458 | 2135219 | 2202236 | 2202236 | 2135221 | 2204302 | 2135221 | 2135216 | 2202236 | 2135216 | 2202236 |
| Volatile Organic Compounds | | | | | | | | | | | | | | | |
| Acetone | ug/L | 100000 | 100000 | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) |
| Benzene | ug/L | 44 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Bromodichloromethane | ug/L | 67000 | 67000 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Bromoform | ug/L | 380 | 5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Bromomethane | ug/L | 5.6 | 0.89 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Carbon Tetrachloride | ug/L | 0.79 | 0.2 | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) |
| Chlorobenzene | ug/L | 500.00 | 140 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Chloroform | ug/L | 2.4 | 2 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Dibromochloromethane | ug/L | 65000 | 65000 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Dichlorodifluoromethane | ug/L | 3500 | 3500 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| 1,2-Dichlorobenzene | ug/L | 4600 | 150 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,3-Dichlorobenzene | ug/L | 7600 | 7600 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,4-Dichlorobenzene | ug/L | 8 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1-Dichloroethane | ug/L | 320 | 11 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,2-Dichloroethane | ug/L | 1.6 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1-Dichloroethylene | ug/L | 1.6 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| cis-1,2-Dichloroethylene | ug/L | 1.6 | 1.6 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| trans-1,2-Dichloroethylene | ug/L | 1.6 | 1.6 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,2-Dichloropropane | ug/L | 16 | 0.58 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| cis-1,3-Dichloropropylene | ug/L | NV | NV | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| trans-1,3-Dichloropropylene | ug/L | NV | NV | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,3-Dichloropropene, total | ug/L | 5.2 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Ethylbenzene | ug/L | 1800 | 54 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Ethylene dibromide (dibromoethane, 1,2-) | ug/L | 0.25 | 0.2 | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) |
| Hexane | ug/L | 51 | 5 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Methyl Ethyl Ketone (2-Butanone) | ug/L | 470000 | 21000 | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) |
| Methyl Isobutyl Ketone | ug/L | 140000 | 5200 | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) |
| Methyl tert-butyl ether | ug/L | 190 | 15 | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) | ND (2.0) |
| Methylene Chloride | ug/L | 610 | 26 | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | ND (5.0) | 15.9 |
| Styrene | ug/L | 1300 | 43 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1,1,2-Tetrachloroethane | ug/L | 3.3 | 1.1 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1,2,2-Tetrachloroethane | ug/L | 3.2 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Tetrachloroethylene | ug/L | 1.6 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Toluene | ug/L | 14000 | 320 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1,1-Trichloroethane | ug/L | 640 | 23 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| 1,1,2-Trichloroethane | ug/L | 4.7 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Trichloroethylene | ug/L | 1.6 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Trichlorofluoromethane | ug/L | 2000 | 2000 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Vinyl Chloride | ug/L | 0.5 | 0.50 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| m/p-Xylene | ug/L | NV | NV | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| o-Xylene | ug/L | NV | NV | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Xylenes, total | ug/L | 3300 | 72 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Petroleum Hydrocarbons | | | | | | | | | | | | | | | |
| F1 PHC (C6 - C10) - BTEX* | ug/L | 420 | 420 | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) | ND (25) |
| F2 PHC (C10-C16) | ug/L | 150 | 150 | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | N/A | ND (100) |
| F3 PHC (C16-C34) | ug/L | 500 | 500 | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | N/A | ND (100) |
| F4 PHC (C34-C50)** | ug/L | 500 | 500 | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | ND (100) | N/A | ND (100) |

NOTES:

1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)

2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)

* F1 fraction does not include BTEX.

** In instances where the PHC F2 to F4 chromatogram did not reach baseline, the F4 fraction result shown is the highest value obtained via the gas chromatograph/flame ionization detection method or the gravimetric method.

ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

NV No Value

N/A Not Applicable

- Parameter not analyzed

m bgs Metres below ground surface

Indicates groundwater exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Indicates groundwater exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 11 - Post-Remediation Analytical Results in Groundwater - PAH and PCB
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | MW21-01 | MW21-01 | MW21-02 | MW21-02 | D206 (Field Duplicate MW21-02) | MW21-03 | MW21-03 | D206 (Field Duplicate MW21-03) | FB23 | Trip Blank | Field Blank |
|--------------------------------|-------|---------------------------|---------------------------|-------------|-------------|-------------|-------------|--------------------------------------|-------------|-------------|--------------------------------------|-------------|-------------|-------------|
| Sampling Date | | | | 14-Sep-2021 | 16-Feb-2022 | 23-Aug-2021 | 12-Jan-2021 | 12-Jan-2022 | 23-Aug-2021 | 19-Jan-2022 | 23-Aug-2021 | 23-Aug-2021 | 15-Dec-2021 | 12-Jan-2022 |
| Screen Depth (mbgs) | | | | 3.0 to 6.1 | 3.0 to 6.1 | 3.6 to 6.7 | 3.6 to 6.7 | 3.6 to 6.7 | 3.0 to 6.1 | 3.0 to 6.1 | 3.0 to 6.1 | N/A | N/A | N/A |
| Parcel ID | | Bold | Dark Orange | 2136274-03 | 2208458-01 | 2135219-01 | 2203311-01 | 2203311-02 | 2135221-02 | 2204302-01 | 2135221-01 | 2135216-01 | 2203309-01 | 2203309-02 |
| Analysis Date | | | | 20-Sep-2021 | 22-Feb-2022 | 3-Sep-2021 | 18-Jan-2022 | 18-Jan-2022 | 26-Aug-2021 | 21-Jan-2021 | 26-Aug-2021 | 26-Aug-2021 | 18-Jan-2021 | 18-Jan-2021 |
| Parcel Certificate of Analysis | | | | 2138370 | 2208458 | 2135219 | 2203311 | 2203311 | 2135221 | 2204302 | 2135221 | 2135216 | 2203309 | 2203309 |
| Semi-Volatiles | | | | | | | | | | | | | | |
| Acenaphthene | ug/L | 600 | 17 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Acenaphthylene | ug/L | 1.4 | 1 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Anthracene | ug/L | 1 | 1 | ND (0.01) | 0.01 | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) |
| Benzo[a]anthracene | ug/L | 1.8 | 1.8 | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) |
| Benzo[a]pyrene | ug/L | 0.81 | 0.81 | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) |
| Benzo[b]fluoranthene | ug/L | 0.75 | 0.75 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Benzo[g,h,i]perylene | ug/L | 0.2 | 0.2 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Benzo[k]fluoranthene | ug/L | 0.4 | 0.4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Chrysene | ug/L | 0.7 | 0.7 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Dibenzo[a,h]anthracene | ug/L | 0.4 | 0.4 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Fluoranthene | ug/L | 73 | 44 | 0.06 | 0.05 | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) |
| Fluorene | ug/L | 290 | 290 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Indeno[1,2,3-cd]pyrene | ug/L | 0.2 | 0.2 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 1-Methylnaphthalene | ug/L | 1500 | 1500 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| 2-Methylnaphthalene | ug/L | 1500 | 1500 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Methylnaphthalene (1&2) | ug/L | 1500 | 1500 | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) | ND (0.10) |
| Naphthalene | ug/L | 1400 | 7 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Phenanthrene | ug/L | 380 | 380 | ND (0.05) | 0.05 | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) |
| Pyrene | ug/L | 5.7 | 5.7 | 0.05 | 0.05 | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) | ND (0.01) |
| PCBs | | | | | | | | | | | | | | |
| PCBs Total | ug/L | 0.2 | 0.2 | ND (0.05) | ND (0.05) | ND (0.10) | ND (0.05) | ND (0.05) | ND (0.05) | ND (0.05) | - | ND (0.05) | ND (0.05) | ND (0.05) |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Indicates groundwater exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Indicates groundwater exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 12 - Post-Remediation Analytical Results in Groundwater - Inorganics
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | MW21-01 | MW21-01 | Duplicate (Duplicate MW21-01) | MW21-02 | MW21-02 | MW21-03 | D206 (Duplicate) | MW21-03 | FB23 | Field Blank | Trip Blank |
|--------------------------------|-------|---------------------------|---------------------------|-------------|-------------|-------------------------------|-------------|-------------|-------------|------------------|-------------|-------------|-------------|-------------|
| Sampling Date | | | | 31-Aug-2021 | 21-Dec-2021 | 21-Dec-2021 | 23-Aug-2021 | 22-Dec-2021 | 23-Aug-2021 | 23-Aug-2021 | 19-Jan-2022 | 23-Aug-2021 | 21-Dec-2021 | 15-Dec-2021 |
| Screen Depth (mbgs) | | | | 3.0 to 6.1 | 3.0 to 6.1 | 3.0 to 6.1 | 3.6 to 6.7 | 3.6 to 6.7 | 3.0 to 6.1 | 3.0 to 6.1 | 3.0 to 6.1 | N/A | N/A | N/A |
| Parcel ID | | Bold | Dark Orange | 2136274-03 | 2152337-01 | 2152337-01 | 2135219-02 | 2152337-03 | 2135221-02 | 2135221-01 | 2204302-01 | 2135216-01 | 2152337-04 | 2152337-05 |
| Analysis Date | | | | 2-Sep-2021 | 23-Dec-2021 | 23-Dec-2021 | 25-Aug-2021 | 23-Dec-2021 | 25-Aug-2021 | 25-Aug-2021 | 21-Jan-2021 | 25-Aug-2021 | 23-Dec-2021 | 23-Dec-2021 |
| Parcel Certificate of Analysis | | | | 2136274 | 2152337 | 2152337 | 2135219 | 2152337 | 2135221 | 2135221 | 2204302 | 2135216 | 2152337 | 2152337 |
| Metals | | | | | | | | | | | | | | |
| Antimony | ug/L | 16000 | 16000 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Arsenic | ug/L | 1500 | 1500 | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | 4 | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Barium | ug/L | 23000 | 23000 | 644 | 595 | 615 | 225 | 179 | 210 | 226 | 195 | ND (1) | ND (1) | ND (1) |
| Beryllium | ug/L | 53 | 53 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Boron | ug/L | 36000 | 36000 | 698 | 747 | 748 | 217 | 222 | 143 | 213 | 94 | ND (10) | ND (10) | ND (10) |
| Cadmium | ug/L | 2.1 | 2.1 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) |
| Chromium | ug/L | 640 | 640 | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Chromium (VI) | ug/L | 110 | 110 | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) | ND (10) |
| Cobalt | ug/L | 52 | 52 | 0.9 | ND (0.5) | ND (0.5) | 1.3 | 0.5 | 1.9 | 1.2 | 0.6 | ND (0.5) | ND (0.5) | ND (0.5) |
| Copper | ug/L | 69 | 69 | 2.0 | 1.2 | 1.1 | ND (0.5) | 1.2 | 0.9 | ND (0.5) | ND (0.5) | ND (0.5) | 1.7 | ND (0.5) |
| Lead | ug/L | 20 | 20 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | 0.1 | ND (0.1) |
| Mercury | ug/L | 0.29 | 0.1 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) |
| Molybdenum | ug/L | 7300 | 7300 | 5.4 | 3.5 | 3.5 | 2.1 | 4.9 | 5.0 | 2.1 | 1.7 | ND (0.5) | ND (0.5) | ND (0.5) |
| Nickel | ug/L | 390 | 390 | 4 | 4 | 4 | 3 | 4 | 6 | 3 | 3 | ND (1) | ND (1) | ND (1) |
| Selenium | ug/L | 50 | 50 | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) | ND (1) |
| Silver | ug/L | 1.2 | 1.2 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) |
| Sodium | ug/L | 1800000 | 1800000 | 348000 | 342000 | 348000 | 648000 | 462000 | 632000 | 630000 | 463000 | ND (200) | ND (200) | ND (200) |
| Thallium | ug/L | 400 | 400 | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) | ND (0.1) |
| Uranium | ug/L | 330 | 330 | 1.0 | 1.2 | 1.2 | 0.3 | 11.8 | 9.2 | 0.3 | 3.3 | ND (0.1) | ND (0.1) | ND (0.1) |
| Vanadium | ug/L | 200 | 200 | ND (0.5) | ND (0.5) | ND (0.5) | 0.7 | ND (0.5) | 1.7 | 0.7 | 0.5 | ND (0.5) | ND (0.5) | ND (0.5) |
| Zinc | ug/L | 890 | 890 | 11 | ND (5) | ND (5) | ND (5) | ND (5) | 7 | ND (5) | ND (5) | ND (5) | ND (5) | ND (5) |
| General Inorganics | | | | | | | | | | | | | | |
| pH | ug/L | 6 to 9 | 6 to 9 | - | - | - | - | 6.8 | - | - | 7.6 | - | - | - |
| Cyanide | ug/L | 52 | 52 | ND (2) | ND (2) | - | ND (2) | ND (2) | ND (2) | ND (2) | ND (2) | ND (2) | - | - |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Bold** Indicates groundwater exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Dark Orange** Indicates groundwater exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 13 - Maximum Concentrations in Soil
315 Miwate Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Sample Location | Sample Depth (mbgs) | Sampling Date | Maximum Concentration | MECP Table 9 | MECP Table 7 |
|---|-----------------|---------------------|-------------------------------|-----------------------|--------------|--------------|
| Metals and Inorganics | | | | | | |
| Antimony | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (1.0) | 1 | 8 |
| Arsenic | SS-5 | 0.50 | 25-Mar-2019 | 4.1 | 18 | 18 |
| Barium | SS-5 | 0.50 | 25-Mar-2019 | 158 | 220 | 390 |
| Beryllium | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.5) | 3 | 4 |
| Boron | SS-2 | 0.50 | 18-Mar-2019 | 12.5 | 36 | 120 |
| Boron, Hot Water Soluble | SS-2 | 0.50 | 18-Mar-2019 | 0.5 | | 2 |
| Cadmium | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.5) | 1.2 | 1.2 |
| Chromium | SS-2 | 0.50 | 18-Mar-2019 | 14.6 | 70 | 160 |
| Chromium (VI) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.2) | 1 | 8 |
| Cobalt | SS-2 | 0.50 | 18-Mar-2019 | 7.0 | 22 | 22 |
| Copper | SS-2 | 0.50 | 18-Mar-2019 | 14.1 | 92 | 140 |
| Lead | SS-1 | 0.25 | 13-Mar-2019 | 51.5 | 120 | 120 |
| Mercury | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.1) | 0 | 0 |
| Molybdenum | SS-5 | 0.50 | 25-Mar-2019 | 1.8 | 2 | 7 |
| Nickel | SS-2 | 0.50 | 18-Mar-2019 | 15 | 82 | 100 |
| Selenium | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (1.0) | 2 | 2 |
| Silver | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.3) | 0.5 | 20.0 |
| Thallium | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (1.0) | 1 | 1 |
| Uranium | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (1.0) | 3 | 23 |
| Vanadium | SS-1 | 0.50 | 18-Mar-2019 | 14.3 | 86 | 86 |
| Zinc | SS-5 | 0.5 | 25-Mar-2019 | 24.0 | 290 | 340 |
| Polycyclic Aromatic Hydrocarbons | | | | | | |
| Acenaphthene | SS-1 | 0.25 | 13-Mar-2019 | 0.03 | 0.072 | 7.9 |
| Acenaphthylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.02) | 0.093 | 0.15 |
| Anthracene | SS-1 | 0.25 | 13-Mar-2019 | 0.06 | 0.22 | 0.67 |
| Benzo(a)anthracene | SS-1 | 0.25 | 13-Mar-2019 | 0.13 | 0.36 | 0.5 |
| Benzo(a)pyrene | SS-1 | 0.25 | 13-Mar-2019 | 0.1 | 0.3 | 0.3 |
| Benzo(b)fluoranthene | SS-1 | 0.25 | 13-Mar-2019 | 0.13 | 0.47 | 0.78 |
| Benzo(g,h,i)perylene | SS-1 | 0.25 | 13-Mar-2019 | 0.07 | 0.68 | 6.6 |
| Benzo(k)fluoranthene | SS-1 | 0.25 | 13-Mar-2019 | 0.07 | 0.48 | 0.78 |
| Chrysene | SS-1 | 0.25 | 13-Mar-2019 | 0.14 | 2.8 | 7 |
| Dibenz(a,h)anthracene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.02) | 0.1 | 0.1 |
| Fluoranthene | SS-1 | 0.25 | 13-Mar-2019 | 0.33 | 0.69 | 0.69 |
| Fluorene | SS-1 | 0.25 | 13-Mar-2019 | 0.03 | 0.19 | 62 |
| Indeno(1,2,3-cd)pyrene | SS-1 | 0.25 | 13-Mar-2019 | 0.06 | 0.23 | 0.38 |
| 1-Methylnaphthalene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.02) | 0.59 | 0.99 |
| 2-Methylnaphthalene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.02) | 0.59 | 0.99 |
| Methylnaphthalene, 2-(1-) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.04) | 0.59 | 0.99 |
| Naphthalene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.01) | 0.09 | 0.6 |
| Phenanthrene | SS-1 | 0.25 | 13-Mar-2019 | 0.25 | 0.69 | 6.2 |
| Pyrene | SS-1 | 0.25 | 13-Mar-2019 | 0.25 | 1 | 78 |
| Polychlorinated Biphenyls | | | | | | |
| Total PCBs | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.3 | 0.35 |
| Petroleum Hydrocarbons | | | | | | |
| F1 PHC (C6 - C10) - BTEX | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (7) | 25 | 55 |
| F2 PHC (C10-C16) | SS-2 | 0.50 | 18-Mar-2019 | 6 | 10 | 98 |
| F3 PHC (C16-C34) | SS-2 | 0.50 | 18-Mar-2019 | 86 | 240 | 300 |
| F4 PHC (C34-C50) | SS-2 | 0.50 | 18-Mar-2019 | 58 | 120 | 2800 |
| Volatile Organic Compounds | | | | | | |
| Acetone (2-Propanone) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.50) | 0.5 | 16 |
| Benzene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.02) | 0.02 | 0.21 |
| Bromodichloromethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 13 |
| Bromoform | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.27 |
| Bromomethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| Carbon Tetrachloride | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| Chlorobenzene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 2.4 |
| Chloroform | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| Dibromochloromethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 9.4 |
| Dichlorodifluoromethane (FREON 12) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 16 |
| 1,2-Dichlorobenzene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 3.4 |
| 1,3-Dichlorobenzene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 4.8 |
| 1,4-Dichlorobenzene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.083 |
| 1,1-Dichloroethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 3.5 |
| 1,2-Dichloroethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| 1,1-Dichloroethylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| cis-1,2-Dichloroethylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 3.4 |
| trans-1,2-Dichloroethylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.084 |
| 1,2-Dichloropropane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| cis-1,3-Dichloropropylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | NV | NV |
| trans-1,3-Dichloropropylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | NV | NV |
| 1,3-Dichloropropene (cis+trans) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| Ethylbenzene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 2 |

NOTES:

All analyses performed by Paracel Laboratories.

All results are in ppm on dry weight basis

NV - No value

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

Results were compared to:

Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils), and

Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)

Table 13 - Maximum Concentrations in Soil
315 Miwate Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Sample Location | Sample Depth (mbgs) | Sampling Date | Maximum Concentration | MECP Table 9 | MECP Table 7 |
|-------------------------------------|-----------------|---------------------|-------------------------------|-----------------------|--------------|--------------|
| Ethylene Dibromide | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| Hexane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 2.8 |
| Methyl Ethyl Ketone (2-Butanone) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.50) | 0.5 | 16 |
| Methyl Isobutyl Ketone | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.50) | 0.5 | 1.7 |
| Methyl t-butyl ether (MTBE) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.75 |
| Methylene Chloride(Dichloromethane) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.1 |
| Styrene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.7 |
| 1,1,1,2-Tetrachloroethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.058 |
| 1,1,2,2-Tetrachloroethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.5 |
| Tetrachloroethylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.28 |
| Toluene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.2 | 2.3 |
| 1,1,1-Trichloroethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.38 |
| 1,1,2-Trichloroethane | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.05 |
| Trichloroethylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 0.061 |
| Trichlorofluoromethane (FREON 11) | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.25 | 4 |
| Vinyl Chloride | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.02) | 0.02 | 0.02 |
| m/p-Xylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | NV | NV |
| o-Xylene | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | NV | NV |
| Total Xylenes | All Locations | 0.25 to 0.50 | All March 2019 Sampling Dates | ND (0.05) | 0.05 | 3.1 |

NOTES:

All analyses performed by Paracel Laboratories.

All results are in ppm on dry weight basis

NV - No value

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

Results were compared to:

Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils), and

Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)

Table 14 - Maximum Concentrations in Groundwater
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Sample Location | Sample Depth (mbgs) | Sampling Date | Maximum Concentration | MECP Table 9 | MECP Table 7 |
|---|-----------------|---------------------|----------------------------------|-----------------------|--------------|--------------|
| Metals and Inorganics | | | | | | |
| Antimony | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 16000 | 16000.00 |
| Arsenic | MW21-3 | 3.0 to 6.1 | 23-Aug-2021 | 4.0 | 1500 | 1500 |
| Barium | MW21-1 | 3.0 to 6.1 | 31-Aug-2021 | 644 | 23000 | 23000 |
| Beryllium | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 53 | 53 |
| Boron | MW21-1 | 3.0 to 6.1 | 21-Dec-2021 | 748 | 36000 | 36000 |
| Cadmium | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.1) | 2 | 2 |
| Chromium | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (1) | 640.0 | 640.0 |
| Chromium (VI) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (10) | 110 | 110 |
| Cobalt | MW21-2 | 3.6 to 6.7 | 23-Aug-2021 | 1.9 | 52 | 52 |
| Copper | MW21-1 | 3.0 to 6.1 | 31-Aug-2021 | 2.0 | 69 | 69 |
| Lead | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.1) | 20 | 20 |
| Mercury | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.1) | 0 | 0 |
| Molybdenum | MW21-1 | 3.0 to 6.1 | 31-Aug-2021 | 5.4 | 7300 | 7300 |
| Nickel | MW21-3 | 3.0 to 6.1 | 23-Aug-2021 | 6 | 390 | 390 |
| Selenium | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (1) | 50 | 50 |
| Silver | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.1) | 1.2 | 1.2 |
| Sodium | MW21-02 | 3.6 to 6.7 | 23-Aug-2021 | 648000 | 1,800,000 | 1,800,000 |
| Thallium | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.1) | 400 | 400 |
| Uranium | MW21-02 | 3.6 to 6.7 | 22-Dec-2021 | 11.8 | 330 | 330 |
| Vanadium | MW21-3 | 3.0 to 6.1 | 23-Aug-2021 | 1.7 | 200 | 200 |
| Zinc | MW21-1 | 3.0 to 6.1 | 31-Aug-2021 | 11 | 890 | 890 |
| Polycyclic Aromatic Hydrocarbons | | | | | | |
| Acenaphthene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 600 | 17 |
| Acenaphthylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 1.4 | 1 |
| Anthracene | MW21-01 | 3.0 to 6.1 | 16-Feb-2022 | 0.01 | 1 | 1 |
| Benzo(a)anthracene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.01) | 1.8 | 1.8 |
| Benzo(a)pyrene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.01) | 0.81 | 0.81 |
| Benzo(b)fluoranthene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 0.75 | 0.75 |
| Benzo(g,h,i)perylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 0.2 | 0.2 |
| Benzo(k)fluoranthene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 0.4 | 0.4 |
| Chrysene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 0.7 | 0.7 |
| Dibenz(a,h)anthracene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 0.4 | 0.4 |
| Fluoranthene | MW21-01 | 3.0 to 6.1 | 16-Feb-2022 | 0.05 | 73 | 44 |
| Fluorene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 290 | 290 |
| Indeno(1,2,3-cd)pyrene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 0.2 | 0.2 |
| 1-Methylnaphthalene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 1500 | 1500 |
| 2-Methylnaphthalene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 1500 | 1500 |
| Methylnaphthalene, 2-(1-) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.10) | 1500 | 1500 |
| Naphthalene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.05) | 1400 | 7 |
| Phenanthrene | MW21-01 | 3.0 to 6.1 | 16-Feb-2022 | 0.05 | 380 | 380 |
| Pyrene | MW21-01 | 3.0 to 6.1 | 14-Sept-2021 16-Feb-2022 | 0.05 | 5.7 | 5.7 |
| Polychlorinated Biphenyls | | | | | | |
| Total PCBs | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND(0.05) | 0.2 | 0.2 |
| Petroleum Hydrocarbons | | | | | | |
| F1 PHC (C6 - C10) - BTEX | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (25) | 420 | 420 |
| F2 PHC (C10-C16) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (100) | 150 | 150 |
| F3 PHC (C16-C34) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (100) | 500 | 500 |
| F4 PHC (C34-C50) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (100) | 500 | 500 |
| Volatile Organic Compounds | | | | | | |
| Acetone (2-Propanone) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (5.0) | 100000 | 100000 |
| Benzene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 44 | 0.5 |
| Bromodichloromethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 67000 | 67000 |
| Bromoform | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 380 | 5 |
| Bromomethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 5.6 | 0.89 |
| Carbon Tetrachloride | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.2) | 0.79 | 0.2 |
| Chlorobenzene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 500 | 140 |
| Chloroform | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 2.4 | 2 |
| Dibromochloromethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 65000 | 65000 |
| Dichlorodifluoromethane (FREON 12) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (1.0) | 3500 | 3500 |
| 1,2-Dichlorobenzene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 4600 | 150 |
| 1,3-Dichlorobenzene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 7600 | 7600 |
| 1,4-Dichlorobenzene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 8 | 0.5 |
| 1,1-Dichloroethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 320 | 11 |
| 1,2-Dichloroethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 1.6 | 0.5 |
| 1,1-Dichloroethylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 1.6 | 0.5 |
| cis-1,2-Dichloroethylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 1.6 | 1.6 |
| trans-1,2-Dichloroethylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 1.6 | 1.6 |
| 1,2-Dichloropropane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 16 | 0.58 |

NOTES:

All analyses performed by Paracel Laboratories.

NV - No value

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

Results were compared to:

Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils), and

Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)

Table 14 - Maximum Concentrations in Groundwater
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Sample Location | Sample Depth (mbgs) | Sampling Date | Maximum Concentration | MECP Table 9 | MECP Table 7 |
|-------------------------------------|-----------------|---------------------|----------------------------------|-----------------------|--------------|--------------|
| cis-1,3-Dichloropropylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | NV | NV |
| trans-1,3-Dichloropropylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | NV | NV |
| 1,3-Dichloropropene (cis+trans) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 5.2 | 0.5 |
| Ethylbenzene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 1800 | 54 |
| Ethylene Dibromide | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.2) | 0.25 | 0.2 |
| Hexane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (1.0) | 51 | 5 |
| Methyl Ethyl Ketone (2-Butanone) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (5.0) | 470000 | 21000 |
| Methyl Isobutyl Ketone | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (5.0) | 140000 | 5200 |
| Methyl t-butyl ether (MTBE) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (2.0) | 190 | 15 |
| Methylene Chloride(Dichloromethane) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (5.0) | 610 | 26 |
| Styrene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 1300 | 43 |
| 1,1,1,2-Tetrachloroethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 3.3 | 1.1 |
| 1,1,2,2-Tetrachloroethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 3.2 | 0.5 |
| Tetrachloroethylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 1.6 | 0.5 |
| Toluene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 14000 | 320 |
| 1,1,1-Trichloroethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 640 | 23 |
| 1,1,2-Trichloroethane | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 4.7 | 0.5 |
| Trichloroethylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 1.6 | 0.5 |
| Trichlorofluoromethane (FREON 11) | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (1.0) | 2000 | 2000 |
| Vinyl Chloride | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 0.5 | 0.5 |
| m/p-Xylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | NV | NV |
| o-Xylene | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | NV | NV |
| Total Xylenes | All Locations | 3.0 to 6.7 | All Post Remedial Sampling Dates | ND (0.5) | 3300 | 72 |

NOTES:

All analyses performed by Paracel Laboratories.

NV - No value

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

Results were compared to:

Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils), and

Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)

Table 15- Analytical Results in Leachate
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | O.Reg 347 Schedule 4 | TCLP-206 |
|----------------------------------|-------|----------------------|---------------|
| Sample Date | | | 16-Mar-2021 |
| Metals | | | |
| Arsenic | mg/L | 2.5 | ND (0.05) |
| Barium | mg/L | 100 | 1.28 |
| Boron | mg/L | 500 | 0.11 |
| Cadmium | mg/L | 0.5 | ND (0.01) |
| Chromium | mg/L | 5 | ND (0.05) |
| Lead | mg/L | 5 | ND (0.05) |
| Mercury | mg/L | 0.1 | ND (0.005) |
| Selenium | mg/L | 1 | ND (0.05) |
| Silver | mg/L | 5 | ND (0.05) |
| Uranium | mg/L | 10 | ND (0.05) |
| Inorganics | | | |
| Fluoride | mg/L | 150 | 0.24 |
| Nitrate as N | mg/L | 1000 | ND (1) |
| Nitrite as N | mg/L | 1000 | ND (1) |
| Cyanide, free | mg/L | 20 | ND (0.02) |
| Volatiles | | | |
| Benzene | mg/L | 0.5 | ND (0.005) |
| Carbon Tetrachloride | mg/L | 0.5 | ND (0.005) |
| Chlorobenzene | mg/L | 8 | ND (0.004) |
| Chloroform | mg/L | 10 | ND (0.006) |
| 1,2-Dichlorobenzene | mg/L | 20 | ND (0.004) |
| 1,4-Dichlorobenzene | mg/L | 0.5 | ND (0.004) |
| 1,2-Dichloroethane | mg/L | 0.5 | ND (0.005) |
| 1,1-Dichloroethylene | mg/L | 1.4 | ND (0.006) |
| Methyl Ethyl Ketone (2-Butanone) | mg/L | 200 | ND (0.30) |
| Methylene Chloride | mg/L | 5 | ND (0.04) |
| Tetrachloroethylene | mg/L | 3 | ND (0.005) |
| Trichloroethylene | mg/L | 5 | ND (0.004) |
| Vinyl Chloride | mg/L | 0.2 | ND (0.005) |
| Organics | | | |
| 2,4-Dinitrotoluene | mg/L | 0.13 | ND (0.001) |
| Benzo[a]pyrene | mg/L | 0.001 | ND (0.001) |
| Nitrobenzene | mg/L | 2 | ND (0.001) |
| Hexachloroethane | mg/L | 3 | ND (0.001) |
| Hexachlorobenzene | mg/L | 0.13 | ND (0.050) |
| Hexachlorobutadiene | mg/L | NV | ND (0.001) |
| 2,3,4,6-Tetrachlorophenol | mg/L | 10 | ND (0.002) |
| 2,4,5-Trichlorophenol | mg/L | 400 | ND (0.001) |
| 2,4,6-Trichlorophenol | mg/L | 0.5 | ND (0.001) |
| 2,4-Dichlorophenol | mg/L | 90 | ND (0.001) |
| 2-Methylphenol | mg/L | 200 | ND (0.001) |
| 3/4-Methylphenol | mg/L | 200 | ND (0.001) |
| Pentachlorophenol | mg/L | 6 | ND (0.005) |
| PCBs, total | mg/L | 0.3 | ND (0.003) |
| Physical Characteristics | | | |
| Ignitability | N/A | - | Non-ignitable |

NOTES:

All results shown are in ppm (mg/L)

Indicates exceedance of Regulation 347 Schedule 4 leachate criteria

Table 16 - Relative Percent Differences - PHC and VOC in Soil
315 Miwate Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | RDL | BH/MW21-03-01 | D206 | RPD (%) | Alert Limit (%) |
|---|----------|------|---------------|-------------|---------|-----------------|
| | | | 15-Mar-2021 | 15-Mar-2021 | | |
| Petroleum Hydrocarbons | | | | | | |
| F1 PHC (C6 - C10) - BTEX | ug/g dry | 7 | ND (7) | ND (7) | nc | 60 |
| F2 PHC (C10-C16) | ug/g dry | 4 | ND (4) | ND (4) | nc | 60 |
| F3 PHC (C16-C34) | ug/g dry | 8 | 46 | 56 | 20 | 60 |
| F4 PHC (C34-C50) | ug/g dry | 6 | 28 | 34 | nc | 60 |
| Volatiles | | | | | | |
| Acetone | ug/g dry | 0.50 | ND (0.50) | ND (0.50) | nc | 100 |
| Benzene | ug/g dry | 0.02 | ND (0.02) | ND (0.02) | nc | 100 |
| Bromodichloromethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Bromoform | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Bromomethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Carbon Tetrachloride | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Chlorobenzene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Chloroform | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Dibromochloromethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Dichlorodifluoromethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,2-Dichlorobenzene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,3-Dichlorobenzene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,4-Dichlorobenzene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,1-Dichloroethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,2-Dichloroethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,1-Dichloroethylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| cis-1,2-Dichloroethylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| trans-1,2-Dichloroethylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,2-Dichloropropane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| cis-1,3-Dichloropropylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| trans-1,3-Dichloropropylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,3-Dichloropropene, total | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Ethylbenzene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Ethylene dibromide (dibromoethane, 1,2) | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Hexane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Methyl Ethyl Ketone (2-Butanone) | ug/g dry | 0.50 | ND (0.50) | ND (0.50) | nc | 100 |
| Methyl Isobutyl Ketone | ug/g dry | 0.50 | ND (0.50) | ND (0.50) | nc | 100 |
| Methyl tert-butyl ether | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Methylene Chloride | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Styrene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,1,1,2-Tetrachloroethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,1,2,2-Tetrachloroethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Tetrachloroethylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Toluene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,1,1-Trichloroethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| 1,1,2-Trichloroethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Trichloroethylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Trichlorofluoromethane | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Vinyl Chloride | ug/g dry | 0.02 | ND (0.02) | ND (0.02) | nc | 100 |
| m/p-Xylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| o-Xylene | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |
| Xylenes, total | ug/g dry | 0.05 | ND (0.05) | ND (0.05) | nc | 100 |

NOTES:

Analysis by Paracel Laboratories Ltd.

All results on dry weight basis; Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 17 - Relative Percent Differences - PAH and PCB in Soil
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | RDL | BH/MW21-03-01 | D206 | RPD (%) | Alert Limit (%) |
|---|----------|------|---------------|-------------|---------|-----------------|
| | | | 15-Mar-2021 | 15-Mar-2021 | | |
| Polycyclic Aromatic Hydrocarbons | | | | | | |
| Acenaphthene | ug/g dry | 0.02 | 0.11 | 0.21 | 63 | 80 |
| Acenaphthylene | ug/g dry | 0.02 | 0.07 | 0.12 | nc | 80 |
| Anthracene | ug/g dry | 0.02 | 0.47 | 0.83 | 55 | 80 |
| Benzo[a]anthracene | ug/g dry | 0.02 | 1.02 | 1.35 | 28 | 80 |
| Benzo[a]pyrene | ug/g dry | 0.02 | 0.88 | 1.16 | 27 | 80 |
| Benzo[b]fluoranthene | ug/g dry | 0.02 | 0.82 | 1.31 | 46 | 80 |
| Benzo[g,h,i]perylene | ug/g dry | 0.02 | 0.48 | 0.62 | 25 | 80 |
| Benzo[k]fluoranthene | ug/g dry | 0.02 | 0.45 | 0.74 | 49 | 80 |
| Chrysene | ug/g dry | 0.02 | 0.83 | 1.28 | 43 | 80 |
| Dibenzo[a,h]anthracene | ug/g dry | 0.02 | 0.13 | 0.19 | 38 | 80 |
| Fluoranthene | ug/g dry | 0.02 | 1.88 | 3.25 | 53 | 80 |
| Fluorene | ug/g dry | 0.02 | 0.19 | 0.3 | 45 | 80 |
| Indeno[1,2,3-cd]pyrene | ug/g dry | 0.02 | 0.47 | 0.64 | 31 | 80 |
| 1-Methylnaphthalene | ug/g dry | 0.02 | 0.06 | 0.14 | nc | 80 |
| 2-Methylnaphthalene | ug/g dry | 0.02 | 0.13 | 0.2 | 42 | 80 |
| Methylnaphthalene (1&2) | ug/g dry | 0.04 | 0.19 | 0.34 | nc | 80 |
| Naphthalene | ug/g dry | 0.01 | 0.21 | 0.33 | 44 | 80 |
| Phenanthrene | ug/g dry | 0.02 | 1.75 | 2.78 | 45 | 80 |
| Pyrene | ug/g dry | 0.02 | 1.5 | 2.53 | 51 | 80 |
| Polychlorinated Biphenyls | | | | | | |
| PCBs Total | ug/g dry | 0.05 | 0.16 | 0.14 | nc | 100 |

NOTES:

Analysis by Paracel Laboratories Ltd.

All results on dry weight basis; Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 18 - Relative Percent Differences - Inorganics in Soil
315 Miwate Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | RDL | BH/MW21-03-01 | D206 | RPD (%) | Alert Limit (%) |
|------------------------------------|----------|------|---------------|-------------|---------|-----------------|
| | | | 15-Mar-2021 | 15-Mar-2021 | | |
| <i>Inorganic Parameters</i> | | | | | | |
| Chromium (VI) | ug/g dry | 0.2 | ND (0.2) | ND (0.2) | nc | 70 |
| Mercury | ug/g dry | 0.1 | 0.1 | 0.1 | nc | 60 |
| Antimony | ug/g dry | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| Arsenic | ug/g dry | 1.0 | 2.9 | 2.6 | nc | 60 |
| Barium | ug/g dry | 1.0 | 144 | 136 | 6 | 60 |
| Beryllium | ug/g dry | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Boron | ug/g dry | 5.0 | 10.9 | 10.4 | nc | 60 |
| Cadmium | ug/g dry | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Chromium | ug/g dry | 5.0 | 15.4 | 13.3 | nc | 60 |
| Cobalt | ug/g dry | 1.0 | 3.2 | 3.2 | nc | 60 |
| Copper | ug/g dry | 5.0 | 18.8 | 17.8 | nc | 60 |
| Lead | ug/g dry | 1.0 | 18.8 | 17.9 | 5 | 60 |
| Molybdenum | ug/g dry | 1.0 | 1.5 | ND (1.0) | nc | 60 |
| Nickel | ug/g dry | 5.0 | 14.1 | 10 | nc | 60 |
| Selenium | ug/g dry | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| Silver | ug/g dry | 0.3 | ND (0.3) | ND (0.3) | nc | 60 |
| Thallium | ug/g dry | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| Uranium | ug/g dry | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| Vanadium | ug/g dry | 10.0 | 11.6 | 11.4 | nc | 60 |
| Zinc | ug/g dry | 20.0 | 37.7 | 34.8 | nc | 60 |
| Cyanide (free) | ug/g dry | 0.0 | ND (0.03) | ND (0.03) | nc | 70 |

NOTES:

Analysis by Paracel Laboratories Ltd.

All results on dry weight basis; Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 19 - Relative Percent Differences - PHC and VOC in Groundwater - Pre-Remediation
315 Miwate Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | RDL | BH/MW21-05 | D206 | RPD (%) | Alert Limit (%) |
|--|-------|-----|-------------|-------------|---------|-----------------|
| | | | 23-Mar-2021 | 23-Mar-2021 | | |
| Petroleum Hydrocarbons | | | | | | |
| F1 PHC (C6 - C10) - BTEX | ug/L | 25 | ND (25) | ND (25) | nc | 60 |
| F2 PHC (C10-C16) | ug/L | 100 | ND (100) | ND (100) | nc | 60 |
| F3 PHC (C16-C34) | ug/L | 100 | ND (100) | ND (100) | nc | 60 |
| F4 PHC (C34-C50) | ug/L | 100 | ND (100) | ND (100) | nc | 60 |
| Volatiles | | | | | | |
| Acetone | ug/L | 5.0 | ND (5.0) | ND (5.0) | nc | 60 |
| Benzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Bromodichloromethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Bromoform | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Bromomethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Carbon Tetrachloride | ug/L | 0.2 | ND (0.2) | ND (0.2) | nc | 60 |
| Chlorobenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Chloroform | ug/L | 0.5 | 1.9 | 2.0 | nc | 60 |
| Dibromochloromethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Dichlorodifluoromethane | ug/L | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| 1,2-Dichlorobenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,3-Dichlorobenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,4-Dichlorobenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1-Dichloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,2-Dichloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1-Dichloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| cis-1,2-Dichloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| trans-1,2-Dichloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,2-Dichloropropane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| cis-1,3-Dichloropropylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| trans-1,3-Dichloropropylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,3-Dichloropropene, total | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Ethylbenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Ethylene dibromide (dibromoethane, 1,2-) | ug/L | 0.2 | ND (0.2) | ND (0.2) | nc | 60 |
| Hexane | ug/L | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| Methyl Ethyl Ketone (2-Butanone) | ug/L | 5.0 | ND (5.0) | ND (5.0) | nc | 60 |
| Methyl Isobutyl Ketone | ug/L | 5.0 | ND (5.0) | ND (5.0) | nc | 60 |
| Methyl tert-butyl ether | ug/L | 2.0 | ND (2.0) | ND (2.0) | nc | 60 |
| Methylene Chloride | ug/L | 5.0 | ND (5.0) | ND (5.0) | nc | 60 |
| Styrene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1,1,2-Tetrachloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1,2,2-Tetrachloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Tetrachloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Toluene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1,1-Trichloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1,2-Trichloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Trichloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Trichlorofluoromethane | ug/L | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| Vinyl Chloride | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| m/p-Xylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| o-Xylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Xylenes, total | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |

NOTES:

Analysis by Paracel Laboratories Ltd.

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 20 - Relative Percent Differences - PAH and PCB in Groundwater - Pre-Remediation
315 Miwate Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | RDL | BH/MW21-05 | D206 | RPD (%) | Alert Limit (%) |
|--|-------|-------|-------------|-------------|---------|-----------------|
| | | | 23-Mar-2021 | 23-Mar-2021 | | |
| <i>Polycyclic Aromatic Hydrocarbons</i> | | | | | | |
| Acenaphthene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Acenaphthylene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Anthracene | ug/L | 0.01 | ND (0.01) | ND (0.01) | nc | 60 |
| Benzo[a]anthracene | ug/L | 0.01 | ND (0.01) | ND (0.01) | nc | 60 |
| Benzo[a]pyrene | ug/L | 0.01 | ND (0.01) | ND (0.01) | nc | 60 |
| Benzo[b]fluoranthene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Benzo[g,h,i]perylene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Benzo[k]fluoranthene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Chrysene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Dibenzo[a,h]anthracene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Fluoranthene | ug/L | 0.01 | 0.02 | 0.03 | nc | 60 |
| Fluorene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Indeno[1,2,3-cd]pyrene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| 1-Methylnaphthalene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| 2-Methylnaphthalene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Methylnaphthalene (1&2) | ug/L | 0.10 | ND (0.10) | ND (0.10) | nc | 60 |
| Naphthalene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Phenanthrene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Pyrene | ug/L | 0.01 | 0.05 | 0.05 | mc | 60 |
| <i>Polychlorinated Biphenyls</i> | | | | | | |
| PCBs Total | ug/L | 0.050 | ND (0.05) | ND (0.05) | nc | 60 |

NOTES:

Analysis by Paracel Laboratories Ltd.

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 21 - Relative Percent Differences - Inorganic Parameters in Groundwater - Post-Remediation
315 Miwate Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | RDL | BH/MW21-05 | D206 | RPD (%) | Alert Limit (%) |
|-------------------|----------|-----|-------------|-------------|---------|-----------------|
| | | | 23-Mar-2021 | 23-Mar-2021 | | |
| Inorganics | | | | | | |
| Mercury | ug/L | 0.1 | ND (0.1) | ND (0.1) | nc | 40 |
| Antimony | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 40 |
| Arsenic | ug/L | 1 | ND (1) | ND (1) | nc | 40 |
| Barium | ug/L | 1 | 1200 | 1160 | 3 | 40 |
| Beryllium | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 40 |
| Boron | ug/L | 10 | 77 | 76 | 1 | 40 |
| Cadmium | ug/L | 0.1 | ND (0.1) | ND (0.1) | nc | 40 |
| Chromium | ug/L | 1 | ND (1) | ND (1) | nc | 40 |
| Chromium (VI) | ug/L | 10 | ND (10) | ND (10) | nc | 40 |
| Cobalt | ug/L | 0.5 | 3.7 | 3.6 | 3 | 40 |
| Copper | ug/L | 0.5 | 2.5 | 2.3 | nc | 40 |
| Lead | ug/L | 0.1 | ND (0.1) | ND (0.1) | nc | 40 |
| Molybdenum | ug/L | 0.5 | 1.4 | 1.5 | nc | 40 |
| Nickel | ug/L | 1 | 6 | 5 | 18 | 40 |
| Selenium | ug/L | 1 | ND (1) | ND (1) | nc | 40 |
| Silver | ug/L | 0.1 | ND (0.1) | ND (0.1) | nc | 40 |
| Sodium | ug/L | 200 | 617000 | 606000 | 2 | 40 |
| Thallium | ug/L | 0.1 | ND (0.1) | 0.1 | nc | 40 |
| Uranium | ug/L | 0.1 | 1.1 | 1.1 | 0 | 40 |
| Vanadium | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 40 |
| Zinc | ug/L | 5 | 21 | 21 | nc | 40 |
| pH | No units | | 7.2 | 7.3 | | |

NOTES:

Analysis by Paracel Laboratories Ltd.

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 22 - Relative Percent Differences - PHC and VOC in Groundwater - Post-Remediation
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | RDL | MW21-02 | Duplicate | RPD (%) | Alert Limit (%) |
|--|-------|-----|------------|------------|---------|-----------------|
| | | | 6-Jan-2022 | 6-Jan-2022 | | |
| Petroleum Hydrocarbons | | | | | | |
| F1 PHC (C6 - C10) - BTEX | ug/L | 25 | ND (25) | ND (25) | nc | 60 |
| F2 PHC (C10-C16) | ug/L | 100 | ND (100) | ND (100) | nc | 60 |
| F3 PHC (C16-C34) | ug/L | 100 | ND (100) | ND (100) | nc | 60 |
| F4 PHC (C34-C50) | ug/L | 100 | ND (100) | ND (100) | nc | 60 |
| Volatiles | | | | | | |
| Acetone | ug/L | 5.0 | ND (5.0) | ND (5.0) | nc | 60 |
| Benzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Bromodichloromethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Bromoform | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Bromomethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Carbon Tetrachloride | ug/L | 0.2 | ND (0.2) | ND (0.2) | nc | 60 |
| Chlorobenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Chloroform | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Dibromochloromethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Dichlorodifluoromethane | ug/L | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| 1,2-Dichlorobenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,3-Dichlorobenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,4-Dichlorobenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1-Dichloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,2-Dichloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1-Dichloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| cis-1,2-Dichloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| trans-1,2-Dichloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,2-Dichloropropane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| cis-1,3-Dichloropropylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| trans-1,3-Dichloropropylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,3-Dichloropropene, total | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Ethylbenzene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Ethylene dibromide (dibromoethane, 1,2-) | ug/L | 0.2 | ND (0.2) | ND (0.2) | nc | 60 |
| Hexane | ug/L | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| Methyl Ethyl Ketone (2-Butanone) | ug/L | 5.0 | ND (5.0) | ND (5.0) | nc | 60 |
| Methyl Isobutyl Ketone | ug/L | 5.0 | ND (5.0) | ND (5.0) | nc | 60 |
| Methyl tert-butyl ether | ug/L | 2.0 | ND (2.0) | ND (2.0) | nc | 60 |
| Methylene Chloride | ug/L | 5.0 | ND (5.0) | ND (5.0) | nc | 60 |
| Styrene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1,1,2-Tetrachloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1,2,2-Tetrachloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Tetrachloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Toluene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1,1-Trichloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| 1,1,2-Trichloroethane | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Trichloroethylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Trichlorofluoromethane | ug/L | 1.0 | ND (1.0) | ND (1.0) | nc | 60 |
| Vinyl Chloride | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| m/p-Xylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| o-Xylene | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |
| Xylenes, total | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 60 |

NOTES:

Analysis by Paracel Laboratories Ltd.

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 23 - Relative Percent Differences - PAH and PCB in Groundwater - Post-Remediation
 315 Miwate Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | RDL | MW21-02 | Duplicate | RPD (%) | Alert Limit (%) |
|---|-------|-------|-------------|-------------|---------|-----------------|
| | | | 12-Jan-2022 | 12-Jan-2022 | | |
| Polycyclic Aromatic Hydrocarbons | | | | | | |
| Acenaphthene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Acenaphthylene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Anthracene | ug/L | 0.01 | ND (0.01) | ND (0.01) | nc | 60 |
| Benzo[a]anthracene | ug/L | 0.01 | ND (0.01) | ND (0.01) | nc | 60 |
| Benzo[a]pyrene | ug/L | 0.01 | ND (0.01) | ND (0.01) | nc | 60 |
| Benzo[b]fluoranthene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Benzo[g,h,i]perylene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Benzo[k]fluoranthene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Chrysene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Dibenzo[a,h]anthracene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Fluoranthene | ug/L | 0.01 | ND (0.01) | ND (0.01) | nc | 60 |
| Fluorene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Indeno[1,2,3-cd]pyrene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| 1-Methylnaphthalene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| 2-Methylnaphthalene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Methylnaphthalene (1&2) | ug/L | 0.10 | ND (0.10) | ND (0.10) | nc | 60 |
| Naphthalene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Phenanthrene | ug/L | 0.05 | ND (0.05) | ND (0.05) | nc | 60 |
| Pyrene | ug/L | 0.01 | ND (0.01) | ND (0.01) | mc | 60 |
| Polychlorinated Biphenyls | | | | | | |
| PCBs Total | ug/L | 0.050 | ND (0.05) | ND (0.05) | nc | 60 |

NOTES:

Analysis by Paracel Laboratories Ltd.

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 24 - Relative Percent Differences - Inorganic Parameters in Groundwater - Post-Remediation
315 Miwate Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| Parameter | Units | RDL | MW21-01 | Duplicate | RPD (%) | Alert Limit (%) |
|-------------------|-------|-----|-------------|-------------|---------|-----------------|
| | | | 21-Dec-2021 | 21-Dec-2021 | | |
| Inorganics | | | | | | |
| Antimony | ug/L | 0.1 | ND (0.5) | ND (0.5) | nc | 40 |
| Arsenic | ug/L | 0.5 | ND (1) | ND (1) | nc | 40 |
| Barium | ug/L | 1 | 595 | 615 | 3 | 40 |
| Beryllium | ug/L | 1 | ND (0.5) | ND (0.5) | nc | 40 |
| Boron | ug/L | 0.5 | 747 | 748 | 0 | 40 |
| Cadmium | ug/L | 10 | ND (0.1) | ND (0.1) | nc | 40 |
| Chromium | ug/L | 0.1 | ND (1) | ND (1) | nc | 40 |
| Chromium (VI) | ug/L | 1 | ND (10) | ND (10) | nc | 40 |
| Cobalt | ug/L | 10 | ND (0.5) | ND (0.5) | nc | 40 |
| Copper | ug/L | 0.5 | 1.2 | 1.1 | 9 | 40 |
| Lead | ug/L | 0.5 | ND (0.1) | ND (0.1) | nc | 40 |
| Mercury | ug/L | 0.1 | ND (0.1) | ND (0.1) | nc | 40 |
| Molybdenum | ug/L | 0.5 | 3.5 | 3.5 | 0 | 40 |
| Nickel | ug/L | 1 | 4 | 4 | 0 | 40 |
| Selenium | ug/L | 1 | ND (1) | ND (1) | nc | 40 |
| Silver | ug/L | 0.1 | ND (0.1) | ND (0.1) | nc | 40 |
| Sodium | ug/L | 200 | 342000 | 348000 | 2 | 40 |
| Thallium | ug/L | 0.1 | ND (0.1) | ND (0.1) | nc | 40 |
| Uranium | ug/L | 0.1 | 1.2 | 1.2 | 0 | 40 |
| Vanadium | ug/L | 0.5 | ND (0.5) | ND (0.5) | nc | 40 |
| Zinc | ug/L | 5 | ND (5) | ND (5) | nc | 40 |

NOTES:

Analysis by Paracel Laboratories Ltd.

Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.

- means "not analysed"

nc means "not calculable" - one (or both) of the results are <5x RDL

Exceedances of alert limits are shown in **bold**

Table 2 - Pre-Remediation Analytical Results in Soil - PAH and PCB
 315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | BH/MW21-01-01 | BH/MW21-02-01 | BH/MW21-03-01 | D206 (Duplicate BH/MW21-03-01) | BH/MW21-03-02 | BH/MW21-04-01 | BH/MW21-04-02 | BH/MW21-05-01 |
|--------------------------------|----------|---------------------------|---------------------------|---------------|---------------|---------------|-----------------------------------|---------------|---------------|---------------|---------------|
| Sampling Date | | | | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 17-Mar-2021 |
| Sample Depth (mbgs) | | | | 0.0 to 0.6 | 0.0 to 0.6 | 0.0 to 0.6 | 0.0 to 0.6 | 0.6 to 1.2 | 0.0 to 0.6 | 0.6 to 0.8 | 0.0 to 0.6 |
| Parcel ID | | Bold | Orange | 2112349-01 | 2112349-02 | 2112349-03 | 2112349-04 | 2112349-05 | 2112349-06 | 2112349-07 | 2112654-01 |
| Analysis Date | | | | 17-Mar-21 | 17-Mar-21 | 17-Mar-21 | 17-Mar-21 | 17-Mar-21 | 17-Mar-21 | 17-Mar-21 | 17-Mar-21 |
| Parcel Certificate of Analysis | | | | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 |
| Semi-Volatiles | | | | | | | | | | | |
| Acenaphthene | ug/g dry | 0.072 | 7.9 | 0.10 | ND (0.02) | 0.11 | 0.21 | 0.05 | 0.03 | 0.02 | ND (0.02) |
| Acenaphthylene | ug/g dry | 0.093 | 0.15 | 0.09 | ND (0.02) | 0.07 | 0.12 | 0.02 | 0.05 | 0.06 | ND (0.02) |
| Anthracene | ug/g dry | 0.22 | 0.67 | 0.21 | ND (0.02) | 0.47 | 0.83 | 0.17 | 0.07 | 0.11 | ND (0.02) |
| Benzo[a]anthracene | ug/g dry | 0.36 | 0.5 | 0.72 | 0.03 | 1.02 | 1.35 | 0.30 | 0.18 | 0.31 | 0.06 |
| Benzo[a]pyrene | ug/g dry | 0.3 | 0.3 | 0.42 | 0.04 | 0.88 | 1.16 | 0.32 | 0.19 | 0.26 | 0.07 |
| Benzo[b]fluoranthene | ug/g dry | 0.47 | 0.78 | 0.65 | 0.05 | 0.82 | 1.31 | 0.31 | 0.22 | 0.39 | 0.08 |
| Benzo[g,h,i]perylene | ug/g dry | 0.68 | 6.6 | 0.33 | 0.03 | 0.48 | 0.62 | 0.17 | 0.12 | 0.20 | 0.06 |
| Benzo[k]fluoranthene | ug/g dry | 0.48 | 0.78 | 0.31 | 0.02 | 0.45 | 0.74 | 0.15 | 0.11 | 0.16 | 0.04 |
| Chrysene | ug/g dry | 2.8 | 7 | 0.49 | 0.04 | 0.83 | 1.28 | 0.32 | 0.17 | 0.31 | 0.06 |
| Dibenzo[a,h]anthracene | ug/g dry | 0.1 | 0.1 | 0.08 | ND (0.02) | 0.13 | 0.19 | 0.05 | 0.03 | 0.05 | ND (0.02) |
| Fluoranthene | ug/g dry | 0.69 | 0.69 | 0.74 | 0.06 | 1.88 | 3.25 | 0.63 | 0.36 | 0.43 | 0.09 |
| Fluorene | ug/g dry | 0.19 | 62 | 0.13 | ND (0.02) | 0.19 | 0.3 | 0.07 | 0.03 | 0.06 | ND (0.02) |
| Indeno[1,2,3-cd]pyrene | ug/g dry | 0.23 | 0.38 | 0.25 | 0.02 | 0.47 | 0.64 | 0.16 | 0.11 | 0.19 | 0.04 |
| 1-Methylnaphthalene | ug/g dry | 0.59 | 0.99 | 2.72 | 0.06 | 0.06 | 0.14 | 0.04 | 0.06 | 0.93 | ND (0.02) |
| 2-Methylnaphthalene | ug/g dry | 0.59 | 0.99 | 4.34 | 0.11 | 0.13 | 0.2 | 0.06 | 0.10 | 1.36 | 0.04 |
| Methylnaphthalene (1&2) | ug/g dry | 0.59 | 0.99 | 7.05 | 0.17 | 0.19 | 0.34 | 0.10 | 0.17 | 2.29 | 0.06 |
| Naphthalene | ug/g dry | 0.09 | 0.6 | 1.94 | 0.05 | 0.21 | 0.33 | 0.10 | 0.04 | 1.00 | 0.03 |
| Phenanthrene | ug/g dry | 0.69 | 6.2 | 1.19 | 0.06 | 1.75 | 2.78 | 0.65 | 0.24 | 0.65 | 0.07 |
| Pyrene | ug/g dry | 1 | 78 | 0.86 | 0.05 | 1.50 | 2.53 | 0.50 | 0.31 | 0.42 | 0.09 |
| PCBs | | | | | | | | | | | |
| PCBs Total | ug/g dry | 0.3 | 0.35 | ND (0.05) | ND (0.05) | 0.16 | 0.14 | ND (0.05) | 0.11 | ND (0.05) | ND (0.05) |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Indicates soil exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use
- Indicates soil exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use

Table 3 - Pre-Remediation Analytical Results in Soil - Inorganic Parameters
 315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
 OTT-00250193-P0

| Parameter | Units | MECP Table 9 ¹ | MECP Table 7 ² | BH/MW21-01-01 | BH/MW21-02-01 | BH/MW21-03-01 | D206 (Duplicate BH/MW21-03-01) | BH/MW21-03-02 | BH/MW21-04-01 | BH/MW21-04-02 | BH/MW21-05-01 |
|--------------------------------|----------|---------------------------|---------------------------|---------------|---------------|---------------|-----------------------------------|---------------|---------------|---------------|---------------|
| | | | | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 15-Mar-2021 | 17-Mar-2021 |
| Sampling Date | | | | 0.0 to 0.6 | 0.0 to 0.6 | 0.0 to 0.6 | 0.0 to 0.6 | 0.6 to 1.2 | 0.0 to 0.6 | 0.6 to 0.8 | 0.0 to 0.6 |
| Sample Depth (mbgs) | | | | 2112349-01 | 2112349-02 | 2112349-03 | 2112349-04 | 2112349-05 | 2112349-06 | 2112349-07 | 2112654-01 |
| Parcel ID | | Bold | Orange | 22-Mar-21 | 22-Mar-21 | 22-Mar-21 | 22-Mar-21 | 22-Mar-21 | 22-Mar-21 | 22-Mar-21 | 22-Mar-21 |
| Analysis Date | | | | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 | 2112349 |
| Parcel Certificate of Analysis | | | | | | | | | | | |
| Metals | | | | | | | | | | | |
| Antimony | ug/g dry | 1.3 | 7.5 | 3.8 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | 1.3 | ND (1.0) |
| Arsenic | ug/g dry | 18 | 18 | 134 | 4.1 | 2.9 | 2.6 | 3.2 | 2.7 | 21.6 | 2.2 |
| Barium | ug/g dry | 220 | 390 | 420 | 137 | 144 | 136 | 198 | 211 | 161 | 146 |
| Beryllium | ug/g dry | 2.5 | 4 | 1.1 | ND (0.5) | ND (0.5) | ND (0.5) | 0.6 | ND (0.5) | 0.8 | ND (0.5) |
| Boron | ug/g dry | 36 | 120 | 16.7 | 9.2 | 10.9 | 10.4 | 17.8 | 13.4 | 16.8 | 9.5 |
| Cadmium | ug/g dry | 1.2 | 1.2 | 0.8 | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) | ND (0.5) |
| Chromium | ug/g dry | 70 | 160 | 26.2 | 11.1 | 16.0 | 13.3 | 17.3 | 13.6 | 13.6 | 10.5 |
| Chromium (VI) | ug/g dry | 0.66 | 8 | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) | ND (0.2) |
| Cobalt | ug/g dry | 22 | 22 | 10.0 | 3.6 | 3.2 | 3.2 | 5.7 | 5.4 | 8.7 | 3.5 |
| Copper | ug/g dry | 92 | 140 | 121 | 8.0 | 18.8 | 17.8 | 10.0 | 20.8 | 55.8 | 10.1 |
| Lead | ug/g dry | 120 | 120 | 218 | 12.5 | 18.8 | 17.9 | 15.7 | 26.4 | 2880 | 9.7 |
| Mercury | ug/g dry | 0.27 | 0.27 | 0.6 | ND (0.1) | 0.1 | 0.1 | ND (0.1) | ND (0.1) | 0.3 | ND (0.1) |
| Molybdenum | ug/g dry | 2 | 6.9 | 13.5 | 1.9 | 1.5 | ND (1.0) | ND (1.0) | ND (1.0) | 3.6 | ND (1.0) |
| Nickel | ug/g dry | 82 | 100 | 37.4 | 9.5 | 14.1 | 10.0 | 14.6 | 11.4 | 24.4 | 9.1 |
| Selenium | ug/g dry | 1.5 | 2.4 | 2.6 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | 1.7 | ND (1.0) |
| Silver | ug/g dry | 0.5 | 20 | 0.3 | ND (0.3) | ND (0.3) | ND (0.3) | ND (0.3) | ND (0.3) | ND (0.3) | ND (0.3) |
| Thallium | ug/g dry | 1 | 1 | 1.7 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Uranium | ug/g dry | 2.5 | 23 | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) | ND (1.0) |
| Vanadium | ug/g dry | 86 | 86 | 29.8 | ND (10.0) | 11.6 | 11.4 | 10.4 | 19.8 | 22.5 | 13.6 |
| Zinc | ug/g dry | 290 | 340 | 183 | 25.3 | 37.7 | 34.8 | ND (20.0) | 39.9 | 148 | ND (20.0) |
| General Inorganics | | | | | | | | | | | |
| Cyanide, free | ug/g dry | 0.051 | 0.051 | ND (0.03) | ND (0.03) | ND (0.03) | ND (0.03) | ND (0.03) | ND (0.03) | ND (0.03) | ND (0.03) |
| pH | pH Units | 5 to 9 | 5 to 9 | - | - | - | - | - | 8.20 | 7.58 | - |

NOTES:

- 1 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 9 Generic Site Condition Standards for Use within 30 m of a Water Body in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- 2 Ontario Ministry of Environment, Conservation and Parks (MECP), Soil, Groundwater and Sediment Standards for use under Part XV.1 of the Environmental Protection Act, April 2011, Table 7 Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition for Residential/Parkland/Institutional Property Use (coarse textured soils)
- ND Non-detectable results are shown as "ND (RDL)" where RDL represents the reporting detection limit.
- NV No Value
- N/A Not Applicable
- Parameter not analyzed
- m bgs Metres below ground surface
- Indicates soil exceedance of MECP Table 9 generic site condition standard for coarse textured soil and residential/parkland/institutional property use**
- Indicates soil exceedance of MECP Table 7 generic site condition standard for coarse textured soil and residential/parkland/institutional property use**

EXP Services Inc.

*Windmill Dream Zibi Ontario Inc.
Phase Two Environmental Site Assessment
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0
April 20, 2022*

Appendix H: Laboratory Certificates of Analysis

Certificate of Analysis

exp Services Inc. (Ottawa)
100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi- Chaudiere Island
Project: OTT00250193E0
Custody:

Report Date: 18-Mar-2019
Order Date: 14-Mar-2019

Order #: 1911439

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|-----------|
| 1911439-01 | SS-1 |
| 1911439-02 | TB-0314 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi- Chaudiere Island

Report Date: 18-Mar-2019

Order Date: 14-Mar-2019

Project Description: OTT00250193E0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|---------------------------------|---------------------------------------|-----------------|---------------|
| BTEX by P&T GC-MS | EPA 8260 - P&T GC-MS | 17-Mar-19 | 18-Mar-19 |
| Chromium, hexavalent - soil | MOE E3056 - Extraction, colourimetric | 15-Mar-19 | 15-Mar-19 |
| Mercury by CVAA | EPA 7471B - CVAA, digestion | 18-Mar-19 | 18-Mar-19 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 17-Mar-19 | 18-Mar-19 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 15-Mar-19 | 17-Mar-19 |
| REG 153: Metals by ICP/MS, soil | EPA 6020 - Digestion - ICP-MS | 18-Mar-19 | 18-Mar-19 |
| REG 153: PAHs by GC-MS | EPA 8270 - GC-MS, extraction | 15-Mar-19 | 18-Mar-19 |
| Solids, % | Gravimetric, calculation | 18-Mar-19 | 18-Mar-19 |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi- Chaudiere Island

Report Date: 18-Mar-2019

Order Date: 14-Mar-2019

Project Description: OTT00250193E0

| | | | | |
|---------------------|------------------|------------------|---|---|
| Client ID: | SS-1 | TB-0314 | - | - |
| Sample Date: | 03/14/2019 10:15 | 03/14/2019 10:15 | - | - |
| Sample ID: | 1911439-01 | 1911439-02 | - | - |
| MDL/Units | Soil | Soil | - | - |

Physical Characteristics

| | | | | | |
|----------|--------------|------|-----|---|---|
| % Solids | 0.1 % by Wt. | 89.3 | 100 | - | - |
|----------|--------------|------|-----|---|---|

Metals

| | | | | | |
|---------------|---------------|-------|---|---|---|
| Antimony | 1.0 ug/g dry | <1.0 | - | - | - |
| Arsenic | 1.0 ug/g dry | 2.2 | - | - | - |
| Barium | 1.0 ug/g dry | 61.3 | - | - | - |
| Beryllium | 0.5 ug/g dry | <0.5 | - | - | - |
| Boron | 5.0 ug/g dry | 8.3 | - | - | - |
| Cadmium | 0.5 ug/g dry | <0.5 | - | - | - |
| Chromium | 5.0 ug/g dry | 9.9 | - | - | - |
| Chromium (VI) | 0.2 ug/g dry | <0.2 | - | - | - |
| Cobalt | 1.0 ug/g dry | 3.9 | - | - | - |
| Copper | 5.0 ug/g dry | 8.3 | - | - | - |
| Lead | 1.0 ug/g dry | 51.5 | - | - | - |
| Mercury | 0.1 ug/g dry | <0.1 | - | - | - |
| Molybdenum | 1.0 ug/g dry | <1.0 | - | - | - |
| Nickel | 5.0 ug/g dry | 9.5 | - | - | - |
| Selenium | 1.0 ug/g dry | <1.0 | - | - | - |
| Silver | 0.3 ug/g dry | <0.3 | - | - | - |
| Thallium | 1.0 ug/g dry | <1.0 | - | - | - |
| Uranium | 1.0 ug/g dry | <1.0 | - | - | - |
| Vanadium | 10.0 ug/g dry | 14.3 | - | - | - |
| Zinc | 20.0 ug/g dry | <20.0 | - | - | - |

Volatiles

| | | | | | |
|----------------|---------------|-------|-------|---|---|
| Benzene | 0.02 ug/g dry | <0.02 | <0.02 | - | - |
| Ethylbenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Toluene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| m,p-Xylenes | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| o-Xylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Xylenes, total | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Toluene-d8 | Surrogate | 103% | 106% | - | - |

Hydrocarbons

| | | | | | |
|-------------------|------------|----|----|---|---|
| F1 PHCs (C6-C10) | 7 ug/g dry | <7 | <7 | - | - |
| F2 PHCs (C10-C16) | 4 ug/g dry | <4 | - | - | - |
| F3 PHCs (C16-C34) | 8 ug/g dry | 25 | - | - | - |
| F4 PHCs (C34-C50) | 6 ug/g dry | 14 | - | - | - |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi- Chaudiere Island

Report Date: 18-Mar-2019

Order Date: 14-Mar-2019

Project Description: OTT00250193E0

| | | | | |
|---------------------|------------------|------------------|---|---|
| Client ID: | SS-1 | TB-0314 | - | - |
| Sample Date: | 03/14/2019 10:15 | 03/14/2019 10:15 | - | - |
| Sample ID: | 1911439-01 | 1911439-02 | - | - |
| MDL/Units | Soil | Soil | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|---------------|-------|---|---|---|
| Acenaphthene | 0.02 ug/g dry | 0.03 | - | - | - |
| Acenaphthylene | 0.02 ug/g dry | <0.02 | - | - | - |
| Anthracene | 0.02 ug/g dry | 0.06 | - | - | - |
| Benzo [a] anthracene | 0.02 ug/g dry | 0.13 | - | - | - |
| Benzo [a] pyrene | 0.02 ug/g dry | 0.10 | - | - | - |
| Benzo [b] fluoranthene | 0.02 ug/g dry | 0.13 | - | - | - |
| Benzo [g,h,i] perylene | 0.02 ug/g dry | 0.07 | - | - | - |
| Benzo [k] fluoranthene | 0.02 ug/g dry | 0.07 | - | - | - |
| Chrysene | 0.02 ug/g dry | 0.14 | - | - | - |
| Dibenzo [a,h] anthracene | 0.02 ug/g dry | <0.02 | - | - | - |
| Fluoranthene | 0.02 ug/g dry | 0.33 | - | - | - |
| Fluorene | 0.02 ug/g dry | 0.03 | - | - | - |
| Indeno [1,2,3-cd] pyrene | 0.02 ug/g dry | 0.06 | - | - | - |
| 1-Methylnaphthalene | 0.02 ug/g dry | <0.02 | - | - | - |
| 2-Methylnaphthalene | 0.02 ug/g dry | <0.02 | - | - | - |
| Methylnaphthalene (1&2) | 0.04 ug/g dry | <0.04 | - | - | - |
| Naphthalene | 0.01 ug/g dry | <0.01 | - | - | - |
| Phenanthrene | 0.02 ug/g dry | 0.25 | - | - | - |
| Pyrene | 0.02 ug/g dry | 0.25 | - | - | - |
| 2-Fluorobiphenyl | Surrogate | 95.8% | - | - | - |
| Terphenyl-d14 | Surrogate | 136% | - | - | - |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi- Chaudiere Island

Report Date: 18-Mar-2019
 Order Date: 14-Mar-2019
 Project Description: OTT00250193E0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g | | | | | | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g | | | | | | |
| F3 PHCs (C16-C34) | ND | 8 | ug/g | | | | | | |
| F4 PHCs (C34-C50) | ND | 6 | ug/g | | | | | | |
| Metals | | | | | | | | | |
| Antimony | ND | 1.0 | ug/g | | | | | | |
| Arsenic | ND | 1.0 | ug/g | | | | | | |
| Barium | ND | 1.0 | ug/g | | | | | | |
| Beryllium | ND | 0.5 | ug/g | | | | | | |
| Boron | ND | 5.0 | ug/g | | | | | | |
| Cadmium | ND | 0.5 | ug/g | | | | | | |
| Chromium (VI) | ND | 0.2 | ug/g | | | | | | |
| Chromium | ND | 5.0 | ug/g | | | | | | |
| Cobalt | ND | 1.0 | ug/g | | | | | | |
| Copper | ND | 5.0 | ug/g | | | | | | |
| Lead | ND | 1.0 | ug/g | | | | | | |
| Mercury | ND | 0.1 | ug/g | | | | | | |
| Molybdenum | ND | 1.0 | ug/g | | | | | | |
| Nickel | ND | 5.0 | ug/g | | | | | | |
| Selenium | ND | 1.0 | ug/g | | | | | | |
| Silver | ND | 0.3 | ug/g | | | | | | |
| Thallium | ND | 1.0 | ug/g | | | | | | |
| Uranium | ND | 1.0 | ug/g | | | | | | |
| Vanadium | ND | 10.0 | ug/g | | | | | | |
| Zinc | ND | 20.0 | ug/g | | | | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g | | | | | | |
| Acenaphthylene | ND | 0.02 | ug/g | | | | | | |
| Anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] pyrene | ND | 0.02 | ug/g | | | | | | |
| Benzo [b] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.02 | ug/g | | | | | | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Chrysene | ND | 0.02 | ug/g | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g | | | | | | |
| Fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Fluorene | ND | 0.02 | ug/g | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g | | | | | | |
| 1-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| 2-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.04 | ug/g | | | | | | |
| Naphthalene | ND | 0.01 | ug/g | | | | | | |
| Phenanthrene | ND | 0.02 | ug/g | | | | | | |
| Pyrene | ND | 0.02 | ug/g | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 1.10 | | ug/g | | 82.5 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.55 | | ug/g | | 116 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Benzene | ND | 0.02 | ug/g | | | | | | |
| Ethylbenzene | ND | 0.05 | ug/g | | | | | | |
| Toluene | ND | 0.05 | ug/g | | | | | | |
| m,p-Xylenes | ND | 0.05 | ug/g | | | | | | |
| o-Xylene | ND | 0.05 | ug/g | | | | | | |
| Xylenes, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: Toluene-d8 | 8.48 | | ug/g | | 106 | 50-140 | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi- Chaudiere Island

Report Date: 18-Mar-2019
 Order Date: 14-Mar-2019
 Project Description: OTT00250193E0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g dry | ND | | | | 40 | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g dry | 9 | | | 0.0 | 30 | |
| F3 PHCs (C16-C34) | 29 | 8 | ug/g dry | 73 | | | 87.3 | 30 | QR-04 |
| F4 PHCs (C34-C50) | ND | 6 | ug/g dry | 21 | | | 0.0 | 30 | |
| Metals | | | | | | | | | |
| Antimony | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Arsenic | 2.4 | 1.0 | ug/g dry | 2.2 | | | 7.7 | 30 | |
| Barium | 62.3 | 1.0 | ug/g dry | 61.3 | | | 1.6 | 30 | |
| Beryllium | 0.5 | 0.5 | ug/g dry | ND | | | 0.0 | 30 | |
| Boron | 9.0 | 5.0 | ug/g dry | 8.3 | | | 7.4 | 30 | |
| Cadmium | ND | 0.5 | ug/g dry | ND | | | 0.0 | 30 | |
| Chromium (VI) | ND | 0.2 | ug/g dry | ND | | | | 35 | |
| Chromium | 10.2 | 5.0 | ug/g dry | 9.9 | | | 2.8 | 30 | |
| Cobalt | 4.0 | 1.0 | ug/g dry | 3.9 | | | 3.1 | 30 | |
| Copper | 8.6 | 5.0 | ug/g dry | 8.3 | | | 3.1 | 30 | |
| Lead | 52.7 | 1.0 | ug/g dry | 51.5 | | | 2.4 | 30 | |
| Mercury | ND | 0.1 | ug/g dry | ND | | | 0.0 | 30 | |
| Molybdenum | 1.1 | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Nickel | 9.5 | 5.0 | ug/g dry | 9.5 | | | 0.3 | 30 | |
| Selenium | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Silver | ND | 0.3 | ug/g dry | ND | | | 0.0 | 30 | |
| Thallium | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Uranium | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Vanadium | 14.4 | 10.0 | ug/g dry | 14.3 | | | 0.8 | 30 | |
| Zinc | ND | 20.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Physical Characteristics | | | | | | | | | |
| % Solids | 67.4 | 0.1 | % by Wt. | 68.9 | | | 2.3 | 25 | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Acenaphthylene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Anthracene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Benzo [a] anthracene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Benzo [a] pyrene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Benzo [b] fluoranthene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Benzo [g,h,i] perylene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Chrysene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Fluoranthene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Fluorene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| 1-Methylnaphthalene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| 2-Methylnaphthalene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Naphthalene | ND | 0.01 | ug/g dry | ND | | | | 40 | |
| Phenanthrene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Pyrene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Surrogate: 2-Fluorobiphenyl | 1.15 | | ug/g dry | | 71.6 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.74 | | ug/g dry | | 108 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Benzene | ND | 0.02 | ug/g dry | ND | | | | 50 | |
| Ethylbenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Toluene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| m,p-Xylenes | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| o-Xylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Surrogate: Toluene-d8 | 9.74 | | ug/g dry | | 106 | 50-140 | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi- Chaudiere Island

Report Date: 18-Mar-2019
 Order Date: 14-Mar-2019
 Project Description: OTT00250193E0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F2 PHCs (C10-C16) | 95 | 4 | ug/g | 9 | 89.7 | 60-140 | | | |
| F3 PHCs (C16-C34) | 276 | 8 | ug/g | 73 | 86.4 | 60-140 | | | |
| F4 PHCs (C34-C50) | 160 | 6 | ug/g | 21 | 94.1 | 60-140 | | | |
| Metals | | | | | | | | | |
| Antimony | 41.4 | | ug/L | ND | 82.1 | 70-130 | | | |
| Arsenic | 46.3 | | ug/L | ND | 90.8 | 70-130 | | | |
| Barium | 68.0 | | ug/L | 24.5 | 87.1 | 70-130 | | | |
| Beryllium | 49.3 | | ug/L | ND | 98.5 | 70-130 | | | |
| Boron | 49.7 | | ug/L | ND | 92.7 | 70-130 | | | |
| Cadmium | 43.6 | | ug/L | ND | 87.1 | 70-130 | | | |
| Chromium (VI) | 0.2 | | mg/L | ND | 89.5 | 70-130 | | | |
| Chromium | 52.2 | | ug/L | ND | 96.5 | 70-130 | | | |
| Cobalt | 43.8 | | ug/L | 1.6 | 84.4 | 70-130 | | | |
| Copper | 48.8 | | ug/L | ND | 90.9 | 70-130 | | | |
| Lead | 59.9 | | ug/L | 20.6 | 78.7 | 70-130 | | | |
| Mercury | 1.44 | 0.1 | ug/g | ND | 95.9 | 70-130 | | | |
| Molybdenum | 47.1 | | ug/L | ND | 93.3 | 70-130 | | | |
| Nickel | 49.1 | | ug/L | ND | 90.7 | 70-130 | | | |
| Selenium | 44.2 | | ug/L | ND | 88.1 | 70-130 | | | |
| Silver | 40.8 | | ug/L | ND | 81.5 | 70-130 | | | |
| Thallium | 41.9 | | ug/L | ND | 83.7 | 70-130 | | | |
| Uranium | 42.7 | | ug/L | ND | 85.0 | 70-130 | | | |
| Vanadium | 54.2 | | ug/L | ND | 97.0 | 70-130 | | | |
| Zinc | 49.3 | | ug/L | ND | 86.1 | 70-130 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 0.196 | 0.02 | ug/g | ND | 97.5 | 50-140 | | | |
| Acenaphthylene | 0.178 | 0.02 | ug/g | ND | 88.5 | 50-140 | | | |
| Anthracene | 0.176 | 0.02 | ug/g | ND | 87.4 | 50-140 | | | |
| Benzo [a] anthracene | 0.183 | 0.02 | ug/g | ND | 90.8 | 50-140 | | | |
| Benzo [a] pyrene | 0.163 | 0.02 | ug/g | ND | 81.0 | 50-140 | | | |
| Benzo [b] fluoranthene | 0.260 | 0.02 | ug/g | ND | 129 | 50-140 | | | |
| Benzo [g,h,i] perylene | 0.180 | 0.02 | ug/g | ND | 89.5 | 50-140 | | | |
| Benzo [k] fluoranthene | 0.223 | 0.02 | ug/g | ND | 111 | 50-140 | | | |
| Chrysene | 0.197 | 0.02 | ug/g | ND | 97.8 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 0.147 | 0.02 | ug/g | ND | 73.3 | 50-140 | | | |
| Fluoranthene | 0.178 | 0.02 | ug/g | ND | 88.6 | 50-140 | | | |
| Fluorene | 0.175 | 0.02 | ug/g | ND | 86.9 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 0.164 | 0.02 | ug/g | ND | 81.5 | 50-140 | | | |
| 1-Methylnaphthalene | 0.141 | 0.02 | ug/g | ND | 70.2 | 50-140 | | | |
| 2-Methylnaphthalene | 0.161 | 0.02 | ug/g | ND | 79.9 | 50-140 | | | |
| Naphthalene | 0.193 | 0.01 | ug/g | ND | 95.9 | 50-140 | | | |
| Phenanthrene | 0.192 | 0.02 | ug/g | ND | 95.4 | 50-140 | | | |
| Pyrene | 0.176 | 0.02 | ug/g | ND | 87.3 | 50-140 | | | |
| Surrogate: 2-Fluorobiphenyl | 1.10 | | ug/g | | 68.1 | 50-140 | | | |

Certificate of Analysis
Client: exp Services Inc. (Ottawa)
Client PO: Zibi- Chaudiere Island

Report Date: 18-Mar-2019

Order Date: 14-Mar-2019

Project Description: OTT00250193E0

Qualifier Notes:

QC Qualifiers :

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

1911439



TRUSTED.
RESPONSIVE
RELIABLE.



paracel@paracellabs.com

Chain of Custody
(Lab Use Only)

Page 1 of 1

Client Name: EXP Services Inc. Project Reference: Zbi - Chaudiere Island
 Contact Name: Patricia Stelmack Quote # 19-211
 Address: 100-2650 Queensview Drive PO # OTT-00250193-E0
 Ottawa, ON, K2B 8H6 Email Address: Patricia.Stelmack@exp.com
 Telephone: 613-688-1899

Turnaround Time:
 1 Day 3 Day
 2 Day Regular
 Date Required: _____

Criteria: O. Reg. 153/04 (As Amended) Table 7 RSC Filing O. Reg. 558/00 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

| Parcel Order Number: 1911439 | | | | Required Analyses | | | | | | | | | | | | | | |
|------------------------------|------------------------------|------------|-----------------|-------------------|-------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Sample ID/Location Name | Matrix | Air Volume | # of Containers | Sample Taken | | PHCs F1-F4+BTEX | VOCs | PAHs | Metals by ICP | | | B (HWS) | pH | PHC F1+BTEX | | | | |
| | | | | Date | Time | | | | Hg | CrVI | | | | | | | | |
| 1 SS-1 | Soil | / | 4 | 03.14.19 | 10:15 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 TB-0314 | S | / | 1 | 0314.19 | 10:15 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | Sample #2 is a trip blank. ✓ | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used. Method of Delivery: Walkin

| | | | |
|--|--|---|------------------------------------|
| Relinquished By (Sign): <u>[Signature]</u> | Received by Driver/Depot: <u>[Signature]</u> | Received at Lab: <u>SUNEPORN DOKMAI</u> | Verified By: <u>[Signature]</u> |
| Relinquished By (Print): <u>Scott Legend</u> | Date/Time: <u>03/14/19 11:30a</u> | Date/Time: <u>MAR 14 2019 12:00</u> | Date/Time: <u>03/14/19 12:53pm</u> |
| Date/Time: <u>03/14.19 11:30 am</u> | Temperature: <u>6.1</u> °C | Temperature: <u>9.1</u> °C | pH Verified [] By: _____ |

Certificate of Analysis

exp Services Inc. (Ottawa)
100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO:
Project: OTT00250193EO
Custody: 121194

Report Date: 25-Mar-2019
Order Date: 19-Mar-2019

Order #: 1912284

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------------|------------------|
| 1912284-01 | NW-SS-2 |
| 1912284-02 | TB-0319 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|---------------------------------|---------------------------------------|-----------------|---------------|
| Boron, available | MOE (HWE), EPA 200.7 - ICP-OES | 22-Mar-19 | 22-Mar-19 |
| BTEX by P&T GC-MS | EPA 8260 - P&T GC-MS | 21-Mar-19 | 23-Mar-19 |
| Chromium, hexavalent - soil | MOE E3056 - Extraction, colourimetric | 19-Mar-19 | 21-Mar-19 |
| Conductivity | MOE E3138 - probe @25 °C, water ext | 22-Mar-19 | 22-Mar-19 |
| Mercury by CVAA | EPA 7471B - CVAA, digestion | 22-Mar-19 | 22-Mar-19 |
| PCBs, total | SW846 8082A - GC-ECD | 19-Mar-19 | 20-Mar-19 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 21-Mar-19 | 23-Mar-19 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 19-Mar-19 | 21-Mar-19 |
| REG 153: Metals by ICP/MS, soil | EPA 6020 - Digestion - ICP-MS | 21-Mar-19 | 21-Mar-19 |
| REG 153: PAHs by GC-MS | EPA 8270 - GC-MS, extraction | 20-Mar-19 | 21-Mar-19 |
| REG 153: VOCs by P&T GC/MS | EPA 8260 - P&T GC-MS | 21-Mar-19 | 23-Mar-19 |
| SAR | Calculated | 22-Mar-19 | 22-Mar-19 |
| Solids, % | Gravimetric, calculation | 21-Mar-19 | 21-Mar-19 |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

| | | | | |
|---------------------|------------------|------------------|---|---|
| Client ID: | NW-SS-2 | TB-0319 | - | - |
| Sample Date: | 03/18/2019 03:00 | 03/19/2019 03:00 | - | - |
| Sample ID: | 1912284-01 | 1912284-02 | - | - |
| MDL/Units | Soil | Soil | - | - |

Physical Characteristics

| | | | | | |
|----------|--------------|------|-----|---|---|
| % Solids | 0.1 % by Wt. | 94.8 | 100 | - | - |
|----------|--------------|------|-----|---|---|

General Inorganics

| | | | | | |
|--------------|----------|------|---|---|---|
| SAR | 0.01 N/A | 1.95 | - | - | - |
| Conductivity | 5 uS/cm | 330 | - | - | - |

Metals

| | | | | | |
|------------------|---------------|------|---|---|---|
| Antimony | 1.0 ug/g dry | <1.0 | - | - | - |
| Arsenic | 1.0 ug/g dry | 2.8 | - | - | - |
| Barium | 1.0 ug/g dry | 156 | - | - | - |
| Beryllium | 0.5 ug/g dry | <0.5 | - | - | - |
| Boron | 5.0 ug/g dry | 12.5 | - | - | - |
| Boron, available | 0.5 ug/g dry | 0.5 | - | - | - |
| Cadmium | 0.5 ug/g dry | <0.5 | - | - | - |
| Chromium | 5.0 ug/g dry | 14.6 | - | - | - |
| Chromium (VI) | 0.2 ug/g dry | <0.2 | - | - | - |
| Cobalt | 1.0 ug/g dry | 7.0 | - | - | - |
| Copper | 5.0 ug/g dry | 14.1 | - | - | - |
| Lead | 1.0 ug/g dry | 12.6 | - | - | - |
| Mercury | 0.1 ug/g dry | <0.1 | - | - | - |
| Molybdenum | 1.0 ug/g dry | 1.3 | - | - | - |
| Nickel | 5.0 ug/g dry | 15.2 | - | - | - |
| Selenium | 1.0 ug/g dry | <1.0 | - | - | - |
| Silver | 0.3 ug/g dry | <0.3 | - | - | - |
| Thallium | 1.0 ug/g dry | <1.0 | - | - | - |
| Uranium | 1.0 ug/g dry | <1.0 | - | - | - |
| Vanadium | 10.0 ug/g dry | 10.9 | - | - | - |
| Zinc | 20.0 ug/g dry | 22.0 | - | - | - |

Volatiles

| | | | | | |
|----------------------|---------------|-------|-------|---|---|
| Acetone | 0.50 ug/g dry | <0.50 | <0.50 | - | - |
| Benzene | 0.02 ug/g dry | <0.02 | <0.02 | - | - |
| Bromodichloromethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Bromoform | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Bromomethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Carbon Tetrachloride | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Chlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Chloroform | 0.05 ug/g dry | <0.05 | <0.05 | - | - |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

| | Client ID: | NW-SS-2 | TB-0319 | - | - |
|------------------------------------|---------------|------------------|------------------|---|---|
| | Sample Date: | 03/18/2019 03:00 | 03/19/2019 03:00 | - | - |
| | Sample ID: | 1912284-01 | 1912284-02 | - | - |
| | MDL/Units | Soil | Soil | - | - |
| Dibromochloromethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Dichlorodifluoromethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,2-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,3-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,4-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1-Dichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,2-Dichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| cis-1,2-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| trans-1,2-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,2-Dichloropropane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| cis-1,3-Dichloropropylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| trans-1,3-Dichloropropylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,3-Dichloropropene, total | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Ethylbenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Ethylene dibromide (dibromoethane) | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Hexane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Methyl Ethyl Ketone (2-Butanone) | 0.50 ug/g dry | <0.50 | <0.50 | - | - |
| Methyl Isobutyl Ketone | 0.50 ug/g dry | <0.50 | <0.50 | - | - |
| Methyl tert-butyl ether | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Methylene Chloride | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Styrene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1,1,2-Tetrachloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1,2,2-Tetrachloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Tetrachloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Toluene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1,1-Trichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1,2-Trichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Trichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Trichlorofluoromethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Vinyl chloride | 0.02 ug/g dry | <0.02 | <0.02 | - | - |
| m,p-Xylenes | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| o-Xylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Xylenes, total | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 4-Bromofluorobenzene | Surrogate | 100% | 102% | - | - |
| Dibromofluoromethane | Surrogate | 106% | 108% | - | - |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

| | Client ID: | NW-SS-2 | TB-0319 | - | - |
|----------------|---------------|------------------|------------------|---|---|
| | Sample Date: | 03/18/2019 03:00 | 03/19/2019 03:00 | - | - |
| | Sample ID: | 1912284-01 | 1912284-02 | - | - |
| | MDL/Units | Soil | Soil | - | - |
| Toluene-d8 | Surrogate | 99.1% | 98.6% | - | - |
| Benzene | 0.02 ug/g dry | - | <0.02 | - | - |
| Ethylbenzene | 0.05 ug/g dry | - | <0.05 | - | - |
| Toluene | 0.05 ug/g dry | - | <0.05 | - | - |
| m,p-Xylenes | 0.05 ug/g dry | - | <0.05 | - | - |
| o-Xylene | 0.05 ug/g dry | - | <0.05 | - | - |
| Xylenes, total | 0.05 ug/g dry | - | <0.05 | - | - |
| Toluene-d8 | Surrogate | - | 98.6% | - | - |

Hydrocarbons

| | | | | | |
|-------------------|------------|----|----|---|---|
| F1 PHCs (C6-C10) | 7 ug/g dry | <7 | <7 | - | - |
| F2 PHCs (C10-C16) | 4 ug/g dry | 6 | - | - | - |
| F3 PHCs (C16-C34) | 8 ug/g dry | 86 | - | - | - |
| F4 PHCs (C34-C50) | 6 ug/g dry | 58 | - | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|---------------|-------|---|---|---|
| Acenaphthene | 0.02 ug/g dry | <0.02 | - | - | - |
| Acenaphthylene | 0.02 ug/g dry | <0.02 | - | - | - |
| Anthracene | 0.02 ug/g dry | 0.03 | - | - | - |
| Benzo [a] anthracene | 0.02 ug/g dry | 0.04 | - | - | - |
| Benzo [a] pyrene | 0.02 ug/g dry | 0.04 | - | - | - |
| Benzo [b] fluoranthene | 0.02 ug/g dry | 0.06 | - | - | - |
| Benzo [g,h,i] perylene | 0.02 ug/g dry | 0.04 | - | - | - |
| Benzo [k] fluoranthene | 0.02 ug/g dry | 0.03 | - | - | - |
| Chrysene | 0.02 ug/g dry | 0.04 | - | - | - |
| Dibenzo [a,h] anthracene | 0.02 ug/g dry | <0.02 | - | - | - |
| Fluoranthene | 0.02 ug/g dry | 0.12 | - | - | - |
| Fluorene | 0.02 ug/g dry | <0.02 | - | - | - |
| Indeno [1,2,3-cd] pyrene | 0.02 ug/g dry | 0.03 | - | - | - |
| 1-Methylnaphthalene | 0.02 ug/g dry | <0.02 | - | - | - |
| 2-Methylnaphthalene | 0.02 ug/g dry | <0.02 | - | - | - |
| Methylnaphthalene (1&2) | 0.04 ug/g dry | <0.04 | - | - | - |
| Naphthalene | 0.01 ug/g dry | <0.01 | - | - | - |
| Phenanthrene | 0.02 ug/g dry | 0.09 | - | - | - |
| Pyrene | 0.02 ug/g dry | 0.09 | - | - | - |
| 2-Fluorobiphenyl | Surrogate | 68.2% | - | - | - |
| Terphenyl-d14 | Surrogate | 79.1% | - | - | - |

PCBs

| | | | | | |
|-------------|---------------|-------|---|---|---|
| PCBs, total | 0.05 ug/g dry | <0.05 | - | - | - |
|-------------|---------------|-------|---|---|---|

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019
 Order Date: 19-Mar-2019

Project Description: OTT00250193EO

| | Client ID: | NW-SS-2 | TB-0319 | - | - |
|--------------------|--------------|------------------|------------------|---|---|
| | Sample Date: | 03/18/2019 03:00 | 03/19/2019 03:00 | - | - |
| | Sample ID: | 1912284-01 | 1912284-02 | - | - |
| | MDL/Units | Soil | Soil | - | - |
| Decachlorobiphenyl | Surrogate | 70.7% | - | - | - |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Conductivity | ND | 5 | uS/cm | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g | | | | | | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g | | | | | | |
| F3 PHCs (C16-C34) | ND | 8 | ug/g | | | | | | |
| F4 PHCs (C34-C50) | ND | 6 | ug/g | | | | | | |
| Metals | | | | | | | | | |
| Antimony | ND | 1.0 | ug/g | | | | | | |
| Arsenic | ND | 1.0 | ug/g | | | | | | |
| Barium | ND | 1.0 | ug/g | | | | | | |
| Beryllium | ND | 0.5 | ug/g | | | | | | |
| Boron, available | ND | 0.5 | ug/g | | | | | | |
| Boron | ND | 5.0 | ug/g | | | | | | |
| Cadmium | ND | 0.5 | ug/g | | | | | | |
| Chromium (VI) | ND | 0.2 | ug/g | | | | | | |
| Chromium | ND | 5.0 | ug/g | | | | | | |
| Cobalt | ND | 1.0 | ug/g | | | | | | |
| Copper | ND | 5.0 | ug/g | | | | | | |
| Lead | ND | 1.0 | ug/g | | | | | | |
| Mercury | ND | 0.1 | ug/g | | | | | | |
| Molybdenum | ND | 1.0 | ug/g | | | | | | |
| Nickel | ND | 5.0 | ug/g | | | | | | |
| Selenium | ND | 1.0 | ug/g | | | | | | |
| Silver | ND | 0.3 | ug/g | | | | | | |
| Thallium | ND | 1.0 | ug/g | | | | | | |
| Uranium | ND | 1.0 | ug/g | | | | | | |
| Vanadium | ND | 10.0 | ug/g | | | | | | |
| Zinc | ND | 20.0 | ug/g | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.146 | | ug/g | | 73.1 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g | | | | | | |
| Acenaphthylene | ND | 0.02 | ug/g | | | | | | |
| Anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] pyrene | ND | 0.02 | ug/g | | | | | | |
| Benzo [b] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.02 | ug/g | | | | | | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Chrysene | ND | 0.02 | ug/g | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g | | | | | | |
| Fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Fluorene | ND | 0.02 | ug/g | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g | | | | | | |
| 1-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| 2-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.04 | ug/g | | | | | | |
| Naphthalene | ND | 0.01 | ug/g | | | | | | |
| Phenanthrene | ND | 0.02 | ug/g | | | | | | |
| Pyrene | ND | 0.02 | ug/g | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 1.08 | | ug/g | | 80.7 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.34 | | ug/g | | 101 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 0.50 | ug/g | | | | | | |
| Benzene | ND | 0.02 | ug/g | | | | | | |
| Bromodichloromethane | ND | 0.05 | ug/g | | | | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Bromoform | ND | 0.05 | ug/g | | | | | | |
| Bromomethane | ND | 0.05 | ug/g | | | | | | |
| Carbon Tetrachloride | ND | 0.05 | ug/g | | | | | | |
| Chlorobenzene | ND | 0.05 | ug/g | | | | | | |
| Chloroform | ND | 0.05 | ug/g | | | | | | |
| Dibromochloromethane | ND | 0.05 | ug/g | | | | | | |
| Dichlorodifluoromethane | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,1-Dichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichloropropane | ND | 0.05 | ug/g | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.05 | ug/g | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.05 | ug/g | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.05 | ug/g | | | | | | |
| Ethylbenzene | ND | 0.05 | ug/g | | | | | | |
| Ethylene dibromide (dibromoethane) | ND | 0.05 | ug/g | | | | | | |
| Hexane | ND | 0.05 | ug/g | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 0.50 | ug/g | | | | | | |
| Methyl Isobutyl Ketone | ND | 0.50 | ug/g | | | | | | |
| Methyl tert-butyl ether | ND | 0.05 | ug/g | | | | | | |
| Methylene Chloride | ND | 0.05 | ug/g | | | | | | |
| Styrene | ND | 0.05 | ug/g | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.05 | ug/g | | | | | | |
| Tetrachloroethylene | ND | 0.05 | ug/g | | | | | | |
| Toluene | ND | 0.05 | ug/g | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.05 | ug/g | | | | | | |
| Trichloroethylene | ND | 0.05 | ug/g | | | | | | |
| Trichlorofluoromethane | ND | 0.05 | ug/g | | | | | | |
| Vinyl chloride | ND | 0.02 | ug/g | | | | | | |
| m,p-Xylenes | ND | 0.05 | ug/g | | | | | | |
| o-Xylene | ND | 0.05 | ug/g | | | | | | |
| Xylenes, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 9.04 | | ug/g | | 113 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 9.66 | | ug/g | | 121 | 50-140 | | | |
| Surrogate: Toluene-d8 | 7.71 | | ug/g | | 96.3 | 50-140 | | | |
| Benzene | ND | 0.02 | ug/g | | | | | | |
| Ethylbenzene | ND | 0.05 | ug/g | | | | | | |
| Toluene | ND | 0.05 | ug/g | | | | | | |
| m,p-Xylenes | ND | 0.05 | ug/g | | | | | | |
| o-Xylene | ND | 0.05 | ug/g | | | | | | |
| Xylenes, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: Toluene-d8 | 7.71 | | ug/g | | 96.3 | 50-140 | | | |

Certificate of Analysis
Client: exp Services Inc. (Ottawa)
Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|----------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| SAR | 43.6 | 0.01 | N/A | 42.5 | | | 2.5 | 200 | |
| Conductivity | 277 | 5 | uS/cm | 278 | | | 0.4 | 6.2 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g dry | ND | | | | 40 | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g dry | ND | | | | 30 | |
| F3 PHCs (C16-C34) | ND | 8 | ug/g dry | ND | | | | 30 | |
| F4 PHCs (C34-C50) | ND | 6 | ug/g dry | ND | | | | 30 | |
| Metals | | | | | | | | | |
| Antimony | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Arsenic | 4.0 | 1.0 | ug/g dry | 3.9 | | | 1.9 | 30 | |
| Barium | 65.1 | 1.0 | ug/g dry | 66.4 | | | 2.0 | 30 | |
| Beryllium | 0.7 | 0.5 | ug/g dry | 0.8 | | | 3.3 | 30 | |
| Boron, available | ND | 0.5 | ug/g dry | ND | | | 0.0 | 35 | |
| Boron | 12.6 | 5.0 | ug/g dry | 11.6 | | | 8.2 | 30 | |
| Cadmium | ND | 0.5 | ug/g dry | ND | | | 0.0 | 30 | |
| Chromium (VI) | ND | 0.2 | ug/g dry | ND | | | | 35 | |
| Chromium | 23.4 | 5.0 | ug/g dry | 23.3 | | | 0.4 | 30 | |
| Cobalt | 10.0 | 1.0 | ug/g dry | 10.1 | | | 1.0 | 30 | |
| Copper | 31.2 | 5.0 | ug/g dry | 31.3 | | | 0.2 | 30 | |
| Lead | 10.9 | 1.0 | ug/g dry | 10.8 | | | 0.5 | 30 | |
| Mercury | ND | 0.1 | ug/g dry | ND | | | 0.0 | 30 | |
| Molybdenum | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Nickel | 23.6 | 5.0 | ug/g dry | 24.1 | | | 1.9 | 30 | |
| Selenium | 1.3 | 1.0 | ug/g dry | 1.3 | | | 0.8 | 30 | |
| Silver | ND | 0.3 | ug/g dry | ND | | | 0.0 | 30 | |
| Thallium | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Uranium | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Vanadium | 30.1 | 10.0 | ug/g dry | 30.5 | | | 1.2 | 30 | |
| Zinc | 62.8 | 20.0 | ug/g dry | 62.7 | | | 0.1 | 30 | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/g dry | ND | | | | 40 | |
| Surrogate: Decachlorobiphenyl | 0.174 | | ug/g dry | | 72.2 | 60-140 | | | |
| Physical Characteristics | | | | | | | | | |
| % Solids | 85.8 | 0.1 | % by Wt. | 86.0 | | | 0.2 | 25 | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Acenaphthylene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Anthracene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Benzo [a] anthracene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Benzo [a] pyrene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Benzo [b] fluoranthene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Benzo [g,h,i] perylene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Chrysene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Fluoranthene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Fluorene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| 1-Methylnaphthalene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| 2-Methylnaphthalene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Naphthalene | ND | 0.01 | ug/g dry | ND | | | | 40 | |
| Phenanthrene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Pyrene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Surrogate: 2-Fluorobiphenyl | 1.51 | | ug/g dry | | 88.2 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 2.15 | | ug/g dry | | 126 | 50-140 | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|------------------------------------|--------|-----------------|----------|---------------|------|------------|-----|-----------|-------|
| Volatiles | | | | | | | | | |
| Acetone | ND | 0.50 | ug/g dry | ND | | | | 50 | |
| Benzene | ND | 0.02 | ug/g dry | ND | | | | 50 | |
| Bromodichloromethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Bromoform | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Bromomethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Carbon Tetrachloride | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Chlorobenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Chloroform | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Dibromochloromethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Dichlorodifluoromethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,2-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,3-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,4-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1-Dichloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,2-Dichloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| cis-1,2-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| trans-1,2-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,2-Dichloropropane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| cis-1,3-Dichloropropylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| trans-1,3-Dichloropropylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Ethylbenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Ethylene dibromide (dibromoethane) | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Hexane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 0.50 | ug/g dry | ND | | | | 50 | |
| Methyl Isobutyl Ketone | ND | 0.50 | ug/g dry | ND | | | | 50 | |
| Methyl tert-butyl ether | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Methylene Chloride | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Styrene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1,1,2,2-Tetrachloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Tetrachloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Toluene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1,1-Trichloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1,2-Trichloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Trichloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Trichlorofluoromethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Vinyl chloride | ND | 0.02 | ug/g dry | ND | | | | 50 | |
| m,p-Xylenes | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| o-Xylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Surrogate: 4-Bromofluorobenzene | 9.22 | | ug/g dry | | 102 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 9.29 | | ug/g dry | | 102 | 50-140 | | | |
| Surrogate: Toluene-d8 | 8.82 | | ug/g dry | | 97.3 | 50-140 | | | |
| Benzene | ND | 0.02 | ug/g dry | ND | | | | 50 | |
| Ethylbenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Toluene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| m,p-Xylenes | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| o-Xylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Surrogate: Toluene-d8 | 8.82 | | ug/g dry | | 97.3 | 50-140 | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 182 | 7 | ug/g | | 90.8 | 80-120 | | | |
| F2 PHCs (C10-C16) | 82 | 4 | ug/g | ND | 85.0 | 60-140 | | | |
| F3 PHCs (C16-C34) | 241 | 8 | ug/g | ND | 102 | 60-140 | | | |
| F4 PHCs (C34-C50) | 166 | 6 | ug/g | ND | 110 | 60-140 | | | |
| Metals | | | | | | | | | |
| Antimony | 41.8 | | ug/L | ND | 82.9 | 70-130 | | | |
| Arsenic | 47.1 | | ug/L | 1.6 | 91.1 | 70-130 | | | |
| Barium | 70.1 | | ug/L | 26.6 | 87.0 | 70-130 | | | |
| Beryllium | 49.6 | | ug/L | ND | 98.6 | 70-130 | | | |
| Boron, available | 3.98 | 0.5 | ug/g | ND | 79.5 | 70-122 | | | |
| Boron | 48.0 | | ug/L | ND | 86.7 | 70-130 | | | |
| Cadmium | 43.2 | | ug/L | ND | 86.3 | 70-130 | | | |
| Chromium (VI) | 0.2 | | mg/L | ND | 78.0 | 70-130 | | | |
| Chromium | 52.9 | | ug/L | 9.3 | 87.1 | 70-130 | | | |
| Cobalt | 47.0 | | ug/L | 4.0 | 86.0 | 70-130 | | | |
| Copper | 52.8 | | ug/L | 12.5 | 80.6 | 70-130 | | | |
| Lead | 46.4 | | ug/L | 4.3 | 84.1 | 70-130 | | | |
| Mercury | 1.60 | 0.1 | ug/g | ND | 107 | 70-130 | | | |
| Molybdenum | 45.7 | | ug/L | ND | 90.9 | 70-130 | | | |
| Nickel | 56.0 | | ug/L | 9.6 | 92.7 | 70-130 | | | |
| Selenium | 44.6 | | ug/L | ND | 88.1 | 70-130 | | | |
| Silver | 41.9 | | ug/L | ND | 83.7 | 70-130 | | | |
| Thallium | 41.7 | | ug/L | ND | 83.2 | 70-130 | | | |
| Uranium | 43.4 | | ug/L | ND | 86.4 | 70-130 | | | |
| Vanadium | 60.7 | | ug/L | 12.2 | 96.9 | 70-130 | | | |
| Zinc | 67.2 | | ug/L | 25.1 | 84.3 | 70-130 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.762 | 0.05 | ug/g | ND | 79.0 | 60-140 | | | |
| Surrogate: Decachlorobiphenyl | 0.190 | | ug/g | | 78.7 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 0.267 | 0.02 | ug/g | ND | 125 | 50-140 | | | |
| Acenaphthylene | 0.220 | 0.02 | ug/g | ND | 103 | 50-140 | | | |
| Anthracene | 0.227 | 0.02 | ug/g | ND | 106 | 50-140 | | | |
| Benzo [a] anthracene | 0.225 | 0.02 | ug/g | ND | 105 | 50-140 | | | |
| Benzo [a] pyrene | 0.190 | 0.02 | ug/g | ND | 88.6 | 50-140 | | | |
| Benzo [b] fluoranthene | 0.259 | 0.02 | ug/g | ND | 121 | 50-140 | | | |
| Benzo [g,h,i] perylene | 0.194 | 0.02 | ug/g | ND | 90.8 | 50-140 | | | |
| Benzo [k] fluoranthene | 0.251 | 0.02 | ug/g | ND | 117 | 50-140 | | | |
| Chrysene | 0.217 | 0.02 | ug/g | ND | 102 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 0.182 | 0.02 | ug/g | ND | 85.2 | 50-140 | | | |
| Fluoranthene | 0.236 | 0.02 | ug/g | ND | 110 | 50-140 | | | |
| Fluorene | 0.223 | 0.02 | ug/g | ND | 104 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 0.189 | 0.02 | ug/g | ND | 88.3 | 50-140 | | | |
| 1-Methylnaphthalene | 0.178 | 0.02 | ug/g | ND | 83.4 | 50-140 | | | |
| 2-Methylnaphthalene | 0.206 | 0.02 | ug/g | ND | 96.3 | 50-140 | | | |
| Naphthalene | 0.236 | 0.01 | ug/g | ND | 110 | 50-140 | | | |
| Phenanthrene | 0.231 | 0.02 | ug/g | ND | 108 | 50-140 | | | |
| Pyrene | 0.227 | 0.02 | ug/g | ND | 106 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 12.3 | 0.50 | ug/g | | 123 | 50-140 | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Benzene | 3.84 | 0.02 | ug/g | | 96.0 | 60-130 | | | |
| Bromodichloromethane | 4.09 | 0.05 | ug/g | | 102 | 60-130 | | | |
| Bromoform | 4.56 | 0.05 | ug/g | | 114 | 60-130 | | | |
| Bromomethane | 3.47 | 0.05 | ug/g | | 86.6 | 50-140 | | | |
| Carbon Tetrachloride | 3.87 | 0.05 | ug/g | | 96.7 | 60-130 | | | |
| Chlorobenzene | 3.52 | 0.05 | ug/g | | 88.1 | 60-130 | | | |
| Chloroform | 3.29 | 0.05 | ug/g | | 82.3 | 60-130 | | | |
| Dibromochloromethane | 4.82 | 0.05 | ug/g | | 120 | 60-130 | | | |
| Dichlorodifluoromethane | 5.13 | 0.05 | ug/g | | 128 | 50-140 | | | |
| 1,2-Dichlorobenzene | 2.89 | 0.05 | ug/g | | 72.2 | 60-130 | | | |
| 1,3-Dichlorobenzene | 3.31 | 0.05 | ug/g | | 82.7 | 60-130 | | | |
| 1,4-Dichlorobenzene | 3.16 | 0.05 | ug/g | | 79.0 | 60-130 | | | |
| 1,1-Dichloroethane | 4.94 | 0.05 | ug/g | | 124 | 60-130 | | | |
| 1,2-Dichloroethane | 4.11 | 0.05 | ug/g | | 103 | 60-130 | | | |
| 1,1-Dichloroethylene | 4.71 | 0.05 | ug/g | | 118 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 4.07 | 0.05 | ug/g | | 102 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 4.10 | 0.05 | ug/g | | 102 | 60-130 | | | |
| 1,2-Dichloropropane | 4.23 | 0.05 | ug/g | | 106 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 3.50 | 0.05 | ug/g | | 87.6 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 2.76 | 0.05 | ug/g | | 69.1 | 60-130 | | | |
| Ethylbenzene | 3.74 | 0.05 | ug/g | | 93.6 | 60-130 | | | |
| Ethylene dibromide (dibromoethane) | 4.33 | 0.05 | ug/g | | 108 | 60-130 | | | |
| Hexane | 3.44 | 0.05 | ug/g | | 85.9 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 9.22 | 0.50 | ug/g | | 92.2 | 50-140 | | | |
| Methyl Isobutyl Ketone | 9.70 | 0.50 | ug/g | | 97.0 | 50-140 | | | |
| Methyl tert-butyl ether | 8.21 | 0.05 | ug/g | | 82.1 | 50-140 | | | |
| Methylene Chloride | 3.71 | 0.05 | ug/g | | 92.7 | 60-130 | | | |
| Styrene | 3.47 | 0.05 | ug/g | | 86.8 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 4.80 | 0.05 | ug/g | | 120 | 60-130 | | | |
| 1,1,1,2,2-Tetrachloroethane | 2.53 | 0.05 | ug/g | | 63.3 | 60-130 | | | |
| Tetrachloroethylene | 4.30 | 0.05 | ug/g | | 107 | 60-130 | | | |
| Toluene | 3.65 | 0.05 | ug/g | | 91.2 | 60-130 | | | |
| 1,1,1-Trichloroethane | 3.81 | 0.05 | ug/g | | 95.2 | 60-130 | | | |
| 1,1,2-Trichloroethane | 4.00 | 0.05 | ug/g | | 100 | 60-130 | | | |
| Trichloroethylene | 4.90 | 0.05 | ug/g | | 122 | 60-130 | | | |
| Trichlorofluoromethane | 3.72 | 0.05 | ug/g | | 93.1 | 50-140 | | | |
| Vinyl chloride | 4.47 | 0.02 | ug/g | | 112 | 50-140 | | | |
| m,p-Xylenes | 7.40 | 0.05 | ug/g | | 92.5 | 60-130 | | | |
| o-Xylene | 3.94 | 0.05 | ug/g | | 98.6 | 60-130 | | | |
| Benzene | 3.84 | 0.02 | ug/g | | 96.0 | 60-130 | | | |
| Ethylbenzene | 3.74 | 0.05 | ug/g | | 93.6 | 60-130 | | | |
| Toluene | 3.65 | 0.05 | ug/g | | 91.2 | 60-130 | | | |
| m,p-Xylenes | 7.40 | 0.05 | ug/g | | 92.5 | 60-130 | | | |
| o-Xylene | 3.94 | 0.05 | ug/g | | 98.6 | 60-130 | | | |

Certificate of Analysis
Client: exp Services Inc. (Ottawa)
Client PO:

Report Date: 25-Mar-2019

Order Date: 19-Mar-2019

Project Description: OTT00250193EO

Qualifier Notes:

Sample Qualifiers :

1 : Limited sample volume available limiting accuracy of reported result.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.



| | | |
|---|---|---|
| Client Name: EXP | Project Reference: 07-00250193-EO | Turnaround Time: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input checked="" type="checkbox"/> Regular |
| Contact Name: Patricia | Quote #: 19-211 | |
| Address: 100-2650 Queensview Dr. | PO #: | |
| Telephone: 613-688-1899 | Email Address: patricia.stelmach@exp.com | |

Criteria: O. Reg. 153/04 (As Amended) Table ___ RSC Filing O. Reg. 558/00 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Soil) GW (Ground Water) SW (Surface Water) SS (Storm Sanitary Sewer) P (Paint) A (Air) O (Other) Required Analyses

| Parcel Order Number: 1912284 | | Matrix | Air Volume | # of Containers | Sample Taken | | PICs FI-F4-BTEX | VOCs | PAHs | Metals by ICP | Hg | CMT | B (HWS) | BTEX, FI | PCB | EC/SAR | Sulphur | +avid |
|--|---------|--------|------------|-----------------|--------------|---------|-----------------|------|------|---------------|----|-----|---------|----------|-----|--------|---------|--------|
| Sample ID/Location Name | | | | | Date | Time | | | | | | | | | | | | |
| 1 | NW-55-2 | S | / | 4 | 03.18.19 | 3:00 pm | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2 | TB-0319 | / | / | 1 | 03.19.19 | | | | | | | | | ✓ | | | | 1x vid |
| 3 | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | |

Comments: **TB-0319 is trip blank.** Method of Delivery: **walk**

| | | | |
|---|-------------------------------|--|---------------------------|
| Relinquished By (Sign): | Received by (Driver/Depot): | Received at Lab: SUMERPERN DOUMMI | Verified By: |
| Relinquished By (Print): Scott Lesourd | Date/Time: Mar 19 2019 | Date/Time: Mar 19 2019 05:03 | Date/Time: 3/18/19 |
| Date/Time: 03.19.19 1:35 pm | Temperature: 10.0°C | Temperature: 8.0°C | pH Verified [] By: |

Certificate of Analysis

exp Services Inc. (Ottawa)
100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi - Chaudiere Island
Project: OTT00250193E0
Custody:

Report Date: 1-Apr-2019
Order Date: 26-Mar-2019

Order #: 1913226

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------------|------------------|
| 1913226-01 | SS-5 |
| 1913226-02 | TB-0326 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|---------------------------------|---------------------------------------|-----------------|---------------|
| Boron, available | MOE (HWE), EPA 200.7 - ICP-OES | 29-Mar-19 | 29-Mar-19 |
| Chromium, hexavalent - soil | MOE E3056 - Extraction, colourimetric | 28-Mar-19 | 29-Mar-19 |
| Mercury by CVAA | EPA 7471B - CVAA, digestion | 29-Mar-19 | 1-Apr-19 |
| PCBs, total | SW846 8082A - GC-ECD | 27-Mar-19 | 29-Mar-19 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 28-Mar-19 | 29-Mar-19 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 27-Mar-19 | 28-Mar-19 |
| REG 153: Metals by ICP/MS, soil | EPA 6020 - Digestion - ICP-MS | 29-Mar-19 | 29-Mar-19 |
| REG 153: PAHs by GC-MS | EPA 8270 - GC-MS, extraction | 29-Mar-19 | 1-Apr-19 |
| REG 153: VOCs by P&T GC/MS | EPA 8260 - P&T GC-MS | 28-Mar-19 | 29-Mar-19 |
| Solids, % | Gravimetric, calculation | 29-Mar-19 | 29-Mar-19 |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

| | | | | |
|---------------------|------------------|------------------|---|---|
| Client ID: | SS-5 | TB-0326 | - | - |
| Sample Date: | 03/25/2019 10:00 | 03/26/2019 09:00 | - | - |
| Sample ID: | 1913226-01 | 1913226-02 | - | - |
| MDL/Units | Soil | Soil | - | - |

Physical Characteristics

| | | | | | |
|----------|--------------|------|-----|---|---|
| % Solids | 0.1 % by Wt. | 95.4 | 100 | - | - |
|----------|--------------|------|-----|---|---|

Metals

| | | | | | |
|------------------|---------------|------|---|---|---|
| Antimony | 1.0 ug/g dry | <1.0 | - | - | - |
| Arsenic | 1.0 ug/g dry | 4.1 | - | - | - |
| Barium | 1.0 ug/g dry | 158 | - | - | - |
| Beryllium | 0.5 ug/g dry | <0.5 | - | - | - |
| Boron | 5.0 ug/g dry | 11.3 | - | - | - |
| Boron, available | 0.5 ug/g dry | <0.5 | - | - | - |
| Cadmium | 0.5 ug/g dry | <0.5 | - | - | - |
| Chromium | 5.0 ug/g dry | 12.1 | - | - | - |
| Chromium (VI) | 0.2 ug/g dry | <0.2 | - | - | - |
| Cobalt | 1.0 ug/g dry | 6.5 | - | - | - |
| Copper | 5.0 ug/g dry | 8.0 | - | - | - |
| Lead | 1.0 ug/g dry | 11.9 | - | - | - |
| Mercury | 0.1 ug/g dry | <0.1 | - | - | - |
| Molybdenum | 1.0 ug/g dry | 1.8 | - | - | - |
| Nickel | 5.0 ug/g dry | 13.7 | - | - | - |
| Selenium | 1.0 ug/g dry | <1.0 | - | - | - |
| Silver | 0.3 ug/g dry | <0.3 | - | - | - |
| Thallium | 1.0 ug/g dry | <1.0 | - | - | - |
| Uranium | 1.0 ug/g dry | <1.0 | - | - | - |
| Vanadium | 10.0 ug/g dry | 12.5 | - | - | - |
| Zinc | 20.0 ug/g dry | 24.0 | - | - | - |

Volatiles

| | | | | | |
|-------------------------|---------------|-------|-------|---|---|
| Acetone | 0.50 ug/g dry | <0.50 | <0.50 | - | - |
| Benzene | 0.02 ug/g dry | <0.02 | <0.02 | - | - |
| Bromodichloromethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Bromoform | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Bromomethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Carbon Tetrachloride | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Chlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Chloroform | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Dibromochloromethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Dichlorodifluoromethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,2-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

| | Client ID: | SS-5 | TB-0326 | - | - |
|------------------------------------|---------------|------------------|------------------|---|---|
| | Sample Date: | 03/25/2019 10:00 | 03/26/2019 09:00 | - | - |
| | Sample ID: | 1913226-01 | 1913226-02 | - | - |
| | MDL/Units | Soil | Soil | - | - |
| 1,3-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,4-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1-Dichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,2-Dichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| cis-1,2-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| trans-1,2-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,2-Dichloropropane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| cis-1,3-Dichloropropylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| trans-1,3-Dichloropropylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,3-Dichloropropene, total | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Ethylbenzene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Ethylene dibromide (dibromoethane) | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Hexane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Methyl Ethyl Ketone (2-Butanone) | 0.50 ug/g dry | <0.50 | <0.50 | - | - |
| Methyl Isobutyl Ketone | 0.50 ug/g dry | <0.50 | <0.50 | - | - |
| Methyl tert-butyl ether | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Methylene Chloride | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Styrene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1,1,2-Tetrachloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1,2,2-Tetrachloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Tetrachloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Toluene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1,1-Trichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 1,1,2-Trichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Trichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Trichlorofluoromethane | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Vinyl chloride | 0.02 ug/g dry | <0.02 | <0.02 | - | - |
| m,p-Xylenes | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| o-Xylene | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| Xylenes, total | 0.05 ug/g dry | <0.05 | <0.05 | - | - |
| 4-Bromofluorobenzene | Surrogate | 85.2% | 87.0% | - | - |
| Dibromofluoromethane | Surrogate | 85.3% | 81.1% | - | - |
| Toluene-d8 | Surrogate | 71.8% | 74.2% | - | - |
| Hydrocarbons | | | | | |
| F1 PHCs (C6-C10) | 7 ug/g dry | <7 | <7 | - | - |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

| | Client ID: | SS-5 | TB-0326 | - | - |
|-------------------|--------------|------------------|------------------|---|---|
| | Sample Date: | 03/25/2019 10:00 | 03/26/2019 09:00 | - | - |
| | Sample ID: | 1913226-01 | 1913226-02 | - | - |
| | MDL/Units | Soil | Soil | - | - |
| F2 PHCs (C10-C16) | 4 ug/g dry | <4 | - | - | - |
| F3 PHCs (C16-C34) | 8 ug/g dry | <8 | - | - | - |
| F4 PHCs (C34-C50) | 6 ug/g dry | <6 | - | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|---------------|-------|---|---|---|
| Acenaphthene | 0.02 ug/g dry | <0.02 | - | - | - |
| Acenaphthylene | 0.02 ug/g dry | <0.02 | - | - | - |
| Anthracene | 0.02 ug/g dry | <0.02 | - | - | - |
| Benzo [a] anthracene | 0.02 ug/g dry | 0.02 | - | - | - |
| Benzo [a] pyrene | 0.02 ug/g dry | <0.02 | - | - | - |
| Benzo [b] fluoranthene | 0.02 ug/g dry | 0.03 | - | - | - |
| Benzo [g,h,i] perylene | 0.02 ug/g dry | <0.02 | - | - | - |
| Benzo [k] fluoranthene | 0.02 ug/g dry | <0.02 | - | - | - |
| Chrysene | 0.02 ug/g dry | 0.03 | - | - | - |
| Dibenzo [a,h] anthracene | 0.02 ug/g dry | <0.02 | - | - | - |
| Fluoranthene | 0.02 ug/g dry | 0.05 | - | - | - |
| Fluorene | 0.02 ug/g dry | <0.02 | - | - | - |
| Indeno [1,2,3-cd] pyrene | 0.02 ug/g dry | <0.02 | - | - | - |
| 1-Methylnaphthalene | 0.02 ug/g dry | <0.02 | - | - | - |
| 2-Methylnaphthalene | 0.02 ug/g dry | <0.02 | - | - | - |
| Methylnaphthalene (1&2) | 0.04 ug/g dry | <0.04 | - | - | - |
| Naphthalene | 0.01 ug/g dry | <0.01 | - | - | - |
| Phenanthrene | 0.02 ug/g dry | 0.04 | - | - | - |
| Pyrene | 0.02 ug/g dry | 0.05 | - | - | - |
| 2-Fluorobiphenyl | Surrogate | 83.8% | - | - | - |
| Terphenyl-d14 | Surrogate | 89.9% | - | - | - |

PCBs

| | | | | | |
|--------------------|---------------|-------|---|---|---|
| PCBs, total | 0.05 ug/g dry | <0.05 | - | - | - |
| Decachlorobiphenyl | Surrogate | 76.0% | - | - | - |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g | | | | | | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g | | | | | | |
| F3 PHCs (C16-C34) | ND | 8 | ug/g | | | | | | |
| F4 PHCs (C34-C50) | ND | 6 | ug/g | | | | | | |
| Metals | | | | | | | | | |
| Antimony | ND | 1.0 | ug/g | | | | | | |
| Arsenic | ND | 1.0 | ug/g | | | | | | |
| Barium | ND | 1.0 | ug/g | | | | | | |
| Beryllium | ND | 0.5 | ug/g | | | | | | |
| Boron, available | ND | 0.5 | ug/g | | | | | | |
| Boron | ND | 5.0 | ug/g | | | | | | |
| Cadmium | ND | 0.5 | ug/g | | | | | | |
| Chromium (VI) | ND | 0.2 | ug/g | | | | | | |
| Chromium | ND | 5.0 | ug/g | | | | | | |
| Cobalt | ND | 1.0 | ug/g | | | | | | |
| Copper | ND | 5.0 | ug/g | | | | | | |
| Lead | ND | 1.0 | ug/g | | | | | | |
| Mercury | ND | 0.1 | ug/g | | | | | | |
| Molybdenum | ND | 1.0 | ug/g | | | | | | |
| Nickel | ND | 5.0 | ug/g | | | | | | |
| Selenium | ND | 1.0 | ug/g | | | | | | |
| Silver | ND | 0.3 | ug/g | | | | | | |
| Thallium | ND | 1.0 | ug/g | | | | | | |
| Uranium | ND | 1.0 | ug/g | | | | | | |
| Vanadium | ND | 10.0 | ug/g | | | | | | |
| Zinc | ND | 20.0 | ug/g | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.113 | | ug/g | | 113 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g | | | | | | |
| Acenaphthylene | ND | 0.02 | ug/g | | | | | | |
| Anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] pyrene | ND | 0.02 | ug/g | | | | | | |
| Benzo [b] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.02 | ug/g | | | | | | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Chrysene | ND | 0.02 | ug/g | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g | | | | | | |
| Fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Fluorene | ND | 0.02 | ug/g | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g | | | | | | |
| 1-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| 2-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.04 | ug/g | | | | | | |
| Naphthalene | ND | 0.01 | ug/g | | | | | | |
| Phenanthrene | ND | 0.02 | ug/g | | | | | | |
| Pyrene | ND | 0.02 | ug/g | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 1.08 | | ug/g | | 80.9 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.08 | | ug/g | | 81.1 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 0.50 | ug/g | | | | | | |
| Benzene | ND | 0.02 | ug/g | | | | | | |
| Bromodichloromethane | ND | 0.05 | ug/g | | | | | | |
| Bromoform | ND | 0.05 | ug/g | | | | | | |
| Bromomethane | ND | 0.05 | ug/g | | | | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Carbon Tetrachloride | ND | 0.05 | ug/g | | | | | | |
| Chlorobenzene | ND | 0.05 | ug/g | | | | | | |
| Chloroform | ND | 0.05 | ug/g | | | | | | |
| Dibromochloromethane | ND | 0.05 | ug/g | | | | | | |
| Dichlorodifluoromethane | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,1-Dichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichloropropane | ND | 0.05 | ug/g | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.05 | ug/g | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.05 | ug/g | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.05 | ug/g | | | | | | |
| Ethylbenzene | ND | 0.05 | ug/g | | | | | | |
| Ethylene dibromide (dibromoethane) | ND | 0.05 | ug/g | | | | | | |
| Hexane | ND | 0.05 | ug/g | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 0.50 | ug/g | | | | | | |
| Methyl Isobutyl Ketone | ND | 0.50 | ug/g | | | | | | |
| Methyl tert-butyl ether | ND | 0.05 | ug/g | | | | | | |
| Methylene Chloride | ND | 0.05 | ug/g | | | | | | |
| Styrene | ND | 0.05 | ug/g | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.05 | ug/g | | | | | | |
| Tetrachloroethylene | ND | 0.05 | ug/g | | | | | | |
| Toluene | ND | 0.05 | ug/g | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.05 | ug/g | | | | | | |
| Trichloroethylene | ND | 0.05 | ug/g | | | | | | |
| Trichlorofluoromethane | ND | 0.05 | ug/g | | | | | | |
| Vinyl chloride | ND | 0.02 | ug/g | | | | | | |
| m,p-Xylenes | ND | 0.05 | ug/g | | | | | | |
| o-Xylene | ND | 0.05 | ug/g | | | | | | |
| Xylenes, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 2.93 | | ug/g | | 91.7 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 3.17 | | ug/g | | 99.1 | 50-140 | | | |
| Surrogate: Toluene-d8 | 2.62 | | ug/g | | 81.9 | 50-140 | | | |

Certificate of Analysis
Client: **exp Services Inc. (Ottawa)**
Client PO: **Zibi - Chaudiere Island**

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: **OTT00250193E0**

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g dry | ND | | | | 40 | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g dry | ND | | | | 30 | |
| F3 PHCs (C16-C34) | 55 | 8 | ug/g dry | 65 | | | 17.4 | 30 | |
| F4 PHCs (C34-C50) | 123 | 6 | ug/g dry | 166 | | | 29.9 | 30 | |
| Metals | | | | | | | | | |
| Antimony | 1.1 | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Arsenic | 4.1 | 1.0 | ug/g dry | 4.1 | | | 0.6 | 30 | |
| Barium | 147 | 1.0 | ug/g dry | 158 | | | 7.3 | 30 | |
| Beryllium | 0.5 | 0.5 | ug/g dry | ND | | | 0.0 | 30 | |
| Boron, available | ND | 0.5 | ug/g dry | ND | | | 0.0 | 35 | |
| Boron | 13.4 | 5.0 | ug/g dry | 11.3 | | | 17.0 | 30 | |
| Cadmium | ND | 0.5 | ug/g dry | ND | | | 0.0 | 30 | |
| Chromium (VI) | ND | 0.2 | ug/g dry | ND | | | | 35 | |
| Chromium | 14.4 | 5.0 | ug/g dry | 12.1 | | | 17.5 | 30 | |
| Cobalt | 6.4 | 1.0 | ug/g dry | 6.5 | | | 2.4 | 30 | |
| Copper | 7.8 | 5.0 | ug/g dry | 8.0 | | | 2.4 | 30 | |
| Lead | 11.5 | 1.0 | ug/g dry | 11.9 | | | 3.0 | 30 | |
| Mercury | ND | 0.1 | ug/g dry | ND | | | 0.0 | 30 | |
| Molybdenum | 2.0 | 1.0 | ug/g dry | 1.8 | | | 12.3 | 30 | |
| Nickel | 14.1 | 5.0 | ug/g dry | 13.7 | | | 3.2 | 30 | |
| Selenium | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Silver | ND | 0.3 | ug/g dry | ND | | | 0.0 | 30 | |
| Thallium | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Uranium | ND | 1.0 | ug/g dry | ND | | | 0.0 | 30 | |
| Vanadium | 13.4 | 10.0 | ug/g dry | 12.5 | | | 7.4 | 30 | |
| Zinc | 23.5 | 20.0 | ug/g dry | 24.0 | | | 2.1 | 30 | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/g dry | ND | | | | 40 | |
| Surrogate: Decachlorobiphenyl | 0.141 | | ug/g dry | | 118 | 60-140 | | | |
| Physical Characteristics | | | | | | | | | |
| % Solids | 95.1 | 0.1 | % by Wt. | 95.4 | | | 0.4 | 25 | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g dry | ND | | | | 40 | |
| Acenaphthylene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Anthracene | 0.020 | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Benzo [a] anthracene | 0.035 | 0.02 | ug/g dry | 0.024 | | | 37.9 | 40 | |
| Benzo [a] pyrene | 0.028 | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Benzo [b] fluoranthene | 0.040 | 0.02 | ug/g dry | 0.030 | | | 29.5 | 40 | |
| Benzo [g,h,i] perylene | 0.021 | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Chrysene | 0.040 | 0.02 | ug/g dry | 0.027 | | | 39.7 | 40 | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Fluoranthene | 0.068 | 0.02 | ug/g dry | 0.049 | | | 33.0 | 40 | |
| Fluorene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| 1-Methylnaphthalene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| 2-Methylnaphthalene | ND | 0.02 | ug/g dry | ND | | | 0.0 | 40 | |
| Naphthalene | ND | 0.01 | ug/g dry | ND | | | 0.0 | 40 | |
| Phenanthrene | 0.050 | 0.02 | ug/g dry | 0.041 | | | 20.4 | 40 | |
| Pyrene | 0.059 | 0.02 | ug/g dry | 0.048 | | | 19.6 | 40 | |
| Surrogate: 2-Fluorobiphenyl | 1.25 | | ug/g dry | | 89.2 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.33 | | ug/g dry | | 95.1 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 0.50 | ug/g dry | ND | | | | 50 | |
| Benzene | ND | 0.02 | ug/g dry | ND | | | | 50 | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|------------------------------------|--------|-----------------|----------|---------------|------|------------|-----|-----------|-------|
| Bromodichloromethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Bromoform | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Bromomethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Carbon Tetrachloride | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Chlorobenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Chloroform | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Dibromochloromethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Dichlorodifluoromethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,2-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,3-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,4-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1-Dichloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,2-Dichloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| cis-1,2-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| trans-1,2-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,2-Dichloropropane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| cis-1,3-Dichloropropylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| trans-1,3-Dichloropropylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Ethylbenzene | ND | 0.05 | ug/g dry | ND | | | 0.0 | 50 | |
| Ethylene dibromide (dibromoethane) | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Hexane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 0.50 | ug/g dry | ND | | | | 50 | |
| Methyl Isobutyl Ketone | ND | 0.50 | ug/g dry | ND | | | | 50 | |
| Methyl tert-butyl ether | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Methylene Chloride | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Styrene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Tetrachloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Toluene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1,1-Trichloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| 1,1,2-Trichloroethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Trichloroethylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Trichlorofluoromethane | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Vinyl chloride | ND | 0.02 | ug/g dry | ND | | | | 50 | |
| m,p-Xylenes | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| o-Xylene | ND | 0.05 | ug/g dry | ND | | | | 50 | |
| Surrogate: 4-Bromofluorobenzene | 2.85 | | ug/g dry | | 80.0 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 3.23 | | ug/g dry | | 90.7 | 50-140 | | | |
| Surrogate: Toluene-d8 | 2.73 | | ug/g dry | | 76.8 | 50-140 | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 182 | 7 | ug/g | | 91.0 | 80-120 | | | |
| F2 PHCs (C10-C16) | 81 | 4 | ug/g | ND | 88.8 | 60-140 | | | |
| F3 PHCs (C16-C34) | 303 | 8 | ug/g | 65 | 106 | 60-140 | | | |
| F4 PHCs (C34-C50) | 338 | 6 | ug/g | 166 | 122 | 60-140 | | | |
| Metals | | | | | | | | | |
| Antimony | 46.8 | | ug/L | | 93.6 | 70-130 | | | |
| Arsenic | 50.2 | | ug/L | | 100 | 70-130 | | | |
| Barium | 49.9 | | ug/L | | 99.9 | 70-130 | | | |
| Beryllium | 55.1 | | ug/L | | 110 | 70-130 | | | |
| Boron, available | 3.55 | 0.5 | ug/g | ND | 71.0 | 70-122 | | | |
| Boron | 53.3 | | ug/L | | 107 | 70-130 | | | |
| Cadmium | 50.5 | | ug/L | | 101 | 70-130 | | | |
| Chromium (VI) | 5.1 | 0.2 | ug/g | ND | 88.5 | 70-130 | | | |
| Chromium | 54.5 | | ug/L | | 109 | 70-130 | | | |
| Cobalt | 48.5 | | ug/L | | 97.0 | 70-130 | | | |
| Copper | 53.4 | | ug/L | | 107 | 70-130 | | | |
| Lead | 44.4 | | ug/L | | 88.7 | 70-130 | | | |
| Mercury | 1.40 | 0.1 | ug/g | ND | 93.4 | 70-130 | | | |
| Molybdenum | 49.9 | | ug/L | | 99.8 | 70-130 | | | |
| Nickel | 52.4 | | ug/L | | 105 | 70-130 | | | |
| Selenium | 49.8 | | ug/L | | 99.5 | 70-130 | | | |
| Silver | 47.5 | | ug/L | | 95.0 | 70-130 | | | |
| Thallium | 46.8 | | ug/L | | 93.5 | 70-130 | | | |
| Uranium | 50.0 | | ug/L | | 100 | 70-130 | | | |
| Vanadium | 53.4 | | ug/L | | 107 | 70-130 | | | |
| Zinc | 50.9 | | ug/L | | 102 | 70-130 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.511 | 0.05 | ug/g | ND | 107 | 60-140 | | | |
| Surrogate: Decachlorobiphenyl | 0.142 | | ug/g | | 119 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 0.157 | 0.02 | ug/g | ND | 89.6 | 50-140 | | | |
| Acenaphthylene | 0.152 | 0.02 | ug/g | ND | 86.8 | 50-140 | | | |
| Anthracene | 0.209 | 0.02 | ug/g | ND | 119 | 50-140 | | | |
| Benzo [a] anthracene | 0.212 | 0.02 | ug/g | 0.024 | 108 | 50-140 | | | |
| Benzo [a] pyrene | 0.167 | 0.02 | ug/g | ND | 95.7 | 50-140 | | | |
| Benzo [b] fluoranthene | 0.272 | 0.02 | ug/g | 0.030 | 139 | 50-140 | | | |
| Benzo [g,h,i] perylene | 0.157 | 0.02 | ug/g | ND | 89.7 | 50-140 | | | |
| Benzo [k] fluoranthene | 0.213 | 0.02 | ug/g | ND | 122 | 50-140 | | | |
| Chrysene | 0.252 | 0.02 | ug/g | 0.027 | 129 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 0.139 | 0.02 | ug/g | ND | 79.4 | 50-140 | | | |
| Fluoranthene | 0.264 | 0.02 | ug/g | 0.049 | 123 | 50-140 | | | |
| Fluorene | 0.166 | 0.02 | ug/g | ND | 95.3 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 0.158 | 0.02 | ug/g | ND | 90.5 | 50-140 | | | |
| 1-Methylnaphthalene | 0.190 | 0.02 | ug/g | ND | 109 | 50-140 | | | |
| 2-Methylnaphthalene | 0.211 | 0.02 | ug/g | ND | 121 | 50-140 | | | |
| Naphthalene | 0.197 | 0.01 | ug/g | ND | 113 | 50-140 | | | |
| Phenanthrene | 0.273 | 0.02 | ug/g | 0.041 | 133 | 50-140 | | | |
| Pyrene | 0.256 | 0.02 | ug/g | 0.048 | 119 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 6.45 | 0.50 | ug/g | | 64.5 | 50-140 | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Benzene | 3.22 | 0.02 | ug/g | | 80.6 | 60-130 | | | |
| Bromodichloromethane | 2.78 | 0.05 | ug/g | | 69.5 | 60-130 | | | |
| Bromoform | 2.70 | 0.05 | ug/g | | 67.6 | 60-130 | | | |
| Bromomethane | 3.16 | 0.05 | ug/g | | 79.1 | 50-140 | | | |
| Carbon Tetrachloride | 2.73 | 0.05 | ug/g | | 68.1 | 60-130 | | | |
| Chlorobenzene | 3.39 | 0.05 | ug/g | | 84.7 | 60-130 | | | |
| Chloroform | 3.05 | 0.05 | ug/g | | 76.3 | 60-130 | | | |
| Dibromochloromethane | 3.02 | 0.05 | ug/g | | 75.4 | 60-130 | | | |
| Dichlorodifluoromethane | 2.85 | 0.05 | ug/g | | 71.2 | 50-140 | | | |
| 1,2-Dichlorobenzene | 3.99 | 0.05 | ug/g | | 99.7 | 60-130 | | | |
| 1,3-Dichlorobenzene | 4.05 | 0.05 | ug/g | | 101 | 60-130 | | | |
| 1,4-Dichlorobenzene | 3.28 | 0.05 | ug/g | | 82.1 | 60-130 | | | |
| 1,1-Dichloroethane | 3.34 | 0.05 | ug/g | | 83.4 | 60-130 | | | |
| 1,2-Dichloroethane | 3.00 | 0.05 | ug/g | | 75.0 | 60-130 | | | |
| 1,1-Dichloroethylene | 3.44 | 0.05 | ug/g | | 86.1 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 2.97 | 0.05 | ug/g | | 74.4 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 2.75 | 0.05 | ug/g | | 68.7 | 60-130 | | | |
| 1,2-Dichloropropane | 3.22 | 0.05 | ug/g | | 80.5 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 2.75 | 0.05 | ug/g | | 68.8 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 2.83 | 0.05 | ug/g | | 70.7 | 60-130 | | | |
| Ethylbenzene | 3.22 | 0.05 | ug/g | | 80.4 | 60-130 | | | |
| Ethylene dibromide (dibromoethane) | 4.25 | 0.05 | ug/g | | 106 | 60-130 | | | |
| Hexane | 2.88 | 0.05 | ug/g | | 71.9 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 6.89 | 0.50 | ug/g | | 68.9 | 50-140 | | | |
| Methyl Isobutyl Ketone | 8.36 | 0.50 | ug/g | | 83.6 | 50-140 | | | |
| Methyl tert-butyl ether | 6.94 | 0.05 | ug/g | | 69.4 | 50-140 | | | |
| Methylene Chloride | 3.08 | 0.05 | ug/g | | 76.9 | 60-130 | | | |
| Styrene | 3.88 | 0.05 | ug/g | | 97.1 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 3.16 | 0.05 | ug/g | | 79.1 | 60-130 | | | |
| 1,1,1,2,2-Tetrachloroethane | 3.50 | 0.05 | ug/g | | 87.4 | 60-130 | | | |
| Tetrachloroethylene | 4.07 | 0.05 | ug/g | | 102 | 60-130 | | | |
| Toluene | 3.19 | 0.05 | ug/g | | 79.8 | 60-130 | | | |
| 1,1,1-Trichloroethane | 2.86 | 0.05 | ug/g | | 71.5 | 60-130 | | | |
| 1,1,2-Trichloroethane | 3.58 | 0.05 | ug/g | | 89.5 | 60-130 | | | |
| Trichloroethylene | 3.56 | 0.05 | ug/g | | 89.0 | 60-130 | | | |
| Trichlorofluoromethane | 2.71 | 0.05 | ug/g | | 67.8 | 50-140 | | | |
| Vinyl chloride | 2.83 | 0.02 | ug/g | | 70.7 | 50-140 | | | |
| m,p-Xylenes | 8.22 | 0.05 | ug/g | | 103 | 60-130 | | | |
| o-Xylene | 3.38 | 0.05 | ug/g | | 84.6 | 60-130 | | | |

Certificate of Analysis
Client: exp Services Inc. (Ottawa)
Client PO: Zibi - Chaudiere Island

Report Date: 01-Apr-2019

Order Date: 26-Mar-2019

Project Description: OTT00250193E0

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.



RELIABLE.

Head Office
300-2319 St. Laurent Blvd.
Ottawa, Ontario K1G 4J8
1-800-743-1947
paracel@paracellabs.com

Chain of Custody
(Lab Use Only)

Page 1 of 1

| | | |
|---|---|--|
| Client Name: EXP Services Inc. | Project Reference: Zibi - Chaudiere Island | Turnaround Time: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input checked="" type="checkbox"/> Regular Date Required: _____ |
| Contact Name: Patricia Stelmack | Quote #: 19-211 | |
| Address: 100-2650 Queensview Drive Ottawa, ON, K2B 8H6 | PO #: OTT-00250193-E0 Email Address: Patricia.Stelmack@exp.com | |
| Telephone: 613-688-1899 | | |

Criteria: O. Reg. 153/04 (As Amended) Table 7 RSC Filing O. Reg. 558/00 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other) Required Analyses

| Parcel Order Number: | Matrix | Air Volume | # of Containers | Sample Taken | | PHCs F1-F4+BTEX | VOCs | PAHs | Metals by ICP | Hg | CrVI | B (HWS) | VOC, PHC F1-F4 | PCB | EC/SAR | pH | VOC, PHC F1 | | |
|----------------------|---------|------------|-----------------|--------------|-------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| | | | | Date | Time | | | | | | | | | | | | | | |
| 1 | SS-S | Soil | 4 | 03.25.19 | 10:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | TB-0326 | S | 1 | 03.26.19 | 9:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used.
TB-0326 is a trip blank.

Method of Delivery:
Paracel

| | | | |
|--|--|-------------------------------------|---------------------------------|
| Relinquished By (Sign): <i>[Signature]</i> | Received by Driver/Depot: <i>[Signature]</i> | Received at Lab: <i>[Signature]</i> | Verified By: <i>[Signature]</i> |
| Relinquished By (Print): Scott Lessard | Date/Time: 26/03/19 11:53 | Date/Time: 26/03/19 | Date/Time: 3/26/19 14:15 |
| Date/Time: 03.26.19 9:00 am | Temperature: _____ °C AH | Temperature: 18 °C | pH Verified [] By: _____ |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi Albert and Chaudière Island
Project: OTT00250193P0
Custody:

Report Date: 23-Mar-2021
Order Date: 16-Mar-2021

Order #: 2112349

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|---------------|
| 2112349-01 | BH/MW21-01-01 |
| 2112349-02 | BH/MW21-02-01 |
| 2112349-03 | BH/MW21-03-01 |
| 2112349-04 | D206 |
| 2112349-05 | BH/MW21-03-02 |
| 2112349-06 | BH/MW21-04-01 |
| 2112349-07 | BH/MW21-04-02 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|---------------------------------|--|-----------------|---------------|
| Chromium, hexavalent - soil | MOE E3056 - Extraction, colourimetric | 17-Mar-21 | 19-Mar-21 |
| Cyanide, free | MOE E3015 - Auto Colour, water extraction | 17-Mar-21 | 19-Mar-21 |
| Mercury by CVAA | EPA 7471B - CVAA, digestion | 23-Mar-21 | 23-Mar-21 |
| PCBs, total | SW846 8082A - GC-ECD | 17-Mar-21 | 18-Mar-21 |
| pH, soil | EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext. | 19-Mar-21 | 19-Mar-21 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 18-Mar-21 | 19-Mar-21 |
| PHC F4G (gravimetric) | CWS Tier 1 - Extraction Gravimetric | 22-Mar-21 | 22-Mar-21 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 17-Mar-21 | 19-Mar-21 |
| REG 153: Metals by ICP/MS, soil | EPA 6020 - Digestion - ICP-MS | 22-Mar-21 | 22-Mar-21 |
| REG 153: PAHs by GC-MS | EPA 8270 - GC-MS, extraction | 17-Mar-21 | 22-Mar-21 |
| REG 153: VOCs by P&T GC/MS | EPA 8260 - P&T GC-MS | 18-Mar-21 | 18-Mar-21 |
| Solids, % | Gravimetric, calculation | 18-Mar-21 | 18-Mar-21 |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|-----------------|-----------------|-----------------|
| Client ID: | BH/MW21-01-01 | BH/MW21-02-01 | BH/MW21-03-01 | D206 |
| Sample Date: | 15-Mar-21 08:30 | 15-Mar-21 09:15 | 15-Mar-21 09:30 | 15-Mar-21 09:30 |
| Sample ID: | 2112349-01 | 2112349-02 | 2112349-03 | 2112349-04 |
| MDL/Units | Soil | Soil | Soil | Soil |

Physical Characteristics

| | | | | | |
|----------|--------------|------|------|------|------|
| % Solids | 0.1 % by Wt. | 74.8 | 85.1 | 87.5 | 84.9 |
|----------|--------------|------|------|------|------|

General Inorganics

| | | | | | |
|---------------|---------------|-------|-------|-------|-------|
| Cyanide, free | 0.03 ug/g dry | <0.03 | <0.03 | <0.03 | <0.03 |
|---------------|---------------|-------|-------|-------|-------|

Metals

| | | | | | |
|---------------|---------------|------|-------|------|------|
| Antimony | 1.0 ug/g dry | 3.8 | <1.0 | <1.0 | <1.0 |
| Arsenic | 1.0 ug/g dry | 134 | 4.1 | 2.9 | 2.6 |
| Barium | 1.0 ug/g dry | 420 | 137 | 144 | 136 |
| Beryllium | 0.5 ug/g dry | 1.1 | <0.5 | <0.5 | <0.5 |
| Boron | 5.0 ug/g dry | 16.7 | 9.2 | 10.9 | 10.4 |
| Cadmium | 0.5 ug/g dry | 0.8 | <0.5 | <0.5 | <0.5 |
| Chromium | 5.0 ug/g dry | 26.2 | 11.1 | 15.4 | 13.3 |
| Chromium (VI) | 0.2 ug/g dry | <0.2 | <0.2 | <0.2 | <0.2 |
| Cobalt | 1.0 ug/g dry | 10.0 | 3.6 | 3.2 | 3.2 |
| Copper | 5.0 ug/g dry | 121 | 8.0 | 18.8 | 17.8 |
| Lead | 1.0 ug/g dry | 218 | 12.5 | 18.8 | 17.9 |
| Mercury | 0.1 ug/g dry | 0.6 | <0.1 | 0.1 | 0.1 |
| Molybdenum | 1.0 ug/g dry | 13.5 | 1.9 | 1.5 | <1.0 |
| Nickel | 5.0 ug/g dry | 37.4 | 9.5 | 14.1 | 10.0 |
| Selenium | 1.0 ug/g dry | 2.6 | <1.0 | <1.0 | <1.0 |
| Silver | 0.3 ug/g dry | 0.3 | <0.3 | <0.3 | <0.3 |
| Thallium | 1.0 ug/g dry | 1.7 | <1.0 | <1.0 | <1.0 |
| Uranium | 1.0 ug/g dry | <1.0 | <1.0 | <1.0 | <1.0 |
| Vanadium | 10.0 ug/g dry | 29.8 | <10.0 | 11.6 | 11.4 |
| Zinc | 20.0 ug/g dry | 183 | 25.3 | 37.7 | 34.8 |

Volatiles

| | | | | | |
|-------------------------|---------------|-------|-------|-------|-------|
| Acetone | 0.50 ug/g dry | <0.50 | <0.50 | <0.50 | <0.50 |
| Benzene | 0.02 ug/g dry | 0.78 | <0.02 | <0.02 | <0.02 |
| Bromodichloromethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Bromoform | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Bromomethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Carbon Tetrachloride | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Chlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Chloroform | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Dibromochloromethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Dichlorodifluoromethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: Sample Date: Sample ID: | BH/MW21-01-01 15-Mar-21 08:30 2112349-01 | BH/MW21-02-01 15-Mar-21 09:15 2112349-02 | BH/MW21-03-01 15-Mar-21 09:30 2112349-03 | D206 15-Mar-21 09:30 2112349-04 |
|--|--|--|--|--|---------------------------------------|
| | MDL/Units | Soil | Soil | Soil | Soil |
| 1,2-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,3-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,4-Dichlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,1-Dichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,2-Dichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,1-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| cis-1,2-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| trans-1,2-Dichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,2-Dichloropropane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| cis-1,3-Dichloropropylene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| trans-1,3-Dichloropropylene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,3-Dichloropropene, total | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Ethylbenzene | 0.05 ug/g dry | 0.11 | <0.05 | <0.05 | <0.05 |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Hexane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Methyl Ethyl Ketone (2-Butanone) | 0.50 ug/g dry | <0.50 | <0.50 | <0.50 | <0.50 |
| Methyl Isobutyl Ketone | 0.50 ug/g dry | <0.50 | <0.50 | <0.50 | <0.50 |
| Methyl tert-butyl ether | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Methylene Chloride | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Styrene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,1,1,2-Tetrachloroethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,1,2,2-Tetrachloroethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Tetrachloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Toluene | 0.05 ug/g dry | 0.93 | <0.05 | <0.05 | <0.05 |
| 1,1,1-Trichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| 1,1,2-Trichloroethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Trichloroethylene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Trichlorofluoromethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | <0.05 |
| Vinyl chloride | 0.02 ug/g dry | <0.02 | <0.02 | <0.02 | <0.02 |
| m,p-Xylenes | 0.05 ug/g dry | 0.57 | <0.05 | <0.05 | <0.05 |
| o-Xylene | 0.05 ug/g dry | 0.21 | <0.05 | <0.05 | <0.05 |
| Xylenes, total | 0.05 ug/g dry | 0.79 | <0.05 | <0.05 | <0.05 |
| 4-Bromofluorobenzene | Surrogate | 114% | 111% | 118% | 105% |
| Dibromofluoromethane | Surrogate | 128% | 112% | 129% | 128% |
| Toluene-d8 | Surrogate | 89.2% | 91.3% | 91.7% | 91.7% |

Hydrocarbons

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: | BH/MW21-01-01 | BH/MW21-02-01 | BH/MW21-03-01 | D206 |
|------------------------|--------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date: | 15-Mar-21 08:30 | 15-Mar-21 09:15 | 15-Mar-21 09:30 | 15-Mar-21 09:30 |
| | Sample ID: | 2112349-01 | 2112349-02 | 2112349-03 | 2112349-04 |
| | MDL/Units | Soil | Soil | Soil | Soil |
| F1 PHCs (C6-C10) | 7 ug/g dry | <7 | <7 | <7 | <7 |
| F2 PHCs (C10-C16) | 4 ug/g dry | <4 | <4 | <4 | <4 |
| F3 PHCs (C16-C34) | 8 ug/g dry | 623 | 52 | 46 | 56 |
| F4 PHCs (C34-C50) | 6 ug/g dry | 779 [1] | 36 | 28 | 34 |
| F4G PHCs (gravimetric) | 50 ug/g dry | 1370 | - | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|---------------|------|-------|-------|-------|
| Acenaphthene | 0.02 ug/g dry | 0.10 | <0.02 | 0.11 | 0.21 |
| Acenaphthylene | 0.02 ug/g dry | 0.09 | <0.02 | 0.07 | 0.12 |
| Anthracene | 0.02 ug/g dry | 0.21 | <0.02 | 0.47 | 0.83 |
| Benzo [a] anthracene | 0.02 ug/g dry | 0.72 | 0.03 | 1.02 | 1.35 |
| Benzo [a] pyrene | 0.02 ug/g dry | 0.42 | 0.04 | 0.88 | 1.16 |
| Benzo [b] fluoranthene | 0.02 ug/g dry | 0.65 | 0.05 | 0.82 | 1.31 |
| Benzo [g,h,i] perylene | 0.02 ug/g dry | 0.33 | 0.03 | 0.48 | 0.62 |
| Benzo [k] fluoranthene | 0.02 ug/g dry | 0.31 | 0.02 | 0.45 | 0.74 |
| Chrysene | 0.02 ug/g dry | 0.49 | 0.04 | 0.83 | 1.28 |
| Dibenzo [a,h] anthracene | 0.02 ug/g dry | 0.08 | <0.02 | 0.13 | 0.19 |
| Fluoranthene | 0.02 ug/g dry | 0.74 | 0.06 | 1.88 | 3.25 |
| Fluorene | 0.02 ug/g dry | 0.13 | <0.02 | 0.19 | 0.30 |
| Indeno [1,2,3-cd] pyrene | 0.02 ug/g dry | 0.25 | 0.02 | 0.47 | 0.64 |
| 1-Methylnaphthalene | 0.02 ug/g dry | 2.72 | 0.06 | 0.06 | 0.14 |
| 2-Methylnaphthalene | 0.02 ug/g dry | 4.34 | 0.11 | 0.13 | 0.20 |
| Methylnaphthalene (1&2) | 0.04 ug/g dry | 7.05 | 0.17 | 0.19 | 0.34 |
| Naphthalene | 0.01 ug/g dry | 1.94 | 0.05 | 0.21 | 0.33 |
| Phenanthrene | 0.02 ug/g dry | 1.19 | 0.06 | 1.75 | 2.78 |
| Pyrene | 0.02 ug/g dry | 0.86 | 0.05 | 1.50 | 2.53 |
| 2-Fluorobiphenyl | Surrogate | 118% | 123% | 64.3% | 78.5% |
| Terphenyl-d14 | Surrogate | 129% | 98.3% | 71.3% | 86.8% |

PCBs

| | | | | | |
|--------------------|---------------|-------|-------|-------|------|
| PCBs, total | 0.05 ug/g dry | <0.05 | <0.05 | 0.16 | 0.14 |
| Decachlorobiphenyl | Surrogate | 133% | 95.2% | 95.9% | 104% |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|-----------------|-----------------|---|
| Client ID: | BH/MW21-03-02 | BH/MW21-04-01 | BH/MW21-04-02 | - |
| Sample Date: | 15-Mar-21 09:45 | 15-Mar-21 10:00 | 15-Mar-21 10:15 | - |
| Sample ID: | 2112349-05 | 2112349-06 | 2112349-07 | - |
| MDL/Units | Soil | Soil | Soil | - |

Physical Characteristics

| | | | | | |
|----------|--------------|------|------|------|---|
| % Solids | 0.1 % by Wt. | 84.5 | 88.5 | 70.4 | - |
|----------|--------------|------|------|------|---|

General Inorganics

| | | | | | |
|---------------|---------------|-------|-------|-------|---|
| Cyanide, free | 0.03 ug/g dry | <0.03 | <0.03 | <0.03 | - |
| pH | 0.05 pH Units | - | 8.20 | 7.58 | - |

Metals

| | | | | | |
|---------------|---------------|-------|------|------|---|
| Antimony | 1.0 ug/g dry | <1.0 | <1.0 | 1.3 | - |
| Arsenic | 1.0 ug/g dry | 3.2 | 2.7 | 21.6 | - |
| Barium | 1.0 ug/g dry | 198 | 211 | 161 | - |
| Beryllium | 0.5 ug/g dry | 0.6 | <0.5 | 0.8 | - |
| Boron | 5.0 ug/g dry | 17.8 | 13.4 | 16.8 | - |
| Cadmium | 0.5 ug/g dry | <0.5 | <0.5 | <0.5 | - |
| Chromium | 5.0 ug/g dry | 17.3 | 13.6 | 26.7 | - |
| Chromium (VI) | 0.2 ug/g dry | <0.2 | <0.2 | <0.2 | - |
| Cobalt | 1.0 ug/g dry | 5.7 | 5.4 | 8.7 | - |
| Copper | 5.0 ug/g dry | 10.0 | 20.8 | 55.8 | - |
| Lead | 1.0 ug/g dry | 15.7 | 26.4 | 2880 | - |
| Mercury | 0.1 ug/g dry | <0.1 | <0.1 | 0.3 | - |
| Molybdenum | 1.0 ug/g dry | <1.0 | <1.0 | 3.6 | - |
| Nickel | 5.0 ug/g dry | 14.6 | 11.4 | 24.4 | - |
| Selenium | 1.0 ug/g dry | <1.0 | <1.0 | 1.7 | - |
| Silver | 0.3 ug/g dry | <0.3 | <0.3 | <0.3 | - |
| Thallium | 1.0 ug/g dry | <1.0 | <1.0 | <1.0 | - |
| Uranium | 1.0 ug/g dry | <1.0 | <1.0 | <1.0 | - |
| Vanadium | 10.0 ug/g dry | 10.4 | 19.8 | 22.5 | - |
| Zinc | 20.0 ug/g dry | <20.0 | 39.9 | 148 | - |

Volatiles

| | | | | | |
|----------------------|---------------|-------|-------|-------|---|
| Acetone | 0.50 ug/g dry | <0.50 | <0.50 | <0.50 | - |
| Benzene | 0.02 ug/g dry | <0.02 | <0.02 | <0.02 | - |
| Bromodichloromethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | - |
| Bromoform | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | - |
| Bromomethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | - |
| Carbon Tetrachloride | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | - |
| Chlorobenzene | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | - |
| Chloroform | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | - |
| Dibromochloromethane | 0.05 ug/g dry | <0.05 | <0.05 | <0.05 | - |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

| | MDL/Units | Client ID: Sample Date: Sample ID: | BH/MW21-03-02 15-Mar-21 09:45 2112349-05 Soil | BH/MW21-04-01 15-Mar-21 10:00 2112349-06 Soil | BH/MW21-04-02 15-Mar-21 10:15 2112349-07 Soil | - - - - |
|--------------------------------------|---------------|--|--|--|--|------------------|
| Dichlorodifluoromethane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,2-Dichlorobenzene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,3-Dichlorobenzene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,4-Dichlorobenzene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,1-Dichloroethane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,2-Dichloroethane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,1-Dichloroethylene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| cis-1,2-Dichloroethylene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| trans-1,2-Dichloroethylene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,2-Dichloropropane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| cis-1,3-Dichloropropylene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| trans-1,3-Dichloropropylene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,3-Dichloropropene, total | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Ethylbenzene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Ethylene dibromide (dibromoethane, 1 | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Hexane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Methyl Ethyl Ketone (2-Butanone) | 0.50 ug/g dry | | <0.50 | <0.50 | <0.50 | - |
| Methyl Isobutyl Ketone | 0.50 ug/g dry | | <0.50 | <0.50 | <0.50 | - |
| Methyl tert-butyl ether | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Methylene Chloride | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Styrene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,1,1,2-Tetrachloroethane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,1,1,2,2-Tetrachloroethane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Tetrachloroethylene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Toluene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,1,1-Trichloroethane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 1,1,2-Trichloroethane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Trichloroethylene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Trichlorofluoromethane | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Vinyl chloride | 0.02 ug/g dry | | <0.02 | <0.02 | <0.02 | - |
| m,p-Xylenes | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| o-Xylene | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| Xylenes, total | 0.05 ug/g dry | | <0.05 | <0.05 | <0.05 | - |
| 4-Bromofluorobenzene | Surrogate | | 108% | 112% | 104% | - |
| Dibromofluoromethane | Surrogate | | 116% | 130% | 116% | - |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: | BH/MW21-03-02 | BH/MW21-04-01 | BH/MW21-04-02 | - |
|------------|--------------|-----------------|-----------------|-----------------|---|
| | Sample Date: | 15-Mar-21 09:45 | 15-Mar-21 10:00 | 15-Mar-21 10:15 | - |
| | Sample ID: | 2112349-05 | 2112349-06 | 2112349-07 | - |
| | MDL/Units | Soil | Soil | Soil | - |
| Toluene-d8 | Surrogate | 92.0% | 85.8% | 89.7% | - |

Hydrocarbons

| | | | | | |
|------------------------|-------------|----|---------|---------|---|
| F1 PHCs (C6-C10) | 7 ug/g dry | <7 | <7 | <7 | - |
| F2 PHCs (C10-C16) | 4 ug/g dry | <4 | 121 | 61 | - |
| F3 PHCs (C16-C34) | 8 ug/g dry | 38 | 293 | 315 | - |
| F4 PHCs (C34-C50) | 6 ug/g dry | 34 | 183 [1] | 248 [1] | - |
| F4G PHCs (gravimetric) | 50 ug/g dry | - | 746 | 681 | - |

Semi-Volatiles

| | | | | | |
|--------------------------|---------------|-------|-------|-------|---|
| Acenaphthene | 0.02 ug/g dry | 0.05 | 0.03 | 0.02 | - |
| Acenaphthylene | 0.02 ug/g dry | 0.02 | 0.05 | 0.06 | - |
| Anthracene | 0.02 ug/g dry | 0.17 | 0.07 | 0.11 | - |
| Benzo [a] anthracene | 0.02 ug/g dry | 0.30 | 0.18 | 0.31 | - |
| Benzo [a] pyrene | 0.02 ug/g dry | 0.32 | 0.19 | 0.26 | - |
| Benzo [b] fluoranthene | 0.02 ug/g dry | 0.31 | 0.22 | 0.39 | - |
| Benzo [g,h,i] perylene | 0.02 ug/g dry | 0.17 | 0.12 | 0.20 | - |
| Benzo [k] fluoranthene | 0.02 ug/g dry | 0.15 | 0.11 | 0.16 | - |
| Chrysene | 0.02 ug/g dry | 0.32 | 0.17 | 0.31 | - |
| Dibenzo [a,h] anthracene | 0.02 ug/g dry | 0.05 | 0.03 | 0.05 | - |
| Fluoranthene | 0.02 ug/g dry | 0.63 | 0.36 | 0.43 | - |
| Fluorene | 0.02 ug/g dry | 0.07 | 0.03 | 0.06 | - |
| Indeno [1,2,3-cd] pyrene | 0.02 ug/g dry | 0.16 | 0.11 | 0.19 | - |
| 1-Methylnaphthalene | 0.02 ug/g dry | 0.04 | 0.06 | 0.93 | - |
| 2-Methylnaphthalene | 0.02 ug/g dry | 0.06 | 0.10 | 1.36 | - |
| Methylnaphthalene (1&2) | 0.04 ug/g dry | 0.10 | 0.17 | 2.29 | - |
| Naphthalene | 0.01 ug/g dry | 0.10 | 0.04 | 1.00 | - |
| Phenanthrene | 0.02 ug/g dry | 0.65 | 0.24 | 0.65 | - |
| Pyrene | 0.02 ug/g dry | 0.50 | 0.31 | 0.42 | - |
| 2-Fluorobiphenyl | Surrogate | 58.1% | 81.9% | 71.8% | - |
| Terphenyl-d14 | Surrogate | 92.7% | 88.7% | 85.6% | - |

PCBs

| | | | | | |
|--------------------|---------------|-------|------|-------|---|
| PCBs, total | 0.05 ug/g dry | <0.05 | 0.11 | <0.05 | - |
| Decachlorobiphenyl | Surrogate | 105% | 101% | 104% | - |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 0.03 | ug/g | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g | | | | | | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g | | | | | | |
| F3 PHCs (C16-C34) | ND | 8 | ug/g | | | | | | |
| F4 PHCs (C34-C50) | ND | 6 | ug/g | | | | | | |
| F4G PHCs (gravimetric) | ND | 50 | ug/g | | | | | | |
| Metals | | | | | | | | | |
| Antimony | ND | 1.0 | ug/g | | | | | | |
| Arsenic | ND | 1.0 | ug/g | | | | | | |
| Barium | ND | 1.0 | ug/g | | | | | | |
| Beryllium | ND | 0.5 | ug/g | | | | | | |
| Boron | ND | 5.0 | ug/g | | | | | | |
| Cadmium | ND | 0.5 | ug/g | | | | | | |
| Chromium (VI) | ND | 0.2 | ug/g | | | | | | |
| Chromium | ND | 5.0 | ug/g | | | | | | |
| Cobalt | ND | 1.0 | ug/g | | | | | | |
| Copper | ND | 5.0 | ug/g | | | | | | |
| Lead | ND | 1.0 | ug/g | | | | | | |
| Mercury | ND | 0.1 | ug/g | | | | | | |
| Molybdenum | ND | 1.0 | ug/g | | | | | | |
| Nickel | ND | 5.0 | ug/g | | | | | | |
| Selenium | ND | 1.0 | ug/g | | | | | | |
| Silver | ND | 0.3 | ug/g | | | | | | |
| Thallium | ND | 1.0 | ug/g | | | | | | |
| Uranium | ND | 1.0 | ug/g | | | | | | |
| Vanadium | ND | 10.0 | ug/g | | | | | | |
| Zinc | ND | 20.0 | ug/g | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.106 | | ug/g | | 106 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g | | | | | | |
| Acenaphthylene | ND | 0.02 | ug/g | | | | | | |
| Anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] pyrene | ND | 0.02 | ug/g | | | | | | |
| Benzo [b] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.02 | ug/g | | | | | | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Chrysene | ND | 0.02 | ug/g | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g | | | | | | |
| Fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Fluorene | ND | 0.02 | ug/g | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g | | | | | | |
| 1-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| 2-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.04 | ug/g | | | | | | |
| Naphthalene | ND | 0.01 | ug/g | | | | | | |
| Phenanthrene | ND | 0.02 | ug/g | | | | | | |
| Pyrene | ND | 0.02 | ug/g | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 1.11 | | ug/g | | 83.5 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.44 | | ug/g | | 108 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 0.50 | ug/g | | | | | | |
| Benzene | ND | 0.02 | ug/g | | | | | | |
| Bromodichloromethane | ND | 0.05 | ug/g | | | | | | |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Bromoform | ND | 0.05 | ug/g | | | | | | |
| Bromomethane | ND | 0.05 | ug/g | | | | | | |
| Carbon Tetrachloride | ND | 0.05 | ug/g | | | | | | |
| Chlorobenzene | ND | 0.05 | ug/g | | | | | | |
| Chloroform | ND | 0.05 | ug/g | | | | | | |
| Dibromochloromethane | ND | 0.05 | ug/g | | | | | | |
| Dichlorodifluoromethane | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,1-Dichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichloropropane | ND | 0.05 | ug/g | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.05 | ug/g | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.05 | ug/g | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.05 | ug/g | | | | | | |
| Ethylbenzene | ND | 0.05 | ug/g | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2-Hexane | ND | 0.05 | ug/g | | | | | | |
| Hexane | ND | 0.05 | ug/g | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 0.50 | ug/g | | | | | | |
| Methyl Isobutyl Ketone | ND | 0.50 | ug/g | | | | | | |
| Methyl tert-butyl ether | ND | 0.05 | ug/g | | | | | | |
| Methylene Chloride | ND | 0.05 | ug/g | | | | | | |
| Styrene | ND | 0.05 | ug/g | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.05 | ug/g | | | | | | |
| Tetrachloroethylene | ND | 0.05 | ug/g | | | | | | |
| Toluene | ND | 0.05 | ug/g | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.05 | ug/g | | | | | | |
| Trichloroethylene | ND | 0.05 | ug/g | | | | | | |
| Trichlorofluoromethane | ND | 0.05 | ug/g | | | | | | |
| Vinyl chloride | ND | 0.02 | ug/g | | | | | | |
| m,p-Xylenes | ND | 0.05 | ug/g | | | | | | |
| o-Xylene | ND | 0.05 | ug/g | | | | | | |
| Xylenes, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 3.63 | | ug/g | | 114 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 4.13 | | ug/g | | 129 | 50-140 | | | |
| Surrogate: Toluene-d8 | 3.19 | | ug/g | | 99.8 | 50-140 | | | |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 0.03 | ug/g dry | ND | | | NC | 35 | |
| pH | 7.53 | 0.05 | pH Units | 7.58 | | | 0.7 | 2.3 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g dry | ND | | | NC | 40 | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g dry | ND | | | NC | 30 | |
| F3 PHCs (C16-C34) | 18 | 8 | ug/g dry | 13 | | | NC | 30 | |
| F4 PHCs (C34-C50) | 9 | 6 | ug/g dry | 8 | | | 19.6 | 30 | |
| Metals | | | | | | | | | |
| Antimony | 3.4 | 1.0 | ug/g dry | 3.8 | | | 10.3 | 30 | |
| Arsenic | 127 | 1.0 | ug/g dry | 134 | | | 5.8 | 30 | |
| Barium | 397 | 1.0 | ug/g dry | 420 | | | 5.6 | 30 | |
| Beryllium | 1.1 | 0.5 | ug/g dry | 1.1 | | | 4.1 | 30 | |
| Boron | 15.0 | 5.0 | ug/g dry | 16.7 | | | 10.3 | 30 | |
| Cadmium | 0.9 | 0.5 | ug/g dry | 0.8 | | | 3.3 | 30 | |
| Chromium (VI) | ND | 0.2 | ug/g dry | ND | | | NC | 35 | |
| Chromium | 24.6 | 5.0 | ug/g dry | 26.2 | | | 6.3 | 30 | |
| Cobalt | 9.7 | 1.0 | ug/g dry | 10.0 | | | 2.8 | 30 | |
| Copper | 112 | 5.0 | ug/g dry | 121 | | | 7.8 | 30 | |
| Lead | 201 | 1.0 | ug/g dry | 218 | | | 7.8 | 30 | |
| Mercury | 0.469 | 0.1 | ug/g dry | 0.560 | | | 17.6 | 30 | |
| Molybdenum | 13.1 | 1.0 | ug/g dry | 13.5 | | | 3.1 | 30 | |
| Nickel | 33.8 | 5.0 | ug/g dry | 37.4 | | | 10.1 | 30 | |
| Selenium | 2.5 | 1.0 | ug/g dry | 2.6 | | | 3.6 | 30 | |
| Silver | 0.3 | 0.3 | ug/g dry | 0.3 | | | 6.8 | 30 | |
| Thallium | 1.6 | 1.0 | ug/g dry | 1.7 | | | 1.4 | 30 | |
| Uranium | ND | 1.0 | ug/g dry | ND | | | NC | 30 | |
| Vanadium | 28.1 | 10.0 | ug/g dry | 29.8 | | | 5.8 | 30 | |
| Zinc | 171 | 20.0 | ug/g dry | 183 | | | 6.7 | 30 | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/g dry | ND | | | NC | 40 | |
| Surrogate: Decachlorobiphenyl | 0.134 | | ug/g dry | | 111 | 60-140 | | | |
| Physical Characteristics | | | | | | | | | |
| % Solids | 75.6 | 0.1 | % by Wt. | 74.5 | | | 1.4 | 25 | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g dry | ND | | | NC | 40 | |
| Acenaphthylene | ND | 0.02 | ug/g dry | ND | | | NC | 40 | |
| Anthracene | ND | 0.02 | ug/g dry | ND | | | NC | 40 | |
| Benzo [a] anthracene | 0.027 | 0.02 | ug/g dry | 0.035 | | | 24.2 | 40 | |
| Benzo [a] pyrene | 0.025 | 0.02 | ug/g dry | 0.035 | | | 35.7 | 40 | |
| Benzo [b] fluoranthene | 0.033 | 0.02 | ug/g dry | 0.054 | | | NC | 40 | |
| Benzo [g,h,i] perylene | ND | 0.02 | ug/g dry | 0.027 | | | NC | 40 | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g dry | 0.022 | | | NC | 40 | |
| Chrysene | 0.036 | 0.02 | ug/g dry | 0.044 | | | 22.3 | 40 | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g dry | ND | | | NC | 40 | |
| Fluoranthene | 0.054 | 0.02 | ug/g dry | 0.058 | | | 7.9 | 40 | |
| Fluorene | ND | 0.02 | ug/g dry | ND | | | NC | 40 | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g dry | 0.025 | | | NC | 40 | |
| 1-Methylnaphthalene | 0.036 | 0.02 | ug/g dry | 0.061 | | | NC | 40 | |
| 2-Methylnaphthalene | 0.063 | 0.02 | ug/g dry | 0.110 | | | NC | 40 | |
| Naphthalene | 0.047 | 0.01 | ug/g dry | 0.048 | | | 1.6 | 40 | |
| Phenanthrene | 0.055 | 0.02 | ug/g dry | 0.062 | | | 10.8 | 40 | |
| Pyrene | 0.042 | 0.02 | ug/g dry | 0.049 | | | 13.5 | 40 | |
| Surrogate: 2-Fluorobiphenyl | 0.988 | | ug/g dry | | 63.0 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.28 | | ug/g dry | | 81.7 | 50-140 | | | |
| Volatiles | | | | | | | | | |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--|--------|-----------------|----------|---------------|------|------------|-----|-----------|-------|
| Acetone | ND | 0.50 | ug/g dry | ND | | | NC | 50 | |
| Benzene | ND | 0.02 | ug/g dry | ND | | | NC | 50 | |
| Bromodichloromethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Bromoform | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Bromomethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Carbon Tetrachloride | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Chlorobenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Chloroform | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Dibromochloromethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Dichlorodifluoromethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,2-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,3-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,4-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1-Dichloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,2-Dichloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| cis-1,2-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| trans-1,2-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,2-Dichloropropane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| cis-1,3-Dichloropropylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| trans-1,3-Dichloropropylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Ethylbenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Ethylene dibromide (dibromoethane, 1,2-) | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Hexane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 0.50 | ug/g dry | ND | | | NC | 50 | |
| Methyl Isobutyl Ketone | ND | 0.50 | ug/g dry | ND | | | NC | 50 | |
| Methyl tert-butyl ether | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Methylene Chloride | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Styrene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Tetrachloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Toluene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1,1-Trichloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1,2-Trichloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Trichloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Trichlorofluoromethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Vinyl chloride | ND | 0.02 | ug/g dry | ND | | | NC | 50 | |
| m,p-Xylenes | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| o-Xylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Surrogate: 4-Bromofluorobenzene | 4.40 | | ug/g dry | | 102 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 5.15 | | ug/g dry | | 119 | 50-140 | | | |
| Surrogate: Toluene-d8 | 4.09 | | ug/g dry | | 94.7 | 50-140 | | | |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 0.231 | 0.03 | ug/g | ND | 77.1 | 70-130 | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 199 | 7 | ug/g | ND | 99.5 | 80-120 | | | |
| F2 PHCs (C10-C16) | 76 | 4 | ug/g | ND | 95.6 | 80-120 | | | |
| F3 PHCs (C16-C34) | 199 | 8 | ug/g | ND | 102 | 80-120 | | | |
| F4 PHCs (C34-C50) | 131 | 6 | ug/g | ND | 106 | 80-120 | | | |
| F4G PHCs (gravimetric) | 980 | 50 | ug/g | ND | 98.0 | 80-120 | | | |
| Metals | | | | | | | | | |
| Antimony | 43.7 | 1.0 | ug/g | 1.5 | 84.3 | 70-130 | | | |
| Arsenic | 97.5 | 1.0 | ug/g | 53.6 | 87.8 | 70-130 | | | |
| Barium | 214 | 1.0 | ug/g | 168 | 91.9 | 70-130 | | | |
| Beryllium | 47.1 | 0.5 | ug/g | ND | 93.4 | 70-130 | | | |
| Boron | 49.9 | 5.0 | ug/g | 6.7 | 86.5 | 70-130 | | | |
| Cadmium | 45.5 | 0.5 | ug/g | ND | 90.3 | 70-130 | | | |
| Chromium (VI) | 4.8 | 0.2 | ug/g | ND | 96.5 | 70-130 | | | |
| Chromium | 59.7 | 5.0 | ug/g | 10.5 | 98.5 | 70-130 | | | |
| Cobalt | 52.2 | 1.0 | ug/g | 4.0 | 96.3 | 70-130 | | | |
| Copper | 90.6 | 5.0 | ug/g | 48.3 | 84.6 | 70-130 | | | |
| Lead | 118 | 1.0 | ug/g | 87.1 | 62.3 | 70-130 | | | QM-07 |
| Mercury | 1.93 | 0.1 | ug/g | 0.560 | 91.5 | 70-130 | | | |
| Molybdenum | 52.7 | 1.0 | ug/g | 5.4 | 94.6 | 70-130 | | | |
| Nickel | 60.0 | 5.0 | ug/g | 15.0 | 90.1 | 70-130 | | | |
| Selenium | 41.7 | 1.0 | ug/g | 1.0 | 81.3 | 70-130 | | | |
| Silver | 45.1 | 0.3 | ug/g | ND | 90.0 | 70-130 | | | |
| Thallium | 43.7 | 1.0 | ug/g | ND | 86.0 | 70-130 | | | |
| Uranium | 41.7 | 1.0 | ug/g | ND | 83.0 | 70-130 | | | |
| Vanadium | 62.1 | 10.0 | ug/g | 11.9 | 100 | 70-130 | | | |
| Zinc | 112 | 20.0 | ug/g | 73.0 | 78.4 | 70-130 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.468 | 0.05 | ug/g | ND | 97.0 | 60-140 | | | |
| Surrogate: Decachlorobiphenyl | 0.144 | | ug/g | | 120 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 0.194 | 0.02 | ug/g | ND | 99.1 | 50-140 | | | |
| Acenaphthylene | 0.176 | 0.02 | ug/g | ND | 89.9 | 50-140 | | | |
| Anthracene | 0.207 | 0.02 | ug/g | ND | 106 | 50-140 | | | |
| Benzo [a] anthracene | 0.192 | 0.02 | ug/g | 0.035 | 80.5 | 50-140 | | | |
| Benzo [a] pyrene | 0.198 | 0.02 | ug/g | 0.035 | 83.1 | 50-140 | | | |
| Benzo [b] fluoranthene | 0.264 | 0.02 | ug/g | 0.054 | 107 | 50-140 | | | |
| Benzo [g,h,i] perylene | 0.178 | 0.02 | ug/g | 0.027 | 77.1 | 50-140 | | | |
| Benzo [k] fluoranthene | 0.208 | 0.02 | ug/g | 0.022 | 94.8 | 50-140 | | | |
| Chrysene | 0.242 | 0.02 | ug/g | 0.044 | 101 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 0.162 | 0.02 | ug/g | ND | 82.7 | 50-140 | | | |
| Fluoranthene | 0.229 | 0.02 | ug/g | 0.058 | 87.0 | 50-140 | | | |
| Fluorene | 0.182 | 0.02 | ug/g | ND | 92.7 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 0.172 | 0.02 | ug/g | 0.025 | 75.1 | 50-140 | | | |
| 1-Methylnaphthalene | 0.214 | 0.02 | ug/g | 0.061 | 78.2 | 50-140 | | | |
| 2-Methylnaphthalene | 0.265 | 0.02 | ug/g | 0.110 | 78.9 | 50-140 | | | |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Naphthalene | 0.257 | 0.01 | ug/g | 0.048 | 107 | 50-140 | | | |
| Phenanthrene | 0.240 | 0.02 | ug/g | 0.062 | 91.2 | 50-140 | | | |
| Pyrene | 0.234 | 0.02 | ug/g | 0.049 | 94.6 | 50-140 | | | |
| Surrogate: 2-Fluorobiphenyl | 1.12 | | ug/g | | 71.5 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.50 | | ug/g | | 95.6 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 13.1 | 0.50 | ug/g | ND | 131 | 50-140 | | | |
| Benzene | 4.35 | 0.02 | ug/g | ND | 109 | 60-130 | | | |
| Bromodichloromethane | 4.75 | 0.05 | ug/g | ND | 119 | 60-130 | | | |
| Bromoform | 4.04 | 0.05 | ug/g | ND | 101 | 60-130 | | | |
| Bromomethane | 4.60 | 0.05 | ug/g | ND | 115 | 50-140 | | | |
| Carbon Tetrachloride | 4.39 | 0.05 | ug/g | ND | 110 | 60-130 | | | |
| Chlorobenzene | 4.08 | 0.05 | ug/g | ND | 102 | 60-130 | | | |
| Chloroform | 4.55 | 0.05 | ug/g | ND | 114 | 60-130 | | | |
| Dibromochloromethane | 4.15 | 0.05 | ug/g | ND | 104 | 60-130 | | | |
| Dichlorodifluoromethane | 5.12 | 0.05 | ug/g | ND | 128 | 50-140 | | | |
| 1,2-Dichlorobenzene | 3.78 | 0.05 | ug/g | ND | 94.5 | 60-130 | | | |
| 1,3-Dichlorobenzene | 3.72 | 0.05 | ug/g | ND | 92.9 | 60-130 | | | |
| 1,4-Dichlorobenzene | 3.47 | 0.05 | ug/g | ND | 86.9 | 60-130 | | | |
| 1,1-Dichloroethane | 5.06 | 0.05 | ug/g | ND | 127 | 60-130 | | | |
| 1,2-Dichloroethane | 4.84 | 0.05 | ug/g | ND | 121 | 60-130 | | | |
| 1,1-Dichloroethylene | 4.60 | 0.05 | ug/g | ND | 115 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 4.52 | 0.05 | ug/g | ND | 113 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 4.25 | 0.05 | ug/g | ND | 106 | 60-130 | | | |
| 1,2-Dichloropropane | 4.47 | 0.05 | ug/g | ND | 112 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 4.30 | 0.05 | ug/g | ND | 107 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 4.32 | 0.05 | ug/g | ND | 108 | 60-130 | | | |
| Ethylbenzene | 4.10 | 0.05 | ug/g | ND | 103 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2- | 3.92 | 0.05 | ug/g | ND | 98.0 | 60-130 | | | |
| Hexane | 4.40 | 0.05 | ug/g | ND | 110 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 11.2 | 0.50 | ug/g | ND | 112 | 50-140 | | | |
| Methyl Isobutyl Ketone | 13.0 | 0.50 | ug/g | ND | 130 | 50-140 | | | |
| Methyl tert-butyl ether | 10.5 | 0.05 | ug/g | ND | 105 | 50-140 | | | |
| Methylene Chloride | 4.92 | 0.05 | ug/g | ND | 123 | 60-130 | | | |
| Styrene | 3.93 | 0.05 | ug/g | ND | 98.2 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 4.27 | 0.05 | ug/g | ND | 107 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 3.49 | 0.05 | ug/g | ND | 87.2 | 60-130 | | | |
| Tetrachloroethylene | 4.15 | 0.05 | ug/g | ND | 104 | 60-130 | | | |
| Toluene | 4.20 | 0.05 | ug/g | ND | 105 | 60-130 | | | |
| 1,1,1-Trichloroethane | 4.52 | 0.05 | ug/g | ND | 113 | 60-130 | | | |
| 1,1,2-Trichloroethane | 4.73 | 0.05 | ug/g | ND | 118 | 60-130 | | | |
| Trichloroethylene | 4.91 | 0.05 | ug/g | ND | 123 | 60-130 | | | |
| Trichlorofluoromethane | 4.85 | 0.05 | ug/g | ND | 121 | 50-140 | | | |
| Vinyl chloride | 4.93 | 0.02 | ug/g | ND | 123 | 50-140 | | | |
| m,p-Xylenes | 8.42 | 0.05 | ug/g | ND | 105 | 60-130 | | | |
| o-Xylene | 4.28 | 0.05 | ug/g | ND | 107 | 60-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 2.79 | | ug/g | | 87.1 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 4.21 | | ug/g | | 132 | 50-140 | | | |
| Surrogate: Toluene-d8 | 2.73 | | ug/g | | 85.4 | 50-140 | | | |

Certificate of Analysis

Report Date: 23-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 16-Mar-2021

Client PO: Zibi Albert and Chaudière Island

Project Description: OTT00250193P0

Qualifier Notes:

Sample Qualifiers :

1 : GC-FID signal did not return to baseline by C50

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



| | | |
|---|---|--|
| Client Name: EXP Services Inc. | Project Reference: Zibi - Albert and Chaudiere Island | Turnaround Time: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input checked="" type="checkbox"/> Regular Date Required: _____ |
| Contact Name: Patricia Stelmack | Quote #: 21-158 | |
| Address: 100-2650 Queensview Drive Ottawa, ON, K2B 8H6 | PO #: OTT-00250193-P0 | |
| Telephone: 613-688-1899 | Email Address: Patricia.Stelmack@exp.com | |

Criteria: O. Reg. 153/04 (As Amended) Table 7; RSC Filing O. Reg. 558/00 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

| Sample ID/Location Name | Matrix | Air Volume | # of Containers | Sample Taken | | PHCs F1-F4+BTEX | VOCs | PAHs | Metals by ICP | | | CrVI | B (HWS) | VOC, PHC F1-F4 | PCB | pH | Free Cyanide | limited sample |
|-------------------------|--------|------------|-----------------|--------------|-------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| | | | | Date | Time | | | | Hg | Cd | Pb | | | | | | | |
| 1 BH/MW21-01-01 | Soil | | 2 | 2021/03/15 | 08:30 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2 BH/MW21-02-01 | Soil | | 2 | 2021/03/15 | 09:15 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3 BH/MW21-03-01 | Soil | | 2 | 2021/03/15 | 09:30 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4 D206 | Soil | | 2 | 2021/03/15 | 09:30 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5 BH/MW21-03-02 | Soil | | 2 | 2021/03/15 | 09:45 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6 BH/MW21-04-01 | Soil | | 2 | 2021/03/15 | 10:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7 BH/MW21-04-02 | Soil | | 2 | 2021/03/15 | 10:15 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used. Method of Delivery: *Drop*

| | | | |
|--|--|-------------------------------------|--|
| Relinquished By (Sign): <i>[Signature]</i> | Received by Driver/Depot: <i>[Signature]</i> | Received at Lab: <i>[Signature]</i> | Verified By: <i>[Signature]</i> |
| Relinquished By (Print): Jeremy Eckert | Date/Time: March 17, 2021 12:29 | Date/Time: 03/16/2021 | Date/Time: March 17, 2021 12:54 |
| Date/Time: 2021/03/16 12:00pm | Temperature: 36 °C | Temperature: 15.8 °C | pH Verified [] By: <i>[Signature]</i> |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi - Albert and Chaudière Island
Project: OTT00250193P0
Custody:

Report Date: 25-Mar-2021
Order Date: 19-Mar-2021

Order #: 2112654

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Paracel ID | Client ID |
|------------|---------------|
| 2112654-01 | BH/MW21-05-01 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|---------------------------------|---|-----------------|---------------|
| Chromium, hexavalent - soil | MOE E3056 - Extraction, colourimetric | 22-Mar-21 | 23-Mar-21 |
| Cyanide, free | MOE E3015 - Auto Colour, water extraction | 22-Mar-21 | 24-Mar-21 |
| Mercury by CVAA | EPA 7471B - CVAA, digestion | 24-Mar-21 | 24-Mar-21 |
| PCBs, total | SW846 8082A - GC-ECD | 22-Mar-21 | 23-Mar-21 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 22-Mar-21 | 23-Mar-21 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 22-Mar-21 | 24-Mar-21 |
| REG 153: Metals by ICP/MS, soil | EPA 6020 - Digestion - ICP-MS | 23-Mar-21 | 23-Mar-21 |
| REG 153: PAHs by GC-MS | EPA 8270 - GC-MS, extraction | 22-Mar-21 | 25-Mar-21 |
| REG 153: VOCs by P&T GC/MS | EPA 8260 - P&T GC-MS | 22-Mar-21 | 23-Mar-21 |
| Solids, % | Gravimetric, calculation | 22-Mar-21 | 22-Mar-21 |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|---|---|---|
| Client ID: | BH/MW21-05-01 | - | - | - |
| Sample Date: | 17-Mar-21 08:00 | - | - | - |
| Sample ID: | 2112654-01 | - | - | - |
| MDL/Units | Soil | - | - | - |

Physical Characteristics

| | | | | | |
|----------|--------------|------|---|---|---|
| % Solids | 0.1 % by Wt. | 93.4 | - | - | - |
|----------|--------------|------|---|---|---|

General Inorganics

| | | | | | |
|---------------|---------------|-------|---|---|---|
| Cyanide, free | 0.03 ug/g dry | <0.03 | - | - | - |
|---------------|---------------|-------|---|---|---|

Metals

| | | | | | |
|---------------|---------------|-------|---|---|---|
| Antimony | 1.0 ug/g dry | <1.0 | - | - | - |
| Arsenic | 1.0 ug/g dry | 2.2 | - | - | - |
| Barium | 1.0 ug/g dry | 146 | - | - | - |
| Beryllium | 0.5 ug/g dry | <0.5 | - | - | - |
| Boron | 5.0 ug/g dry | 9.5 | - | - | - |
| Cadmium | 0.5 ug/g dry | <0.5 | - | - | - |
| Chromium | 5.0 ug/g dry | 10.5 | - | - | - |
| Chromium (VI) | 0.2 ug/g dry | <0.2 | - | - | - |
| Cobalt | 1.0 ug/g dry | 3.5 | - | - | - |
| Copper | 5.0 ug/g dry | 10.1 | - | - | - |
| Lead | 1.0 ug/g dry | 9.7 | - | - | - |
| Mercury | 0.1 ug/g dry | <0.1 | - | - | - |
| Molybdenum | 1.0 ug/g dry | <1.0 | - | - | - |
| Nickel | 5.0 ug/g dry | 9.1 | - | - | - |
| Selenium | 1.0 ug/g dry | <1.0 | - | - | - |
| Silver | 0.3 ug/g dry | <0.3 | - | - | - |
| Thallium | 1.0 ug/g dry | <1.0 | - | - | - |
| Uranium | 1.0 ug/g dry | <1.0 | - | - | - |
| Vanadium | 10.0 ug/g dry | 13.6 | - | - | - |
| Zinc | 20.0 ug/g dry | <20.0 | - | - | - |

Volatiles

| | | | | | |
|-------------------------|---------------|-------|---|---|---|
| Acetone | 0.50 ug/g dry | <0.50 | - | - | - |
| Benzene | 0.02 ug/g dry | <0.02 | - | - | - |
| Bromodichloromethane | 0.05 ug/g dry | <0.05 | - | - | - |
| Bromoform | 0.05 ug/g dry | <0.05 | - | - | - |
| Bromomethane | 0.05 ug/g dry | <0.05 | - | - | - |
| Carbon Tetrachloride | 0.05 ug/g dry | <0.05 | - | - | - |
| Chlorobenzene | 0.05 ug/g dry | <0.05 | - | - | - |
| Chloroform | 0.05 ug/g dry | <0.05 | - | - | - |
| Dibromochloromethane | 0.05 ug/g dry | <0.05 | - | - | - |
| Dichlorodifluoromethane | 0.05 ug/g dry | <0.05 | - | - | - |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: | BH/MW21-05-01 | - | - | - |
|--|---------------|-----------------|---|---|---|
| | Sample Date: | 17-Mar-21 08:00 | - | - | - |
| | Sample ID: | 2112654-01 | - | - | - |
| | MDL/Units | Soil | - | - | - |
| 1,2-Dichlorobenzene | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,3-Dichlorobenzene | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,4-Dichlorobenzene | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,1-Dichloroethane | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,2-Dichloroethane | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,1-Dichloroethylene | 0.05 ug/g dry | <0.05 | - | - | - |
| cis-1,2-Dichloroethylene | 0.05 ug/g dry | <0.05 | - | - | - |
| trans-1,2-Dichloroethylene | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,2-Dichloropropane | 0.05 ug/g dry | <0.05 | - | - | - |
| cis-1,3-Dichloropropylene | 0.05 ug/g dry | <0.05 | - | - | - |
| trans-1,3-Dichloropropylene | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,3-Dichloropropene, total | 0.05 ug/g dry | <0.05 | - | - | - |
| Ethylbenzene | 0.05 ug/g dry | <0.05 | - | - | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.05 ug/g dry | <0.05 | - | - | - |
| Hexane | 0.05 ug/g dry | <0.05 | - | - | - |
| Methyl Ethyl Ketone (2-Butanone) | 0.50 ug/g dry | <0.50 | - | - | - |
| Methyl Isobutyl Ketone | 0.50 ug/g dry | <0.50 | - | - | - |
| Methyl tert-butyl ether | 0.05 ug/g dry | <0.05 | - | - | - |
| Methylene Chloride | 0.05 ug/g dry | <0.05 | - | - | - |
| Styrene | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,1,1,2-Tetrachloroethane | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,1,2,2-Tetrachloroethane | 0.05 ug/g dry | <0.05 | - | - | - |
| Tetrachloroethylene | 0.05 ug/g dry | <0.05 | - | - | - |
| Toluene | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,1,1-Trichloroethane | 0.05 ug/g dry | <0.05 | - | - | - |
| 1,1,2-Trichloroethane | 0.05 ug/g dry | <0.05 | - | - | - |
| Trichloroethylene | 0.05 ug/g dry | <0.05 | - | - | - |
| Trichlorofluoromethane | 0.05 ug/g dry | <0.05 | - | - | - |
| Vinyl chloride | 0.02 ug/g dry | <0.02 | - | - | - |
| m,p-Xylenes | 0.05 ug/g dry | <0.05 | - | - | - |
| o-Xylene | 0.05 ug/g dry | <0.05 | - | - | - |
| Xylenes, total | 0.05 ug/g dry | <0.05 | - | - | - |
| 4-Bromofluorobenzene | Surrogate | 116% | - | - | - |
| Dibromofluoromethane | Surrogate | 94.7% | - | - | - |
| Toluene-d8 | Surrogate | 91.1% | - | - | - |

Hydrocarbons

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: | BH/MW21-05-01 | - | - | - |
|-------------------|--------------|-----------------|---|---|---|
| | Sample Date: | 17-Mar-21 08:00 | - | - | - |
| | Sample ID: | 2112654-01 | - | - | - |
| | MDL/Units | Soil | - | - | - |
| F1 PHCs (C6-C10) | 7 ug/g dry | <7 | - | - | - |
| F2 PHCs (C10-C16) | 4 ug/g dry | <4 | - | - | - |
| F3 PHCs (C16-C34) | 8 ug/g dry | 94 | - | - | - |
| F4 PHCs (C34-C50) | 6 ug/g dry | 102 | - | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|---------------|-------|---|---|---|
| Acenaphthene | 0.02 ug/g dry | <0.02 | - | - | - |
| Acenaphthylene | 0.02 ug/g dry | <0.02 | - | - | - |
| Anthracene | 0.02 ug/g dry | <0.02 | - | - | - |
| Benzo [a] anthracene | 0.02 ug/g dry | 0.06 | - | - | - |
| Benzo [a] pyrene | 0.02 ug/g dry | 0.07 | - | - | - |
| Benzo [b] fluoranthene | 0.02 ug/g dry | 0.08 | - | - | - |
| Benzo [g,h,i] perylene | 0.02 ug/g dry | 0.06 | - | - | - |
| Benzo [k] fluoranthene | 0.02 ug/g dry | 0.04 | - | - | - |
| Chrysene | 0.02 ug/g dry | 0.06 | - | - | - |
| Dibenzo [a,h] anthracene | 0.02 ug/g dry | <0.02 | - | - | - |
| Fluoranthene | 0.02 ug/g dry | 0.09 | - | - | - |
| Fluorene | 0.02 ug/g dry | <0.02 | - | - | - |
| Indeno [1,2,3-cd] pyrene | 0.02 ug/g dry | 0.04 | - | - | - |
| 1-Methylnaphthalene | 0.02 ug/g dry | <0.02 | - | - | - |
| 2-Methylnaphthalene | 0.02 ug/g dry | 0.04 | - | - | - |
| Methylnaphthalene (1&2) | 0.04 ug/g dry | 0.06 | - | - | - |
| Naphthalene | 0.01 ug/g dry | 0.03 | - | - | - |
| Phenanthrene | 0.02 ug/g dry | 0.07 | - | - | - |
| Pyrene | 0.02 ug/g dry | 0.09 | - | - | - |
| 2-Fluorobiphenyl | Surrogate | 109% | - | - | - |
| Terphenyl-d14 | Surrogate | 114% | - | - | - |

PCBs

| | | | | | |
|--------------------|---------------|-------|---|---|---|
| PCBs, total | 0.05 ug/g dry | <0.05 | - | - | - |
| Decachlorobiphenyl | Surrogate | 105% | - | - | - |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193PO

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 0.03 | ug/g | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g | | | | | | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g | | | | | | |
| F3 PHCs (C16-C34) | ND | 8 | ug/g | | | | | | |
| F4 PHCs (C34-C50) | ND | 6 | ug/g | | | | | | |
| Metals | | | | | | | | | |
| Antimony | ND | 1.0 | ug/g | | | | | | |
| Arsenic | ND | 1.0 | ug/g | | | | | | |
| Barium | ND | 1.0 | ug/g | | | | | | |
| Beryllium | ND | 0.5 | ug/g | | | | | | |
| Boron | ND | 5.0 | ug/g | | | | | | |
| Cadmium | ND | 0.5 | ug/g | | | | | | |
| Chromium (VI) | ND | 0.2 | ug/g | | | | | | |
| Chromium | ND | 5.0 | ug/g | | | | | | |
| Cobalt | ND | 1.0 | ug/g | | | | | | |
| Copper | ND | 5.0 | ug/g | | | | | | |
| Lead | ND | 1.0 | ug/g | | | | | | |
| Mercury | ND | 0.1 | ug/g | | | | | | |
| Molybdenum | ND | 1.0 | ug/g | | | | | | |
| Nickel | ND | 5.0 | ug/g | | | | | | |
| Selenium | ND | 1.0 | ug/g | | | | | | |
| Silver | ND | 0.3 | ug/g | | | | | | |
| Thallium | ND | 1.0 | ug/g | | | | | | |
| Uranium | ND | 1.0 | ug/g | | | | | | |
| Vanadium | ND | 10.0 | ug/g | | | | | | |
| Zinc | ND | 20.0 | ug/g | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.120 | | ug/g | | 120 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.02 | ug/g | | | | | | |
| Acenaphthylene | ND | 0.02 | ug/g | | | | | | |
| Anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] anthracene | ND | 0.02 | ug/g | | | | | | |
| Benzo [a] pyrene | ND | 0.02 | ug/g | | | | | | |
| Benzo [b] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.02 | ug/g | | | | | | |
| Benzo [k] fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Chrysene | ND | 0.02 | ug/g | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.02 | ug/g | | | | | | |
| Fluoranthene | ND | 0.02 | ug/g | | | | | | |
| Fluorene | ND | 0.02 | ug/g | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.02 | ug/g | | | | | | |
| 1-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| 2-Methylnaphthalene | ND | 0.02 | ug/g | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.04 | ug/g | | | | | | |
| Naphthalene | ND | 0.01 | ug/g | | | | | | |
| Phenanthrene | ND | 0.02 | ug/g | | | | | | |
| Pyrene | ND | 0.02 | ug/g | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 0.973 | | ug/g | | 72.9 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.40 | | ug/g | | 105 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 0.50 | ug/g | | | | | | |
| Benzene | ND | 0.02 | ug/g | | | | | | |
| Bromodichloromethane | ND | 0.05 | ug/g | | | | | | |
| Bromoform | ND | 0.05 | ug/g | | | | | | |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Bromomethane | ND | 0.05 | ug/g | | | | | | |
| Carbon Tetrachloride | ND | 0.05 | ug/g | | | | | | |
| Chlorobenzene | ND | 0.05 | ug/g | | | | | | |
| Chloroform | ND | 0.05 | ug/g | | | | | | |
| Dibromochloromethane | ND | 0.05 | ug/g | | | | | | |
| Dichlorodifluoromethane | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.05 | ug/g | | | | | | |
| 1,1-Dichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.05 | ug/g | | | | | | |
| 1,2-Dichloropropane | ND | 0.05 | ug/g | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.05 | ug/g | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.05 | ug/g | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.05 | ug/g | | | | | | |
| Ethylbenzene | ND | 0.05 | ug/g | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.05 | ug/g | | | | | | |
| Hexane | ND | 0.05 | ug/g | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 0.50 | ug/g | | | | | | |
| Methyl Isobutyl Ketone | ND | 0.50 | ug/g | | | | | | |
| Methyl tert-butyl ether | ND | 0.05 | ug/g | | | | | | |
| Methylene Chloride | ND | 0.05 | ug/g | | | | | | |
| Styrene | ND | 0.05 | ug/g | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.05 | ug/g | | | | | | |
| Tetrachloroethylene | ND | 0.05 | ug/g | | | | | | |
| Toluene | ND | 0.05 | ug/g | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.05 | ug/g | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.05 | ug/g | | | | | | |
| Trichloroethylene | ND | 0.05 | ug/g | | | | | | |
| Trichlorofluoromethane | ND | 0.05 | ug/g | | | | | | |
| Vinyl chloride | ND | 0.02 | ug/g | | | | | | |
| m,p-Xylenes | ND | 0.05 | ug/g | | | | | | |
| o-Xylene | ND | 0.05 | ug/g | | | | | | |
| Xylenes, total | ND | 0.05 | ug/g | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 3.71 | | ug/g | | 116 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 2.99 | | ug/g | | 93.5 | 50-140 | | | |
| Surrogate: Toluene-d8 | 3.65 | | ug/g | | 114 | 50-140 | | | |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 0.03 | ug/g dry | ND | | | NC | 35 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 7 | ug/g dry | ND | | | NC | 40 | |
| F2 PHCs (C10-C16) | ND | 4 | ug/g dry | ND | | | NC | 30 | |
| F3 PHCs (C16-C34) | 143 | 8 | ug/g dry | 163 | | | 13.5 | 30 | |
| F4 PHCs (C34-C50) | 19 | 6 | ug/g dry | 22 | | | 11.7 | 30 | |
| Metals | | | | | | | | | |
| Antimony | ND | 1.0 | ug/g dry | ND | | | NC | 30 | |
| Arsenic | 2.3 | 1.0 | ug/g dry | 2.2 | | | 1.8 | 30 | |
| Barium | 54.9 | 1.0 | ug/g dry | 54.2 | | | 1.4 | 30 | |
| Beryllium | ND | 0.5 | ug/g dry | ND | | | NC | 30 | |
| Boron | 5.5 | 5.0 | ug/g dry | ND | | | NC | 30 | |
| Cadmium | ND | 0.5 | ug/g dry | ND | | | NC | 30 | |
| Chromium (VI) | ND | 0.2 | ug/g dry | ND | | | NC | 35 | |
| Chromium | 14.9 | 5.0 | ug/g dry | 14.1 | | | 6.0 | 30 | |
| Cobalt | 5.0 | 1.0 | ug/g dry | 4.9 | | | 3.2 | 30 | |
| Copper | 11.4 | 5.0 | ug/g dry | 11.7 | | | 2.6 | 30 | |
| Lead | 6.3 | 1.0 | ug/g dry | 6.1 | | | 3.2 | 30 | |
| Mercury | ND | 0.1 | ug/g dry | ND | | | NC | 30 | |
| Molybdenum | ND | 1.0 | ug/g dry | ND | | | NC | 30 | |
| Nickel | 10.8 | 5.0 | ug/g dry | 10.9 | | | 0.3 | 30 | |
| Selenium | ND | 1.0 | ug/g dry | ND | | | NC | 30 | |
| Silver | ND | 0.3 | ug/g dry | ND | | | NC | 30 | |
| Thallium | ND | 1.0 | ug/g dry | ND | | | NC | 30 | |
| Uranium | ND | 1.0 | ug/g dry | ND | | | NC | 30 | |
| Vanadium | 27.3 | 10.0 | ug/g dry | 26.0 | | | 4.9 | 30 | |
| Zinc | 31.6 | 20.0 | ug/g dry | 31.7 | | | 0.4 | 30 | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/g dry | ND | | | NC | 40 | |
| Surrogate: Decachlorobiphenyl | 0.133 | | ug/g dry | | 120 | 60-140 | | | |
| Physical Characteristics | | | | | | | | | |
| % Solids | 74.9 | 0.1 | % by Wt. | 71.6 | | | 4.5 | 25 | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 120 | 2.00 | ug/g dry | 131 | | | 9.1 | 40 | |
| Acenaphthylene | 15.7 | 2.00 | ug/g dry | 17.1 | | | 8.6 | 40 | |
| Anthracene | 225 | 2.00 | ug/g dry | 235 | | | 4.4 | 40 | |
| Benzo [a] anthracene | 158 | 2.00 | ug/g dry | 170 | | | 7.0 | 40 | |
| Benzo [a] pyrene | 98.1 | 2.00 | ug/g dry | 116 | | | 16.7 | 40 | |
| Benzo [b] fluoranthene | 99.7 | 2.00 | ug/g dry | 112 | | | 11.5 | 40 | |
| Benzo [g,h,i] perylene | 37.5 | 2.00 | ug/g dry | 43.5 | | | 14.7 | 40 | |
| Benzo [k] fluoranthene | 64.7 | 2.00 | ug/g dry | 64.5 | | | 0.2 | 40 | |
| Chrysene | 123 | 2.00 | ug/g dry | 151 | | | 20.4 | 40 | |
| Dibenzo [a,h] anthracene | 16.8 | 2.00 | ug/g dry | 19.2 | | | 13.4 | 40 | |
| Fluoranthene | 312 | 2.00 | ug/g dry | 335 | | | 7.2 | 40 | |
| Fluorene | 152 | 2.00 | ug/g dry | 163 | | | 7.1 | 40 | |
| Indeno [1,2,3-cd] pyrene | 40.2 | 2.00 | ug/g dry | 46.3 | | | 14.2 | 40 | |
| 1-Methylnaphthalene | 98.2 | 2.00 | ug/g dry | 94.2 | | | 4.1 | 40 | |
| 2-Methylnaphthalene | 180 | 2.00 | ug/g dry | 171 | | | 5.0 | 40 | |
| Naphthalene | 331 | 1.00 | ug/g dry | 362 | | | 9.0 | 40 | |
| Phenanthrene | 590 | 2.00 | ug/g dry | 631 | | | 6.7 | 40 | |
| Pyrene | 251 | 2.00 | ug/g dry | 270 | | | 7.5 | 40 | |
| Surrogate: 2-Fluorobiphenyl | 1.31 | | ug/g dry | | 95.1 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 1.63 | | ug/g dry | | 119 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 0.50 | ug/g dry | ND | | | NC | 50 | |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|----------|---------------|------|------------|-----|-----------|-------|
| Benzene | ND | 0.02 | ug/g dry | ND | | | NC | 50 | |
| Bromodichloromethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Bromoform | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Bromomethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Carbon Tetrachloride | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Chlorobenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Chloroform | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Dibromochloromethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Dichlorodifluoromethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,2-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,3-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,4-Dichlorobenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1-Dichloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,2-Dichloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| cis-1,2-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| trans-1,2-Dichloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,2-Dichloropropane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| cis-1,3-Dichloropropylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| trans-1,3-Dichloropropylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Ethylbenzene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Hexane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 0.50 | ug/g dry | ND | | | NC | 50 | |
| Methyl Isobutyl Ketone | ND | 0.50 | ug/g dry | ND | | | NC | 50 | |
| Methyl tert-butyl ether | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Methylene Chloride | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Styrene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Tetrachloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Toluene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1,1-Trichloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| 1,1,2-Trichloroethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Trichloroethylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Trichlorofluoromethane | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Vinyl chloride | ND | 0.02 | ug/g dry | ND | | | NC | 50 | |
| m,p-Xylenes | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| o-Xylene | ND | 0.05 | ug/g dry | ND | | | NC | 50 | |
| Surrogate: 4-Bromofluorobenzene | 4.12 | | ug/g dry | | 115 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 3.45 | | ug/g dry | | 96.3 | 50-140 | | | |
| Surrogate: Toluene-d8 | 4.23 | | ug/g dry | | 118 | 50-140 | | | |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 0.224 | 0.03 | ug/g | ND | 74.5 | 70-130 | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 162 | 7 | ug/g | ND | 81.1 | 80-120 | | | |
| F2 PHCs (C10-C16) | 79 | 4 | ug/g | ND | 92.6 | 60-140 | | | |
| F3 PHCs (C16-C34) | 449 | 8 | ug/g | 163 | 137 | 60-140 | | | |
| F4 PHCs (C34-C50) | 187 | 6 | ug/g | 22 | 126 | 60-140 | | | |
| Metals | | | | | | | | | |
| Antimony | 45.0 | 1.0 | ug/g | ND | 89.8 | 70-130 | | | |
| Arsenic | 46.7 | 1.0 | ug/g | ND | 91.6 | 70-130 | | | |
| Barium | 71.2 | 1.0 | ug/g | 21.7 | 99.1 | 70-130 | | | |
| Beryllium | 48.4 | 0.5 | ug/g | ND | 96.4 | 70-130 | | | |
| Boron | 48.3 | 5.0 | ug/g | ND | 92.6 | 70-130 | | | |
| Cadmium | 49.0 | 0.5 | ug/g | ND | 97.9 | 70-130 | | | |
| Chromium (VI) | 0.1 | 0.2 | ug/g | ND | 72.0 | 70-130 | | | |
| Chromium | 55.9 | 5.0 | ug/g | 5.6 | 101 | 70-130 | | | |
| Cobalt | 50.5 | 1.0 | ug/g | 1.9 | 97.1 | 70-130 | | | |
| Copper | 51.1 | 5.0 | ug/g | ND | 92.9 | 70-130 | | | |
| Lead | 37.5 | 1.0 | ug/g | 2.4 | 70.2 | 70-130 | | | |
| Mercury | 1.53 | 0.1 | ug/g | ND | 102 | 70-130 | | | |
| Molybdenum | 48.2 | 1.0 | ug/g | ND | 96.2 | 70-130 | | | |
| Nickel | 51.9 | 5.0 | ug/g | ND | 95.2 | 70-130 | | | |
| Selenium | 43.1 | 1.0 | ug/g | ND | 86.1 | 70-130 | | | |
| Silver | 33.5 | 0.3 | ug/g | ND | 67.0 | 70-130 | | | QM-07 |
| Thallium | 45.7 | 1.0 | ug/g | ND | 91.3 | 70-130 | | | |
| Uranium | 35.7 | 1.0 | ug/g | ND | 71.1 | 70-130 | | | |
| Vanadium | 62.3 | 10.0 | ug/g | 10.4 | 104 | 70-130 | | | |
| Zinc | 57.0 | 20.0 | ug/g | ND | 88.7 | 70-130 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.425 | 0.05 | ug/g | ND | 95.5 | 60-140 | | | |
| Surrogate: Decachlorobiphenyl | 0.151 | | ug/g | | 136 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 0.146 | 0.02 | ug/g | ND | 87.6 | 50-140 | | | |
| Acenaphthylene | 0.128 | 0.02 | ug/g | ND | 76.7 | 50-140 | | | |
| Anthracene | 0.138 | 0.02 | ug/g | ND | 83.1 | 50-140 | | | |
| Benzo [a] anthracene | 0.108 | 0.02 | ug/g | ND | 64.8 | 50-140 | | | |
| Benzo [a] pyrene | 0.135 | 0.02 | ug/g | ND | 80.8 | 50-140 | | | |
| Benzo [b] fluoranthene | 0.145 | 0.02 | ug/g | ND | 87.1 | 50-140 | | | |
| Benzo [g,h,i] perylene | 0.127 | 0.02 | ug/g | ND | 76.2 | 50-140 | | | |
| Benzo [k] fluoranthene | 0.130 | 0.02 | ug/g | ND | 77.9 | 50-140 | | | |
| Chrysene | 0.141 | 0.02 | ug/g | ND | 84.9 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 0.119 | 0.02 | ug/g | ND | 71.3 | 50-140 | | | |
| Fluoranthene | 0.121 | 0.02 | ug/g | ND | 72.8 | 50-140 | | | |
| Fluorene | 0.131 | 0.02 | ug/g | ND | 78.8 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 0.118 | 0.02 | ug/g | ND | 71.1 | 50-140 | | | |
| 1-Methylnaphthalene | 0.142 | 0.02 | ug/g | ND | 85.5 | 50-140 | | | |
| 2-Methylnaphthalene | 0.152 | 0.02 | ug/g | ND | 91.2 | 50-140 | | | |
| Naphthalene | 0.169 | 0.01 | ug/g | ND | 101 | 50-140 | | | |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------------|-----------------|-------------|---------------|-------------|---------------|-----|-----------|-------|
| Phenanthrene | 0.139 | 0.02 | ug/g | ND | 83.2 | 50-140 | | | |
| Pyrene | 0.123 | 0.02 | ug/g | ND | 73.6 | 50-140 | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | <i>0.950</i> | | <i>ug/g</i> | | <i>71.3</i> | <i>50-140</i> | | | |
| <i>Surrogate: Terphenyl-d14</i> | <i>1.39</i> | | <i>ug/g</i> | | <i>104</i> | <i>50-140</i> | | | |
| Volatiles | | | | | | | | | |
| Acetone | 11.0 | 0.50 | ug/g | ND | 110 | 50-140 | | | |
| Benzene | 4.00 | 0.02 | ug/g | ND | 100 | 60-130 | | | |
| Bromodichloromethane | 3.87 | 0.05 | ug/g | ND | 96.6 | 60-130 | | | |
| Bromoform | 3.68 | 0.05 | ug/g | ND | 92.1 | 60-130 | | | |
| Bromomethane | 3.41 | 0.05 | ug/g | ND | 85.1 | 50-140 | | | |
| Carbon Tetrachloride | 3.40 | 0.05 | ug/g | ND | 85.1 | 60-130 | | | |
| Chlorobenzene | 3.82 | 0.05 | ug/g | ND | 95.5 | 60-130 | | | |
| Chloroform | 3.87 | 0.05 | ug/g | ND | 96.7 | 60-130 | | | |
| Dibromochloromethane | 3.46 | 0.05 | ug/g | ND | 86.5 | 60-130 | | | |
| Dichlorodifluoromethane | 3.50 | 0.05 | ug/g | ND | 87.5 | 50-140 | | | |
| 1,2-Dichlorobenzene | 3.65 | 0.05 | ug/g | ND | 91.2 | 60-130 | | | |
| 1,3-Dichlorobenzene | 3.63 | 0.05 | ug/g | ND | 90.8 | 60-130 | | | |
| 1,4-Dichlorobenzene | 3.69 | 0.05 | ug/g | ND | 92.4 | 60-130 | | | |
| 1,1-Dichloroethane | 3.82 | 0.05 | ug/g | ND | 95.4 | 60-130 | | | |
| 1,2-Dichloroethane | 3.61 | 0.05 | ug/g | ND | 90.2 | 60-130 | | | |
| 1,1-Dichloroethylene | 3.47 | 0.05 | ug/g | ND | 86.8 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 4.05 | 0.05 | ug/g | ND | 101 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 3.65 | 0.05 | ug/g | ND | 91.3 | 60-130 | | | |
| 1,2-Dichloropropane | 4.06 | 0.05 | ug/g | ND | 101 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 3.81 | 0.05 | ug/g | ND | 95.3 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 3.68 | 0.05 | ug/g | ND | 92.1 | 60-130 | | | |
| Ethylbenzene | 3.68 | 0.05 | ug/g | ND | 92.0 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2) | 3.90 | 0.05 | ug/g | ND | 97.5 | 60-130 | | | |
| Hexane | 4.44 | 0.05 | ug/g | ND | 111 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 11.9 | 0.50 | ug/g | ND | 119 | 50-140 | | | |
| Methyl Isobutyl Ketone | 10.5 | 0.50 | ug/g | ND | 105 | 50-140 | | | |
| Methyl tert-butyl ether | 10.6 | 0.05 | ug/g | ND | 106 | 50-140 | | | |
| Methylene Chloride | 3.55 | 0.05 | ug/g | ND | 88.7 | 60-130 | | | |
| Styrene | 3.54 | 0.05 | ug/g | ND | 88.5 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 3.78 | 0.05 | ug/g | ND | 94.5 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 3.93 | 0.05 | ug/g | ND | 98.2 | 60-130 | | | |
| Tetrachloroethylene | 3.73 | 0.05 | ug/g | ND | 93.2 | 60-130 | | | |
| Toluene | 3.70 | 0.05 | ug/g | ND | 92.6 | 60-130 | | | |
| 1,1,1-Trichloroethane | 3.65 | 0.05 | ug/g | ND | 91.1 | 60-130 | | | |
| 1,1,2-Trichloroethane | 4.14 | 0.05 | ug/g | ND | 104 | 60-130 | | | |
| Trichloroethylene | 3.89 | 0.05 | ug/g | ND | 97.3 | 60-130 | | | |
| Trichlorofluoromethane | 3.38 | 0.05 | ug/g | ND | 84.4 | 50-140 | | | |
| Vinyl chloride | 3.85 | 0.02 | ug/g | ND | 96.4 | 50-140 | | | |
| m,p-Xylenes | 7.18 | 0.05 | ug/g | ND | 89.8 | 60-130 | | | |
| o-Xylene | 3.62 | 0.05 | ug/g | ND | 90.6 | 60-130 | | | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | <i>3.05</i> | | <i>ug/g</i> | | <i>95.3</i> | <i>50-140</i> | | | |
| <i>Surrogate: Dibromofluoromethane</i> | <i>3.30</i> | | <i>ug/g</i> | | <i>103</i> | <i>50-140</i> | | | |
| <i>Surrogate: Toluene-d8</i> | <i>3.05</i> | | <i>ug/g</i> | | <i>95.3</i> | <i>50-140</i> | | | |

Certificate of Analysis

Report Date: 25-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 19-Mar-2021

Client PO: Zibi - Albert and Chaudière Island

Project Description: OTT00250193P0

Qualifier Notes:

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

TRU:
RESI:
REL:

Paracel ID: 2112654



Office
19 St. Laurent Blvd.
Ontario K1G 4J8
507-749-1947
info@paracellabs.com

Chain of Custody
(Lab Use Only)

Page 1 of 1

Client Name: EXP Services Inc. Project Reference: Zibi - Albert and Chaudiere Island

Contact Name: Patricia Stelmack Quote # 21-158

Address: 100-2650 Queensview Drive PO# OTT-00250193-P0
Ottawa, ON, K2B 8H6 Email Address: Patricia.Stelmack@exp.com

Telephone: 613-688-1899

Turnaround Time:

1 Day 3 Day

2 Day Regular

Date Required: _____

Criteria: O. Reg. 153/04 (As Amended) Table 7, RSC Filing O. Reg. 558/00 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

| Paracel Order Number: <i>2112654</i> | | Matrix | Air Volume | # of Containers | Sample Taken | | PHCs F1-F4+BTEX | VOCs | PAHs | Metals by ICP | Hg | CrVI | B (GW/S) | VOC, PHC F1-F4 | PCB | pH | Free Cyanide | | | | |
|---|--------------|--------|------------|-----------------|--------------|------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Sample ID/Location Name | | | | | Date | Time | | | | | | | | | | | | | | | |
| 1 | BH/MW2-05-01 | Soil | | 2 | 2021/03/17 | 800 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used.

Method of Delivery:
Drop Box

| | | | |
|---|--|--|--|
| Relinquished By (Sign): <i>[Signature]</i> | Received by (Driver/Depot): <i>[Signature]</i> | Received at Lab: <i>Imneerom Dohma</i> | Verified By: <i>[Signature]</i> |
| Relinquished By (Print): <i>Jeremy Eckert</i> | Date/Time: <i>Mar 19/21 1543</i> | Date/Time: <i>Mar 19, 2021 04:4</i> | Date/Time: <i>March 19, 2021 17:11</i> |
| Date/Time: <i>2021/03/19 0900</i> | Temperature: <i>54</i> °C | Temperature: <i>7.2</i> °C | pH Verified [] By: _____ |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi-Albert and Chaudiere Island
Project: OTT00250193P0
Custody:

Report Date: 31-Mar-2021
Order Date: 25-Mar-2021

Order #: 2113433

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|------------|
| 2113433-01 | BH/MW21-04 |
| 2113433-02 | BH/MW21-05 |
| 2113433-03 | D206 |

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------------|---------------------------------|-----------------|---------------|
| Chromium, hexavalent - water | MOE E3056 - colourimetric | 26-Mar-21 | 26-Mar-21 |
| Mercury by CVAA | EPA 245.2 - Cold Vapour AA | 26-Mar-21 | 26-Mar-21 |
| Metals, ICP-MS | EPA 200.8 - ICP-MS | 26-Mar-21 | 26-Mar-21 |
| PCBs, total | EPA 608 - GC-ECD | 29-Mar-21 | 29-Mar-21 |
| pH | EPA 150.1 - pH probe @25 °C | 26-Mar-21 | 26-Mar-21 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 26-Mar-21 | 26-Mar-21 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 27-Mar-21 | 29-Mar-21 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 30-Mar-21 | 30-Mar-21 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 26-Mar-21 | 26-Mar-21 |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|-----------------|-----------------|---|
| Client ID: | BH/MW21-04 | BH/MW21-05 | D206 | - |
| Sample Date: | 24-Mar-21 14:00 | 23-Mar-21 09:45 | 23-Mar-21 09:45 | - |
| Sample ID: | 2113433-01 | 2113433-02 | 2113433-03 | - |
| MDL/Units | Water | Water | Water | - |

General Inorganics

| | | | | | |
|----|--------------|-----|-----|-----|---|
| pH | 0.1 pH Units | 8.1 | 7.2 | 7.3 | - |
|----|--------------|-----|-----|-----|---|

Metals

| | | | | | |
|---------------|----------|--------|--------|--------|---|
| Mercury | 0.1 ug/L | <0.1 | <0.1 | <0.1 | - |
| Antimony | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Arsenic | 1 ug/L | 1 | <1 | <1 | - |
| Barium | 1 ug/L | 700 | 1200 | 1160 | - |
| Beryllium | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Boron | 10 ug/L | 92 | 77 | 76 | - |
| Cadmium | 0.1 ug/L | <0.1 | <0.1 | <0.1 | - |
| Chromium | 1 ug/L | <1 | <1 | <1 | - |
| Chromium (VI) | 10 ug/L | <10 | <10 | <10 | - |
| Cobalt | 0.5 ug/L | 0.8 | 3.7 | 3.6 | - |
| Copper | 0.5 ug/L | 4.2 | 2.5 | 2.3 | - |
| Lead | 0.1 ug/L | 1.0 | <0.1 | <0.1 | - |
| Molybdenum | 0.5 ug/L | 6.8 | 1.4 | 1.5 | - |
| Nickel | 1 ug/L | 5 | 6 | 5 | - |
| Selenium | 1 ug/L | <1 | <1 | <1 | - |
| Silver | 0.1 ug/L | <0.1 | <0.1 | <0.1 | - |
| Sodium | 200 ug/L | 553000 | 617000 | 606000 | - |
| Thallium | 0.1 ug/L | <0.1 | <0.1 | 0.1 | - |
| Uranium | 0.1 ug/L | 2.6 | 1.1 | 1.1 | - |
| Vanadium | 0.5 ug/L | 1.2 | <0.5 | <0.5 | - |
| Zinc | 5 ug/L | <5 | 21 | 21 | - |

Volatiles

| | | | | | |
|-------------------------|----------|------|------|------|---|
| Acetone | 5.0 ug/L | <5.0 | <5.0 | <5.0 | - |
| Benzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Bromodichloromethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Bromoform | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Bromomethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Carbon Tetrachloride | 0.2 ug/L | <0.2 | <0.2 | <0.2 | - |
| Chlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Chloroform | 0.5 ug/L | 3.1 | 1.9 | 2.0 | - |
| Dibromochloromethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Dichlorodifluoromethane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | - |
| 1,2-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

| | Client ID: Sample Date: Sample ID: | BH/MW21-04 24-Mar-21 14:00 2113433-01 | BH/MW21-05 23-Mar-21 09:45 2113433-02 | D206 23-Mar-21 09:45 2113433-03 | - - - - |
|--|--|---|---|---------------------------------------|------------------|
| | MDL/Units | Water | Water | Water | - |
| 1,3-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,4-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,2-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| cis-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| trans-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,2-Dichloropropane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| cis-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| trans-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,3-Dichloropropene, total | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Ethylbenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | <0.2 | <0.2 | <0.2 | - |
| Hexane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | - |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | <5.0 | <5.0 | <5.0 | - |
| Methyl Isobutyl Ketone | 5.0 ug/L | <5.0 | <5.0 | <5.0 | - |
| Methyl tert-butyl ether | 2.0 ug/L | <2.0 | <2.0 | <2.0 | - |
| Methylene Chloride | 5.0 ug/L | <5.0 | <5.0 | <5.0 | - |
| Styrene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1,1,2,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Tetrachloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Toluene | 0.5 ug/L | 1.1 | <0.5 | <0.5 | - |
| 1,1,1-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1,2-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Trichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Trichlorofluoromethane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | - |
| Vinyl chloride | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| m,p-Xylenes | 0.5 ug/L | 0.9 | <0.5 | <0.5 | - |
| o-Xylene | 0.5 ug/L | 0.7 | <0.5 | <0.5 | - |
| Xylenes, total | 0.5 ug/L | 1.6 | <0.5 | <0.5 | - |
| 4-Bromofluorobenzene | Surrogate | 93.2% | 93.1% | 94.5% | - |
| Dibromofluoromethane | Surrogate | 86.6% | 85.5% | 87.0% | - |
| Toluene-d8 | Surrogate | 106% | 106% | 105% | - |
| Hydrocarbons | | | | | |
| F1 PHCs (C6-C10) | 25 ug/L | <25 | <25 | <25 | - |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

| | Client ID: | BH/MW21-04 | BH/MW21-05 | D206 | - |
|-------------------|--------------|-----------------|-----------------|-----------------|---|
| | Sample Date: | 24-Mar-21 14:00 | 23-Mar-21 09:45 | 23-Mar-21 09:45 | - |
| | Sample ID: | 2113433-01 | 2113433-02 | 2113433-03 | - |
| | MDL/Units | Water | Water | Water | - |
| F2 PHCs (C10-C16) | 100 ug/L | <100 | <100 | <100 | - |
| F3 PHCs (C16-C34) | 100 ug/L | <100 | <100 | <100 | - |
| F4 PHCs (C34-C50) | 100 ug/L | <100 | <100 | <100 | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-------|-------|-------|---|
| Acenaphthene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Acenaphthylene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Anthracene | 0.01 ug/L | <0.01 | <0.01 | <0.01 | - |
| Benzo [a] anthracene | 0.01 ug/L | <0.01 | <0.01 | <0.01 | - |
| Benzo [a] pyrene | 0.01 ug/L | <0.01 | <0.01 | <0.01 | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Chrysene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Fluoranthene | 0.01 ug/L | <0.01 | 0.02 | 0.03 | - |
| Fluorene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 | <0.10 | <0.10 | - |
| Naphthalene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Phenanthrene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Pyrene | 0.01 ug/L | <0.01 | 0.05 | 0.05 | - |
| 2-Fluorobiphenyl | Surrogate | 109% | 88.7% | 96.5% | - |
| Terphenyl-d14 | Surrogate | 123% | 106% | 115% | - |

PCBs

| | | | | | |
|--------------------|-----------|-----------|-------|-------|---|
| PCBs, total | 0.05 ug/L | <0.15 [1] | <0.05 | <0.05 | - |
| Decachlorobiphenyl | Surrogate | 84.3% [1] | 107% | 93.2% | - |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | | | | | | |
| Antimony | ND | 0.5 | ug/L | | | | | | |
| Arsenic | ND | 1 | ug/L | | | | | | |
| Barium | ND | 1 | ug/L | | | | | | |
| Beryllium | ND | 0.5 | ug/L | | | | | | |
| Boron | ND | 10 | ug/L | | | | | | |
| Cadmium | ND | 0.1 | ug/L | | | | | | |
| Chromium (VI) | ND | 10 | ug/L | | | | | | |
| Chromium | ND | 1 | ug/L | | | | | | |
| Cobalt | ND | 0.5 | ug/L | | | | | | |
| Copper | ND | 0.5 | ug/L | | | | | | |
| Lead | ND | 0.1 | ug/L | | | | | | |
| Molybdenum | ND | 0.5 | ug/L | | | | | | |
| Nickel | ND | 1 | ug/L | | | | | | |
| Selenium | ND | 1 | ug/L | | | | | | |
| Silver | ND | 0.1 | ug/L | | | | | | |
| Sodium | ND | 200 | ug/L | | | | | | |
| Thallium | ND | 0.1 | ug/L | | | | | | |
| Uranium | ND | 0.1 | ug/L | | | | | | |
| Vanadium | ND | 0.5 | ug/L | | | | | | |
| Zinc | ND | 5 | ug/L | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 0.505 | | ug/L | | 101 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 18.5 | | ug/L | | 92.6 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 24.1 | | ug/L | | 120 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 75.7 | | ug/L | | 94.6 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 63.2 | | ug/L | | 79.0 | 50-140 | | | |
| Surrogate: Toluene-d8 | 84.9 | | ug/L | | 106 | 50-140 | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| General Inorganics | | | | | | | | | |
| pH | 7.9 | 0.1 | pH Units | 8.0 | | | 0.6 | 3.3 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Antimony | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Arsenic | ND | 1 | ug/L | ND | | | NC | 20 | |
| Barium | 226 | 1 | ug/L | 224 | | | 0.9 | 20 | |
| Beryllium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Boron | 175 | 10 | ug/L | 172 | | | 2.0 | 20 | |
| Cadmium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Chromium (VI) | ND | 10 | ug/L | ND | | | NC | 20 | |
| Chromium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Cobalt | 1.24 | 0.5 | ug/L | 1.24 | | | 0.1 | 20 | |
| Copper | 0.80 | 0.5 | ug/L | 0.72 | | | 10.6 | 20 | |
| Lead | 0.14 | 0.1 | ug/L | ND | | | NC | 20 | |
| Molybdenum | 6.30 | 0.5 | ug/L | 6.20 | | | 1.6 | 20 | |
| Nickel | 5.9 | 1 | ug/L | 6.1 | | | 2.9 | 20 | |
| Selenium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Silver | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Sodium | 945000 | 4850 | ug/L | 950000 | | | 0.5 | 20 | |
| Thallium | 0.17 | 0.1 | ug/L | 0.15 | | | 16.5 | 20 | |
| Uranium | 1.8 | 0.1 | ug/L | 1.8 | | | 1.0 | 20 | |
| Vanadium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Zinc | ND | 5 | ug/L | ND | | | NC | 20 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dibromochloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 79.7 | | ug/L | | 99.6 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 67.9 | | ug/L | | 84.9 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 84.3 | | ug/L | | 105 | 50-140 | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------|--------------|-----------------|-------------|---------------|------------|---------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 2030 | 25 | ug/L | ND | 101 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1500 | 100 | ug/L | ND | 93.8 | 60-140 | | | |
| F3 PHCs (C16-C34) | 4000 | 100 | ug/L | ND | 102 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2530 | 100 | ug/L | ND | 102 | 60-140 | | | |
| Metals | | | | | | | | | |
| Mercury | 3.08 | 0.1 | ug/L | ND | 103 | 70-130 | | | |
| Antimony | 41.6 | 0.5 | ug/L | ND | 83.0 | 80-120 | | | |
| Arsenic | 50.8 | 1 | ug/L | ND | 101 | 80-120 | | | |
| Barium | 265 | 1 | ug/L | 224 | 80.6 | 80-120 | | | |
| Beryllium | 40.7 | 0.5 | ug/L | ND | 81.3 | 80-120 | | | |
| Boron | 45 | 10 | ug/L | ND | 89.2 | 80-120 | | | |
| Cadmium | 41.0 | 0.1 | ug/L | ND | 82.0 | 80-120 | | | |
| Chromium (VI) | 203 | 10 | ug/L | ND | 102 | 70-130 | | | |
| Chromium | 59.9 | 1 | ug/L | ND | 120 | 80-120 | | | |
| Cobalt | 55.0 | 0.5 | ug/L | 1.24 | 108 | 80-120 | | | |
| Copper | 48.3 | 0.5 | ug/L | 0.72 | 95.1 | 80-120 | | | |
| Lead | 39.8 | 0.1 | ug/L | ND | 79.4 | 80-120 | | | QM-07 |
| Molybdenum | 56.5 | 0.5 | ug/L | 6.20 | 101 | 80-120 | | | |
| Nickel | 54.3 | 1 | ug/L | 6.1 | 96.6 | 80-120 | | | |
| Selenium | 39.7 | 1 | ug/L | ND | 79.3 | 80-120 | | | QM-07 |
| Silver | 33.1 | 0.1 | ug/L | ND | 66.3 | 80-120 | | | QM-07 |
| Sodium | 11700 | 200 | ug/L | ND | 117 | 80-120 | | | |
| Thallium | 43.4 | 0.1 | ug/L | 0.15 | 86.6 | 80-120 | | | |
| Uranium | 47.3 | 0.1 | ug/L | 1.8 | 91.0 | 80-120 | | | |
| Vanadium | 64.2 | 0.5 | ug/L | ND | 128 | 80-120 | | | QM-07 |
| Zinc | 50 | 5 | ug/L | ND | 101 | 80-120 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.986 | 0.05 | ug/L | ND | 98.6 | 60-140 | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | <i>0.542</i> | | <i>ug/L</i> | | <i>108</i> | <i>60-140</i> | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 4.81 | 0.05 | ug/L | ND | 96.3 | 50-140 | | | |
| Acenaphthylene | 4.39 | 0.05 | ug/L | ND | 87.7 | 50-140 | | | |
| Anthracene | 4.87 | 0.01 | ug/L | ND | 97.4 | 50-140 | | | |
| Benzo [a] anthracene | 3.79 | 0.01 | ug/L | ND | 75.8 | 50-140 | | | |
| Benzo [a] pyrene | 4.44 | 0.01 | ug/L | ND | 88.9 | 50-140 | | | |
| Benzo [b] fluoranthene | 5.36 | 0.05 | ug/L | ND | 107 | 50-140 | | | |
| Benzo [g,h,i] perylene | 4.65 | 0.05 | ug/L | ND | 93.0 | 50-140 | | | |
| Benzo [k] fluoranthene | 5.06 | 0.05 | ug/L | ND | 101 | 50-140 | | | |
| Chrysene | 5.12 | 0.05 | ug/L | ND | 102 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 5.02 | 0.05 | ug/L | ND | 100 | 50-140 | | | |
| Fluoranthene | 5.06 | 0.01 | ug/L | ND | 101 | 50-140 | | | |
| Fluorene | 4.48 | 0.05 | ug/L | ND | 89.6 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 4.85 | 0.05 | ug/L | ND | 96.9 | 50-140 | | | |
| 1-Methylnaphthalene | 5.20 | 0.05 | ug/L | ND | 104 | 50-140 | | | |
| 2-Methylnaphthalene | 5.56 | 0.05 | ug/L | ND | 111 | 50-140 | | | |
| Naphthalene | 5.46 | 0.05 | ug/L | ND | 109 | 50-140 | | | |
| Phenanthrene | 4.68 | 0.05 | ug/L | ND | 93.6 | 50-140 | | | |
| Pyrene | 5.23 | 0.01 | ug/L | ND | 105 | 50-140 | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| <i>Surrogate: 2-Fluorobiphenyl</i> | 18.5 | | ug/L | | 92.4 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 22.8 | | ug/L | | 114 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 97.8 | 5.0 | ug/L | ND | 97.8 | 50-140 | | | |
| Benzene | 36.2 | 0.5 | ug/L | ND | 90.5 | 60-130 | | | |
| Bromodichloromethane | 29.3 | 0.5 | ug/L | ND | 73.3 | 60-130 | | | |
| Bromoform | 32.6 | 0.5 | ug/L | ND | 81.5 | 60-130 | | | |
| Bromomethane | 35.8 | 0.5 | ug/L | ND | 89.4 | 50-140 | | | |
| Carbon Tetrachloride | 26.8 | 0.2 | ug/L | ND | 67.0 | 60-130 | | | |
| Chlorobenzene | 43.7 | 0.5 | ug/L | ND | 109 | 60-130 | | | |
| Chloroform | 39.0 | 0.5 | ug/L | ND | 97.5 | 60-130 | | | |
| Dibromochloromethane | 27.8 | 0.5 | ug/L | ND | 69.4 | 60-130 | | | |
| Dichlorodifluoromethane | 37.4 | 1.0 | ug/L | ND | 93.4 | 50-140 | | | |
| 1,2-Dichlorobenzene | 41.0 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| 1,3-Dichlorobenzene | 41.5 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| 1,4-Dichlorobenzene | 40.8 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,1-Dichloroethane | 37.6 | 0.5 | ug/L | ND | 94.1 | 60-130 | | | |
| 1,2-Dichloroethane | 44.4 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| 1,1-Dichloroethylene | 32.1 | 0.5 | ug/L | ND | 80.2 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 36.1 | 0.5 | ug/L | ND | 90.2 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 32.9 | 0.5 | ug/L | ND | 82.2 | 60-130 | | | |
| 1,2-Dichloropropane | 37.6 | 0.5 | ug/L | ND | 93.9 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 27.0 | 0.5 | ug/L | ND | 67.4 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 28.0 | 0.5 | ug/L | ND | 69.9 | 60-130 | | | |
| Ethylbenzene | 41.2 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2- | 37.4 | 0.2 | ug/L | ND | 93.5 | 60-130 | | | |
| Hexane | 27.6 | 1.0 | ug/L | ND | 69.1 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 90.3 | 5.0 | ug/L | ND | 90.3 | 50-140 | | | |
| Methyl Isobutyl Ketone | 83.6 | 5.0 | ug/L | ND | 83.6 | 50-140 | | | |
| Methyl tert-butyl ether | 89.8 | 2.0 | ug/L | ND | 89.8 | 50-140 | | | |
| Methylene Chloride | 34.3 | 5.0 | ug/L | ND | 85.8 | 60-130 | | | |
| Styrene | 46.0 | 0.5 | ug/L | ND | 115 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 33.0 | 0.5 | ug/L | ND | 82.6 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 34.4 | 0.5 | ug/L | ND | 86.0 | 60-130 | | | |
| Tetrachloroethylene | 45.1 | 0.5 | ug/L | ND | 113 | 60-130 | | | |
| Toluene | 44.7 | 0.5 | ug/L | ND | 112 | 60-130 | | | |
| 1,1,1-Trichloroethane | 29.0 | 0.5 | ug/L | ND | 72.6 | 60-130 | | | |
| 1,1,2-Trichloroethane | 34.8 | 0.5 | ug/L | ND | 87.0 | 60-130 | | | |
| Trichloroethylene | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| Trichlorofluoromethane | 30.8 | 1.0 | ug/L | ND | 76.9 | 60-130 | | | |
| Vinyl chloride | 37.7 | 0.5 | ug/L | ND | 94.3 | 50-140 | | | |
| m,p-Xylenes | 98.8 | 0.5 | ug/L | ND | 123 | 60-130 | | | |
| o-Xylene | 49.3 | 0.5 | ug/L | ND | 123 | 60-130 | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193P0

Qualifier Notes:

Sample Qualifiers :

1 : Elevated Reporting Limits due to limited sample volume.

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



| | | |
|---|---|--|
| Client Name: EXP Services Inc. | Project Reference: Zibi - Albert and Chaudiere Island | Turnaround Time: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input checked="" type="checkbox"/> Regular Date Required: _____ |
| Contact Name: Patricia Stelmack | Quote #: 21-158 | |
| Address: 100-2650 Queensview Drive Ottawa, ON, K2B 8W6 | PO #: QTT 00250150-P0 | |
| Telephone: 613-685-1939 | Email Address: Patricia.Stelmack@exp.com | |

Criteria: O. Reg. 153/04 (As Amended) Table 1 RSC Filing O. Reg. 558/00 PM10 CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

| Parcel Order Number: | | Matrix | Air Volume | # of Containers | Sample Taken | | Required Analyses | | | | | | | | | | | pH | Limited Samples |
|----------------------|---------------|--------|------------|-----------------|--------------|------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--|----|-----------------|
| 2113433 | | | | | Date | Time | PHCS P1-P4/BTEX | VOCs | PAHs | Metals by ICP | Hg | CVI | B (UFS) | VOC, P10 P1-P4 | PCB | | | | |
| Sample ID | Location Name | | | | | | | | | | | | | | | | | | |
| 1 | BH/MW21-04 | GW | | 9 | 2021/03/24 | 1400 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | |
| 2 | BH/MW21-05 | GW | | 9 | 2021/03/23 | 945 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | |
| 3 | D206 | GW | | 9 | 2021/03/23 | 945 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used.

Method of Delivery: Drop Box

| | | | |
|---|----------------------------------|---------------------------------|---------------------------------|
| Relinquished By (Sign): | Received by Drive Depot: | Received at Lab: | Verified by: |
| Relinquished By (Print): <u>Jeremy Eckert</u> | Date/Time: <u>Mar 25/21 1330</u> | Date/Time: <u>3-25-21 16:22</u> | Date/Time: <u>3-25-21 16:00</u> |
| Date/Time: <u>2021/03/25 1330</u> | Temperature: <u>14.2°C</u> | Temperature: <u>15°C</u> | All Verified By: <u>NS</u> |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi-Albert and Chaudiere Island
Project: OTT00250193N0
Custody:

Report Date: 31-Mar-2021
Order Date: 25-Mar-2021

Order #: 2113436

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|------------|
| 2113436-01 | BH/MW21-01 |
| 2113436-02 | BH/MW21-02 |
| 2113436-03 | BH/MW21-03 |

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------------|---------------------------------|-----------------|---------------|
| Chromium, hexavalent - water | MOE E3056 - colourimetric | 26-Mar-21 | 26-Mar-21 |
| Mercury by CVAA | EPA 245.2 - Cold Vapour AA | 26-Mar-21 | 26-Mar-21 |
| Metals, ICP-MS | EPA 200.8 - ICP-MS | 26-Mar-21 | 26-Mar-21 |
| PCBs, total | EPA 608 - GC-ECD | 29-Mar-21 | 29-Mar-21 |
| pH | EPA 150.1 - pH probe @25 °C | 26-Mar-21 | 26-Mar-21 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 26-Mar-21 | 26-Mar-21 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 27-Mar-21 | 29-Mar-21 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 30-Mar-21 | 30-Mar-21 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 26-Mar-21 | 26-Mar-21 |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

| | | | | |
|---------------------|-----------------|-----------------|-----------------|---|
| Client ID: | BH/MW21-01 | BH/MW21-02 | BH/MW21-03 | - |
| Sample Date: | 23-Mar-21 12:50 | 24-Mar-21 10:00 | 23-Mar-21 11:00 | - |
| Sample ID: | 2113436-01 | 2113436-02 | 2113436-03 | - |
| MDL/Units | Water | Water | Water | - |

General Inorganics

| | | | | | |
|----|--------------|-----|---|-----|---|
| pH | 0.1 pH Units | 7.2 | - | 8.0 | - |
|----|--------------|-----|---|-----|---|

Metals

| | | | | | |
|---------------|----------|--------|---|--------|---|
| Mercury | 0.1 ug/L | <0.1 | - | <0.1 | - |
| Antimony | 0.5 ug/L | <0.5 | - | 0.9 | - |
| Arsenic | 1 ug/L | <1 | - | 2 | - |
| Barium | 1 ug/L | 350 | - | 161 | - |
| Beryllium | 0.5 ug/L | <0.5 | - | <0.5 | - |
| Boron | 10 ug/L | 77 | - | 61 | - |
| Cadmium | 0.1 ug/L | <0.1 | - | <0.1 | - |
| Chromium | 1 ug/L | <1 | - | <1 | - |
| Chromium (VI) | 10 ug/L | <10 | - | <10 | - |
| Cobalt | 0.5 ug/L | 3.4 | - | 1.4 | - |
| Copper | 0.5 ug/L | 1.5 | - | 0.9 | - |
| Lead | 0.1 ug/L | 0.4 | - | 0.2 | - |
| Molybdenum | 0.5 ug/L | 5.9 | - | 17.8 | - |
| Nickel | 1 ug/L | 11 | - | 23 | - |
| Selenium | 1 ug/L | <1 | - | <1 | - |
| Silver | 0.1 ug/L | <0.1 | - | <0.1 | - |
| Sodium | 200 ug/L | 884000 | - | 181000 | - |
| Thallium | 0.1 ug/L | <0.1 | - | <0.1 | - |
| Uranium | 0.1 ug/L | 1.7 | - | 1.7 | - |
| Vanadium | 0.5 ug/L | <0.5 | - | 5.9 | - |
| Zinc | 5 ug/L | <5 | - | <5 | - |

Volatiles

| | | | | | |
|-------------------------|----------|------|------|------|---|
| Acetone | 5.0 ug/L | <5.0 | <5.0 | <5.0 | - |
| Benzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Bromodichloromethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Bromoform | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Bromomethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Carbon Tetrachloride | 0.2 ug/L | <0.2 | <0.2 | <0.2 | - |
| Chlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Chloroform | 0.5 ug/L | 0.6 | <0.5 | <0.5 | - |
| Dibromochloromethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Dichlorodifluoromethane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | - |
| 1,2-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

| | Client ID: | BH/MW21-01 | BH/MW21-02 | BH/MW21-03 | - |
|--|--------------|-----------------|-----------------|-----------------|---|
| | Sample Date: | 23-Mar-21 12:50 | 24-Mar-21 10:00 | 23-Mar-21 11:00 | - |
| | Sample ID: | 2113436-01 | 2113436-02 | 2113436-03 | - |
| | MDL/Units | Water | Water | Water | - |
| 1,3-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,4-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,2-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| cis-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| trans-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,2-Dichloropropane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| cis-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| trans-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,3-Dichloropropene, total | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Ethylbenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | <0.2 | <0.2 | <0.2 | - |
| Hexane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | - |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | <5.0 | <5.0 | <5.0 | - |
| Methyl Isobutyl Ketone | 5.0 ug/L | <5.0 | <5.0 | <5.0 | - |
| Methyl tert-butyl ether | 2.0 ug/L | <2.0 | <2.0 | <2.0 | - |
| Methylene Chloride | 5.0 ug/L | <5.0 | <5.0 | <5.0 | - |
| Styrene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1,1,2,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Tetrachloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Toluene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1,1-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 1,1,2-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Trichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Trichlorofluoromethane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | - |
| Vinyl chloride | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| m,p-Xylenes | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| o-Xylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| Xylenes, total | 0.5 ug/L | <0.5 | <0.5 | <0.5 | - |
| 4-Bromofluorobenzene | Surrogate | 93.2% | 93.2% | 91.4% | - |
| Dibromofluoromethane | Surrogate | 86.8% | 88.6% | 85.1% | - |
| Toluene-d8 | Surrogate | 106% | 103% | 106% | - |
| Hydrocarbons | | | | | |
| F1 PHCs (C6-C10) | 25 ug/L | <25 | <25 | <25 | - |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

| | Client ID: | BH/MW21-01 | BH/MW21-02 | BH/MW21-03 | - |
|-------------------|--------------|-----------------|-----------------|-----------------|---|
| | Sample Date: | 23-Mar-21 12:50 | 24-Mar-21 10:00 | 23-Mar-21 11:00 | - |
| | Sample ID: | 2113436-01 | 2113436-02 | 2113436-03 | - |
| | MDL/Units | Water | Water | Water | - |
| F2 PHCs (C10-C16) | 100 ug/L | <100 | <177 [1] | <100 | - |
| F3 PHCs (C16-C34) | 100 ug/L | <100 | <177 [1] | <100 | - |
| F4 PHCs (C34-C50) | 100 ug/L | <100 | <177 [1] | <100 | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-------|-------|-------|---|
| Acenaphthene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Acenaphthylene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Anthracene | 0.01 ug/L | 0.02 | <0.01 | <0.01 | - |
| Benzo [a] anthracene | 0.01 ug/L | 0.04 | <0.01 | <0.01 | - |
| Benzo [a] pyrene | 0.01 ug/L | 0.03 | <0.01 | <0.01 | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Chrysene | 0.05 ug/L | 0.08 | <0.05 | <0.05 | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Fluoranthene | 0.01 ug/L | 0.10 | <0.01 | 0.04 | - |
| Fluorene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 | <0.10 | <0.10 | - |
| Naphthalene | 0.05 ug/L | <0.05 | <0.05 | <0.05 | - |
| Phenanthrene | 0.05 ug/L | 0.09 | <0.05 | <0.05 | - |
| Pyrene | 0.01 ug/L | 0.12 | <0.01 | 0.08 | - |
| 2-Fluorobiphenyl | Surrogate | 96.1% | 94.4% | 97.3% | - |
| Terphenyl-d14 | Surrogate | 120% | 103% | 115% | - |

PCBs

| | | | | | |
|--------------------|-----------|-------|---|-------|---|
| PCBs, total | 0.05 ug/L | <0.05 | - | <0.05 | - |
| Decachlorobiphenyl | Surrogate | 96.2% | - | 98.8% | - |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193NO

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | | | | | | |
| Antimony | ND | 0.5 | ug/L | | | | | | |
| Arsenic | ND | 1 | ug/L | | | | | | |
| Barium | ND | 1 | ug/L | | | | | | |
| Beryllium | ND | 0.5 | ug/L | | | | | | |
| Boron | ND | 10 | ug/L | | | | | | |
| Cadmium | ND | 0.1 | ug/L | | | | | | |
| Chromium (VI) | ND | 10 | ug/L | | | | | | |
| Chromium | ND | 1 | ug/L | | | | | | |
| Cobalt | ND | 0.5 | ug/L | | | | | | |
| Copper | ND | 0.5 | ug/L | | | | | | |
| Lead | ND | 0.1 | ug/L | | | | | | |
| Molybdenum | ND | 0.5 | ug/L | | | | | | |
| Nickel | ND | 1 | ug/L | | | | | | |
| Selenium | ND | 1 | ug/L | | | | | | |
| Silver | ND | 0.1 | ug/L | | | | | | |
| Sodium | ND | 200 | ug/L | | | | | | |
| Thallium | ND | 0.1 | ug/L | | | | | | |
| Uranium | ND | 0.1 | ug/L | | | | | | |
| Vanadium | ND | 0.5 | ug/L | | | | | | |
| Zinc | ND | 5 | ug/L | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 0.505 | | ug/L | | 101 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 18.5 | | ug/L | | 92.6 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 24.1 | | ug/L | | 120 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 75.7 | | ug/L | | 94.6 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 63.2 | | ug/L | | 79.0 | 50-140 | | | |
| Surrogate: Toluene-d8 | 84.9 | | ug/L | | 106 | 50-140 | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| General Inorganics | | | | | | | | | |
| pH | 7.9 | 0.1 | pH Units | 8.0 | | | 0.6 | 3.3 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Antimony | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Arsenic | ND | 1 | ug/L | ND | | | NC | 20 | |
| Barium | 226 | 1 | ug/L | 224 | | | 0.9 | 20 | |
| Beryllium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Boron | 175 | 10 | ug/L | 172 | | | 2.0 | 20 | |
| Cadmium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Chromium (VI) | ND | 10 | ug/L | ND | | | NC | 20 | |
| Chromium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Cobalt | 1.24 | 0.5 | ug/L | 1.24 | | | 0.1 | 20 | |
| Copper | 0.80 | 0.5 | ug/L | 0.72 | | | 10.6 | 20 | |
| Lead | 0.14 | 0.1 | ug/L | ND | | | NC | 20 | |
| Molybdenum | 6.30 | 0.5 | ug/L | 6.20 | | | 1.6 | 20 | |
| Nickel | 5.9 | 1 | ug/L | 6.1 | | | 2.9 | 20 | |
| Selenium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Silver | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Sodium | 945000 | 4850 | ug/L | 950000 | | | 0.5 | 20 | |
| Thallium | 0.17 | 0.1 | ug/L | 0.15 | | | 16.5 | 20 | |
| Uranium | 1.8 | 0.1 | ug/L | 1.8 | | | 1.0 | 20 | |
| Vanadium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Zinc | ND | 5 | ug/L | ND | | | NC | 20 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dibromochloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 79.7 | | ug/L | | 99.6 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 67.9 | | ug/L | | 84.9 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 84.3 | | ug/L | | 105 | 50-140 | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------|--------------|-----------------|-------------|---------------|------------|---------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 2030 | 25 | ug/L | ND | 101 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1500 | 100 | ug/L | ND | 93.8 | 60-140 | | | |
| F3 PHCs (C16-C34) | 4000 | 100 | ug/L | ND | 102 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2530 | 100 | ug/L | ND | 102 | 60-140 | | | |
| Metals | | | | | | | | | |
| Mercury | 3.08 | 0.1 | ug/L | ND | 103 | 70-130 | | | |
| Antimony | 41.6 | 0.5 | ug/L | ND | 83.0 | 80-120 | | | |
| Arsenic | 50.8 | 1 | ug/L | ND | 101 | 80-120 | | | |
| Barium | 265 | 1 | ug/L | 224 | 80.6 | 80-120 | | | |
| Beryllium | 40.7 | 0.5 | ug/L | ND | 81.3 | 80-120 | | | |
| Boron | 45 | 10 | ug/L | ND | 89.2 | 80-120 | | | |
| Cadmium | 41.0 | 0.1 | ug/L | ND | 82.0 | 80-120 | | | |
| Chromium (VI) | 203 | 10 | ug/L | ND | 102 | 70-130 | | | |
| Chromium | 59.9 | 1 | ug/L | ND | 120 | 80-120 | | | |
| Cobalt | 55.0 | 0.5 | ug/L | 1.24 | 108 | 80-120 | | | |
| Copper | 48.3 | 0.5 | ug/L | 0.72 | 95.1 | 80-120 | | | |
| Lead | 39.8 | 0.1 | ug/L | ND | 79.4 | 80-120 | | | QM-07 |
| Molybdenum | 56.5 | 0.5 | ug/L | 6.20 | 101 | 80-120 | | | |
| Nickel | 54.3 | 1 | ug/L | 6.1 | 96.6 | 80-120 | | | |
| Selenium | 39.7 | 1 | ug/L | ND | 79.3 | 80-120 | | | QM-07 |
| Silver | 33.1 | 0.1 | ug/L | ND | 66.3 | 80-120 | | | QM-07 |
| Sodium | 11700 | 200 | ug/L | ND | 117 | 80-120 | | | |
| Thallium | 43.4 | 0.1 | ug/L | 0.15 | 86.6 | 80-120 | | | |
| Uranium | 47.3 | 0.1 | ug/L | 1.8 | 91.0 | 80-120 | | | |
| Vanadium | 64.2 | 0.5 | ug/L | ND | 128 | 80-120 | | | QM-07 |
| Zinc | 50 | 5 | ug/L | ND | 101 | 80-120 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.986 | 0.05 | ug/L | ND | 98.6 | 60-140 | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | <i>0.542</i> | | <i>ug/L</i> | | <i>108</i> | <i>60-140</i> | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 4.81 | 0.05 | ug/L | ND | 96.3 | 50-140 | | | |
| Acenaphthylene | 4.39 | 0.05 | ug/L | ND | 87.7 | 50-140 | | | |
| Anthracene | 4.87 | 0.01 | ug/L | ND | 97.4 | 50-140 | | | |
| Benzo [a] anthracene | 3.79 | 0.01 | ug/L | ND | 75.8 | 50-140 | | | |
| Benzo [a] pyrene | 4.44 | 0.01 | ug/L | ND | 88.9 | 50-140 | | | |
| Benzo [b] fluoranthene | 5.36 | 0.05 | ug/L | ND | 107 | 50-140 | | | |
| Benzo [g,h,i] perylene | 4.65 | 0.05 | ug/L | ND | 93.0 | 50-140 | | | |
| Benzo [k] fluoranthene | 5.06 | 0.05 | ug/L | ND | 101 | 50-140 | | | |
| Chrysene | 5.12 | 0.05 | ug/L | ND | 102 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 5.02 | 0.05 | ug/L | ND | 100 | 50-140 | | | |
| Fluoranthene | 5.06 | 0.01 | ug/L | ND | 101 | 50-140 | | | |
| Fluorene | 4.48 | 0.05 | ug/L | ND | 89.6 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 4.85 | 0.05 | ug/L | ND | 96.9 | 50-140 | | | |
| 1-Methylnaphthalene | 5.20 | 0.05 | ug/L | ND | 104 | 50-140 | | | |
| 2-Methylnaphthalene | 5.56 | 0.05 | ug/L | ND | 111 | 50-140 | | | |
| Naphthalene | 5.46 | 0.05 | ug/L | ND | 109 | 50-140 | | | |
| Phenanthrene | 4.68 | 0.05 | ug/L | ND | 93.6 | 50-140 | | | |
| Pyrene | 5.23 | 0.01 | ug/L | ND | 105 | 50-140 | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| <i>Surrogate: 2-Fluorobiphenyl</i> | 18.5 | | ug/L | | 92.4 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 22.8 | | ug/L | | 114 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 97.8 | 5.0 | ug/L | ND | 97.8 | 50-140 | | | |
| Benzene | 36.2 | 0.5 | ug/L | ND | 90.5 | 60-130 | | | |
| Bromodichloromethane | 29.3 | 0.5 | ug/L | ND | 73.3 | 60-130 | | | |
| Bromoform | 32.6 | 0.5 | ug/L | ND | 81.5 | 60-130 | | | |
| Bromomethane | 35.8 | 0.5 | ug/L | ND | 89.4 | 50-140 | | | |
| Carbon Tetrachloride | 26.8 | 0.2 | ug/L | ND | 67.0 | 60-130 | | | |
| Chlorobenzene | 43.7 | 0.5 | ug/L | ND | 109 | 60-130 | | | |
| Chloroform | 39.0 | 0.5 | ug/L | ND | 97.5 | 60-130 | | | |
| Dibromochloromethane | 27.8 | 0.5 | ug/L | ND | 69.4 | 60-130 | | | |
| Dichlorodifluoromethane | 37.4 | 1.0 | ug/L | ND | 93.4 | 50-140 | | | |
| 1,2-Dichlorobenzene | 41.0 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| 1,3-Dichlorobenzene | 41.5 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| 1,4-Dichlorobenzene | 40.8 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,1-Dichloroethane | 37.6 | 0.5 | ug/L | ND | 94.1 | 60-130 | | | |
| 1,2-Dichloroethane | 44.4 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| 1,1-Dichloroethylene | 32.1 | 0.5 | ug/L | ND | 80.2 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 36.1 | 0.5 | ug/L | ND | 90.2 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 32.9 | 0.5 | ug/L | ND | 82.2 | 60-130 | | | |
| 1,2-Dichloropropane | 37.6 | 0.5 | ug/L | ND | 93.9 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 27.0 | 0.5 | ug/L | ND | 67.4 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 28.0 | 0.5 | ug/L | ND | 69.9 | 60-130 | | | |
| Ethylbenzene | 41.2 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2) | 37.4 | 0.2 | ug/L | ND | 93.5 | 60-130 | | | |
| Hexane | 27.6 | 1.0 | ug/L | ND | 69.1 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 90.3 | 5.0 | ug/L | ND | 90.3 | 50-140 | | | |
| Methyl Isobutyl Ketone | 83.6 | 5.0 | ug/L | ND | 83.6 | 50-140 | | | |
| Methyl tert-butyl ether | 89.8 | 2.0 | ug/L | ND | 89.8 | 50-140 | | | |
| Methylene Chloride | 34.3 | 5.0 | ug/L | ND | 85.8 | 60-130 | | | |
| Styrene | 46.0 | 0.5 | ug/L | ND | 115 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 33.0 | 0.5 | ug/L | ND | 82.6 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 34.4 | 0.5 | ug/L | ND | 86.0 | 60-130 | | | |
| Tetrachloroethylene | 45.1 | 0.5 | ug/L | ND | 113 | 60-130 | | | |
| Toluene | 44.7 | 0.5 | ug/L | ND | 112 | 60-130 | | | |
| 1,1,1-Trichloroethane | 29.0 | 0.5 | ug/L | ND | 72.6 | 60-130 | | | |
| 1,1,2-Trichloroethane | 34.8 | 0.5 | ug/L | ND | 87.0 | 60-130 | | | |
| Trichloroethylene | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| Trichlorofluoromethane | 30.8 | 1.0 | ug/L | ND | 76.9 | 60-130 | | | |
| Vinyl chloride | 37.7 | 0.5 | ug/L | ND | 94.3 | 50-140 | | | |
| m,p-Xylenes | 98.8 | 0.5 | ug/L | ND | 123 | 60-130 | | | |
| o-Xylene | 49.3 | 0.5 | ug/L | ND | 123 | 60-130 | | | |

Certificate of Analysis

Report Date: 31-Mar-2021

Client: exp Services Inc. (Ottawa)

Order Date: 25-Mar-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193N0

Qualifier Notes:

Sample Qualifiers :

1 : Elevated Reporting Limits due to limited sample volume.

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



| | | |
|---|--|--|
| Client Name: EXP Services Inc. | Project Reference: Zbi - Albert and Chaudiere Island | Turnaround Time: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input checked="" type="checkbox"/> Regular Date Required: _____ |
| Contact Name: Patricia Stelmack | Quote # 21-158 | |
| Address: 100-2050 Queensview Drive Ottawa, ON, K2B 8H6 | PO # OTT 00250193-N0 | |
| Telephone: 613-608-1899 | Email Address: Patricia.Stelmack@exp.com | |

 Criteria: O, Reg. 153/04 (As Amended) Table 1 BSC Filing O, Reg. 558/00 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

| Parcel Order Number: | Matrix | Air Volume | # of Containers | Sample Taken | | Pb | Cd | Cu | Mn | Ni | Zn | VOCs | Pb | PCB | pH | Limited Sample |
|----------------------|------------|------------|-----------------|--------------|------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | | | Date | Time | | | | | | | | | | | |
| 1 | BH/MW21-01 | GW | 9 | 2021/03/23 | 1250 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2 | BH/MW21-02 | GW | 4 | 2021/03/23 | 1000 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3 | BH/MW21-03 | GW | 9 | 2021/03/23 | 1100 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used.

Method of Delivery:

Drop Box

| | | | |
|--|---|---|---|
| Requested By (Sign):  | Received by Drive/Drop:  | Received at Lab:  | Verified By:  |
| Requested By (Print): Jeremy Eckert | Date/Time: Mar 25/21 1330 | Date/Time: 3-25-21 1610 | Date/Time: 3-25-21 1614 |
| | Temperature: 14.26 °C | Temperature: 13.6 °C | pH Verified By:  |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi- Albert and Chaudière Island
Project: OTT00250193P0
Custody:

Report Date: 30-Aug-2021
Order Date: 23-Aug-2021

Order #: 2135216

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|-----------|
| 2135216-01 | FB23 |
| 2135216-02 | TB23 |

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------------|---------------------------------|-----------------|---------------|
| Chromium, hexavalent - water | MOE E3056 - colourimetric | 27-Aug-21 | 27-Aug-21 |
| Cyanide, free | MOE E3015 - Auto Colour | 25-Aug-21 | 25-Aug-21 |
| Mercury by CVAA | EPA 245.2 - Cold Vapour AA | 25-Aug-21 | 26-Aug-21 |
| Metals, ICP-MS | EPA 200.8 - ICP-MS | 25-Aug-21 | 25-Aug-21 |
| PCBs, total | EPA 608 - GC-ECD | 24-Aug-21 | 25-Aug-21 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 25-Aug-21 | 26-Aug-21 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 25-Aug-21 | 25-Aug-21 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 26-Aug-21 | 26-Aug-21 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 25-Aug-21 | 26-Aug-21 |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|-----------------|---|---|
| Client ID: | FB23 | TB23 | - | - |
| Sample Date: | 23-Aug-21 14:10 | 17-Aug-21 00:00 | - | - |
| Sample ID: | 2135216-01 | 2135216-02 | - | - |
| MDL/Units | Water | Water | - | - |

General Inorganics

| | | | | |
|---------------|--------|----|---|---|
| Cyanide, free | 2 ug/L | <2 | - | - |
|---------------|--------|----|---|---|

Metals

| | | | | |
|---------------|----------|------|---|---|
| Mercury | 0.1 ug/L | <0.1 | - | - |
| Antimony | 0.5 ug/L | <0.5 | - | - |
| Arsenic | 1 ug/L | <1 | - | - |
| Barium | 1 ug/L | <1 | - | - |
| Beryllium | 0.5 ug/L | <0.5 | - | - |
| Boron | 10 ug/L | <10 | - | - |
| Cadmium | 0.1 ug/L | <0.1 | - | - |
| Chromium | 1 ug/L | <1 | - | - |
| Chromium (VI) | 10 ug/L | <10 | - | - |
| Cobalt | 0.5 ug/L | <0.5 | - | - |
| Copper | 0.5 ug/L | <0.5 | - | - |
| Lead | 0.1 ug/L | <0.1 | - | - |
| Molybdenum | 0.5 ug/L | <0.5 | - | - |
| Nickel | 1 ug/L | <1 | - | - |
| Selenium | 1 ug/L | <1 | - | - |
| Silver | 0.1 ug/L | <0.1 | - | - |
| Sodium | 200 ug/L | <200 | - | - |
| Thallium | 0.1 ug/L | <0.1 | - | - |
| Uranium | 0.1 ug/L | <0.1 | - | - |
| Vanadium | 0.5 ug/L | <0.5 | - | - |
| Zinc | 5 ug/L | <5 | - | - |

Volatiles

| | | | | | |
|-------------------------|----------|------|------|---|---|
| Acetone | 5.0 ug/L | <5.0 | <5.0 | - | - |
| Benzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Bromodichloromethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Bromoform | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Bromomethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Carbon Tetrachloride | 0.2 ug/L | <0.2 | <0.2 | - | - |
| Chlorobenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Chloroform | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Dibromochloromethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Dichlorodifluoromethane | 1.0 ug/L | <1.0 | <1.0 | - | - |
| 1,2-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: | FB23 | TB23 | - | - |
|--|--------------|-----------------|-----------------|---|---|
| | Sample Date: | 23-Aug-21 14:10 | 17-Aug-21 00:00 | - | - |
| | Sample ID: | 2135216-01 | 2135216-02 | - | - |
| | MDL/Units | Water | Water | - | - |
| 1,3-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,4-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,2-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| cis-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| trans-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,2-Dichloropropane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| cis-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| trans-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,3-Dichloropropene, total | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Ethylbenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | <0.2 | <0.2 | - | - |
| Hexane | 1.0 ug/L | <1.0 | <1.0 | - | - |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | <5.0 | <5.0 | - | - |
| Methyl Isobutyl Ketone | 5.0 ug/L | <5.0 | <5.0 | - | - |
| Methyl tert-butyl ether | 2.0 ug/L | <2.0 | <2.0 | - | - |
| Methylene Chloride | 5.0 ug/L | <5.0 | <5.0 | - | - |
| Styrene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1,1,2,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Tetrachloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Toluene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1,1-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1,2-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Trichloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Trichlorofluoromethane | 1.0 ug/L | <1.0 | <1.0 | - | - |
| Vinyl chloride | 0.5 ug/L | <0.5 | <0.5 | - | - |
| m,p-Xylenes | 0.5 ug/L | <0.5 | <0.5 | - | - |
| o-Xylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Xylenes, total | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 4-Bromofluorobenzene | Surrogate | 93.3% | 94.0% | - | - |
| Dibromofluoromethane | Surrogate | 94.6% | 100% | - | - |
| Toluene-d8 | Surrogate | 99.6% | 100% | - | - |
| Hydrocarbons | | | | | |
| F1 PHCs (C6-C10) | 25 ug/L | <25 | <25 | - | - |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: | FB23 | TB23 | - | - |
|-------------------|--------------|-----------------|-----------------|---|---|
| | Sample Date: | 23-Aug-21 14:10 | 17-Aug-21 00:00 | - | - |
| | Sample ID: | 2135216-01 | 2135216-02 | - | - |
| | MDL/Units | Water | Water | - | - |
| F2 PHCs (C10-C16) | 100 ug/L | <100 | - | - | - |
| F3 PHCs (C16-C34) | 100 ug/L | <100 | - | - | - |
| F4 PHCs (C34-C50) | 100 ug/L | <100 | - | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-------|---|---|---|
| Acenaphthene | 0.05 ug/L | <0.05 | - | - | - |
| Acenaphthylene | 0.05 ug/L | <0.05 | - | - | - |
| Anthracene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [a] anthracene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [a] pyrene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 | - | - | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 | - | - | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 | - | - | - |
| Chrysene | 0.05 ug/L | <0.05 | - | - | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 | - | - | - |
| Fluoranthene | 0.01 ug/L | <0.01 | - | - | - |
| Fluorene | 0.05 ug/L | <0.05 | - | - | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 | - | - | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 | - | - | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 | - | - | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 | - | - | - |
| Naphthalene | 0.05 ug/L | <0.05 | - | - | - |
| Phenanthrene | 0.05 ug/L | <0.05 | - | - | - |
| Pyrene | 0.01 ug/L | <0.01 | - | - | - |
| 2-Fluorobiphenyl | Surrogate | 79.3% | - | - | - |
| Terphenyl-d14 | Surrogate | 97.5% | - | - | - |

PCBs

| | | | | | |
|--------------------|-----------|-------|---|---|---|
| PCBs, total | 0.05 ug/L | <0.05 | - | - | - |
| Decachlorobiphenyl | Surrogate | 85.4% | - | - | - |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | | | | | | |
| Antimony | ND | 0.5 | ug/L | | | | | | |
| Arsenic | ND | 1 | ug/L | | | | | | |
| Barium | ND | 1 | ug/L | | | | | | |
| Beryllium | ND | 0.5 | ug/L | | | | | | |
| Boron | ND | 10 | ug/L | | | | | | |
| Cadmium | ND | 0.1 | ug/L | | | | | | |
| Chromium (VI) | ND | 10 | ug/L | | | | | | |
| Chromium | ND | 1 | ug/L | | | | | | |
| Cobalt | ND | 0.5 | ug/L | | | | | | |
| Copper | ND | 0.5 | ug/L | | | | | | |
| Lead | ND | 0.1 | ug/L | | | | | | |
| Molybdenum | ND | 0.5 | ug/L | | | | | | |
| Nickel | ND | 1 | ug/L | | | | | | |
| Selenium | ND | 1 | ug/L | | | | | | |
| Silver | ND | 0.1 | ug/L | | | | | | |
| Sodium | ND | 200 | ug/L | | | | | | |
| Thallium | ND | 0.1 | ug/L | | | | | | |
| Uranium | ND | 0.1 | ug/L | | | | | | |
| Vanadium | ND | 0.5 | ug/L | | | | | | |
| Zinc | ND | 5 | ug/L | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.518 | | ug/L | | 104 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 16.1 | | ug/L | | 80.6 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 21.1 | | ug/L | | 106 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2-Hexane | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 70.7 | | ug/L | | 88.4 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 42.1 | | ug/L | | 52.6 | 50-140 | | | |
| Surrogate: Toluene-d8 | 79.8 | | ug/L | | 99.8 | 50-140 | | | |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | ND | | | NC | 20 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Antimony | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Arsenic | ND | 1 | ug/L | ND | | | NC | 20 | |
| Barium | 50.2 | 1 | ug/L | 51.9 | | | 3.3 | 20 | |
| Beryllium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Boron | 25 | 10 | ug/L | 25 | | | 0.1 | 20 | |
| Cadmium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Chromium (VI) | ND | 10 | ug/L | ND | | | NC | 20 | |
| Chromium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Cobalt | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Copper | 2.45 | 0.5 | ug/L | 2.47 | | | 0.8 | 20 | |
| Lead | 0.14 | 0.1 | ug/L | 0.13 | | | 5.5 | 20 | |
| Molybdenum | 1.66 | 0.5 | ug/L | 1.53 | | | 8.1 | 20 | |
| Nickel | ND | 1 | ug/L | ND | | | NC | 20 | |
| Selenium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Silver | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Sodium | 23600 | 200 | ug/L | 23600 | | | 0.1 | 20 | |
| Thallium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Uranium | 0.2 | 0.1 | ug/L | 0.2 | | | 0.4 | 20 | |
| Vanadium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Zinc | ND | 5 | ug/L | ND | | | NC | 20 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dibromochloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 74.0 | | ug/L | | 92.5 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 70.5 | | ug/L | | 88.1 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 82.7 | | ug/L | | 103 | 50-140 | | | |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 31.9 | 2 | ug/L | ND | 106 | 70-130 | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 2110 | 25 | ug/L | ND | 106 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1730 | 100 | ug/L | ND | 108 | 60-140 | | | |
| F3 PHCs (C16-C34) | 4110 | 100 | ug/L | ND | 105 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2560 | 100 | ug/L | ND | 103 | 60-140 | | | |
| Metals | | | | | | | | | |
| Mercury | 3.32 | 0.1 | ug/L | ND | 111 | 70-130 | | | |
| Antimony | 50.5 | 0.5 | ug/L | ND | 101 | 80-120 | | | |
| Arsenic | 60.2 | 1 | ug/L | ND | 119 | 80-120 | | | |
| Barium | 102 | 1 | ug/L | 51.9 | 100 | 80-120 | | | |
| Beryllium | 49.3 | 0.5 | ug/L | ND | 98.5 | 80-120 | | | |
| Boron | 67 | 10 | ug/L | 25 | 85.3 | 80-120 | | | |
| Cadmium | 50.1 | 0.1 | ug/L | ND | 100 | 80-120 | | | |
| Chromium (VI) | 196 | 10 | ug/L | ND | 98.0 | 70-130 | | | |
| Chromium | 59.7 | 1 | ug/L | ND | 118 | 80-120 | | | |
| Cobalt | 57.2 | 0.5 | ug/L | ND | 114 | 80-120 | | | |
| Copper | 55.3 | 0.5 | ug/L | 2.47 | 106 | 80-120 | | | |
| Lead | 49.4 | 0.1 | ug/L | 0.13 | 98.5 | 80-120 | | | |
| Molybdenum | 57.8 | 0.5 | ug/L | 1.53 | 113 | 80-120 | | | |
| Nickel | 54.1 | 1 | ug/L | ND | 107 | 80-120 | | | |
| Selenium | 57.8 | 1 | ug/L | ND | 116 | 80-120 | | | |
| Silver | 45.4 | 0.1 | ug/L | ND | 90.8 | 80-120 | | | |
| Sodium | 32400 | 200 | ug/L | 23600 | 88.2 | 80-120 | | | |
| Thallium | 49.7 | 0.1 | ug/L | ND | 99.3 | 80-120 | | | |
| Uranium | 54.5 | 0.1 | ug/L | 0.2 | 109 | 80-120 | | | |
| Vanadium | 61.2 | 0.5 | ug/L | ND | 122 | 80-120 | | | QM-07 |
| Zinc | 55 | 5 | ug/L | ND | 101 | 80-120 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.823 | 0.05 | ug/L | ND | 82.3 | 65-135 | | | |
| Surrogate: Decachlorobiphenyl | 0.360 | | ug/L | | 72.0 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 4.33 | 0.05 | ug/L | ND | 86.5 | 50-140 | | | |
| Acenaphthylene | 3.05 | 0.05 | ug/L | ND | 61.1 | 50-140 | | | |
| Anthracene | 3.94 | 0.01 | ug/L | ND | 78.9 | 50-140 | | | |
| Benzo [a] anthracene | 4.08 | 0.01 | ug/L | ND | 81.7 | 50-140 | | | |
| Benzo [a] pyrene | 4.76 | 0.01 | ug/L | ND | 95.2 | 50-140 | | | |
| Benzo [b] fluoranthene | 5.63 | 0.05 | ug/L | ND | 113 | 50-140 | | | |
| Benzo [g,h,i] perylene | 4.82 | 0.05 | ug/L | ND | 96.3 | 50-140 | | | |
| Benzo [k] fluoranthene | 5.22 | 0.05 | ug/L | ND | 104 | 50-140 | | | |
| Chrysene | 4.57 | 0.05 | ug/L | ND | 91.5 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 4.93 | 0.05 | ug/L | ND | 98.6 | 50-140 | | | |
| Fluoranthene | 3.89 | 0.01 | ug/L | ND | 77.7 | 50-140 | | | |
| Fluorene | 3.87 | 0.05 | ug/L | ND | 77.3 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 4.23 | 0.05 | ug/L | ND | 84.5 | 50-140 | | | |
| 1-Methylnaphthalene | 4.24 | 0.05 | ug/L | ND | 84.8 | 50-140 | | | |
| 2-Methylnaphthalene | 4.71 | 0.05 | ug/L | ND | 94.3 | 50-140 | | | |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Naphthalene | 4.64 | 0.05 | ug/L | ND | 92.8 | 50-140 | | | |
| Phenanthrene | 3.84 | 0.05 | ug/L | ND | 76.8 | 50-140 | | | |
| Pyrene | 4.01 | 0.01 | ug/L | ND | 80.2 | 50-140 | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 17.7 | | ug/L | | 88.3 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 20.4 | | ug/L | | 102 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 67.3 | 5.0 | ug/L | ND | 67.3 | 50-140 | | | |
| Benzene | 40.2 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| Bromodichloromethane | 37.7 | 0.5 | ug/L | ND | 94.2 | 60-130 | | | |
| Bromoform | 36.7 | 0.5 | ug/L | ND | 91.7 | 60-130 | | | |
| Bromomethane | 43.9 | 0.5 | ug/L | ND | 110 | 50-140 | | | |
| Carbon Tetrachloride | 37.5 | 0.2 | ug/L | ND | 93.7 | 60-130 | | | |
| Chlorobenzene | 34.3 | 0.5 | ug/L | ND | 85.7 | 60-130 | | | |
| Chloroform | 41.8 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| Dibromochloromethane | 28.2 | 0.5 | ug/L | ND | 70.6 | 60-130 | | | |
| Dichlorodifluoromethane | 43.6 | 1.0 | ug/L | ND | 109 | 50-140 | | | |
| 1,2-Dichlorobenzene | 44.5 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| 1,3-Dichlorobenzene | 44.5 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| 1,4-Dichlorobenzene | 44.0 | 0.5 | ug/L | ND | 110 | 60-130 | | | |
| 1,1-Dichloroethane | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,2-Dichloroethane | 37.1 | 0.5 | ug/L | ND | 92.8 | 60-130 | | | |
| 1,1-Dichloroethylene | 40.0 | 0.5 | ug/L | ND | 99.9 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 40.8 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 39.7 | 0.5 | ug/L | ND | 99.2 | 60-130 | | | |
| 1,2-Dichloropropane | 39.9 | 0.5 | ug/L | ND | 99.8 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 31.4 | 0.5 | ug/L | ND | 78.6 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 30.7 | 0.5 | ug/L | ND | 76.6 | 60-130 | | | |
| Ethylbenzene | 45.2 | 0.5 | ug/L | ND | 113 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2- | 34.3 | 0.2 | ug/L | ND | 85.8 | 60-130 | | | |
| Hexane | 34.0 | 1.0 | ug/L | ND | 85.0 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 101 | 5.0 | ug/L | ND | 101 | 50-140 | | | |
| Methyl Isobutyl Ketone | 105 | 5.0 | ug/L | ND | 105 | 50-140 | | | |
| Methyl tert-butyl ether | 107 | 2.0 | ug/L | ND | 107 | 50-140 | | | |
| Methylene Chloride | 31.0 | 5.0 | ug/L | ND | 77.6 | 60-130 | | | |
| Styrene | 43.6 | 0.5 | ug/L | ND | 109 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 40.2 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 24.0 | 0.5 | ug/L | ND | 60.0 | 60-130 | | | |
| Tetrachloroethylene | 30.9 | 0.5 | ug/L | ND | 77.3 | 60-130 | | | |
| Toluene | 36.3 | 0.5 | ug/L | ND | 90.8 | 60-130 | | | |
| 1,1,1-Trichloroethane | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,1,2-Trichloroethane | 42.5 | 0.5 | ug/L | ND | 106 | 60-130 | | | |
| Trichloroethylene | 42.9 | 0.5 | ug/L | ND | 107 | 60-130 | | | |
| Trichlorofluoromethane | 29.1 | 1.0 | ug/L | ND | 72.8 | 60-130 | | | |
| Vinyl chloride | 37.0 | 0.5 | ug/L | ND | 92.4 | 50-140 | | | |
| m,p-Xylenes | 96.0 | 0.5 | ug/L | ND | 120 | 60-130 | | | |
| o-Xylene | 41.2 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 61.4 | | ug/L | | 76.8 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 72.3 | | ug/L | | 90.4 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 66.0 | | ug/L | | 82.6 | 50-140 | | | |

Certificate of Analysis

Report Date: 30-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Qualifier Notes:

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Client Name: EXP Services Inc. Project Reference: Zibi - Albert and Claudine Island
 Contact Name: Patricia Stelmack Quote #: 21-158
 Address: 100-2650 Queenview Drive PO #: OTT 0026100
 Ottawa, ON, K2B 1H6 Email Address: ~~http://www.exp.com~~
 Telephone: 613-688-1829 jeremy.eckert@exp.com patricia.stelmack@exp.com
 Criteria: Reg. 153.04 (As Amended) Table RSC Filing Reg. 558.00 PWQO CCMB SUB (Stream) SUB (Sanitary) Municipality Other
 Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm Sanitary Sewer) P (Paint) A (Air) O (Other)

Turnaround Time:
 1 Day 3 Day
 2 Day Regular
 Date Required: Aug 24, 2021

| Parcel Order Number: 2135216 | | | | Required Analyses | | | | | | | | | | | | | |
|---------------------------------|--------|------------|-----------------|-------------------|-------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| Sample ID/Location Name | Matrix | Air Volume | # of Containers | Sample Taken | | PHOS P1-P4-BTEX | VOCs | PAMA | Metals by ICP | Hg | CYT | a (HWS) | VOC, PMA P1-P4 | PCB | pH | Free Cyanide | VOC/BTEX/FI |
| | | | | Date | Time | | | | | | | | | | | | |
| 1 FB23 | 0 | | 9 | 2021/08/23 | 14:10 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2 TB23 | 0 | | 1 | 2021/08/23 | 14:05 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: Data will be compared to Table 7 + Table 9 SCS; most stringent standard will be used

Relinquished By (Name): [Signature] Received by Drive Dept: [Signature] Released at Lab: Sumegrom Okonai Verified By: [Signature]
 Relinquished By (Print): Jeremy Eckert Date/Time: Aug 23/21 16:00 Temperature: 9.2 °C Date/Time: Aug 24, 2021 12:07 Temperature: 8.3 °C Date/Time: Aug 24, 2021 12:42
 Date/Time: 2021/08/23 16:00 Temperature: 9.2 °C Date/Time: Aug 24, 2021 12:07 Temperature: 8.3 °C Date/Time: Aug 24, 2021 12:42
 All Verified (Y/N): Y

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi- Albert and Chaudière Island
Project: OTT00250193N0
Custody:

Report Date: 27-Aug-2021
Order Date: 23-Aug-2021

Order #: 2135219

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Paracel ID | Client ID |
|------------|-----------|
| 2135219-01 | MW21-02 |

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------------|---------------------------------|-----------------|---------------|
| Chromium, hexavalent - water | MOE E3056 - colourimetric | 27-Aug-21 | 27-Aug-21 |
| Cyanide, free | MOE E3015 - Auto Colour | 25-Aug-21 | 25-Aug-21 |
| Mercury by CVAA | EPA 245.2 - Cold Vapour AA | 25-Aug-21 | 26-Aug-21 |
| Metals, ICP-MS | EPA 200.8 - ICP-MS | 25-Aug-21 | 25-Aug-21 |
| PCBs, total | EPA 608 - GC-ECD | 24-Aug-21 | 25-Aug-21 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 25-Aug-21 | 26-Aug-21 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 25-Aug-21 | 25-Aug-21 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 25-Aug-21 | 26-Aug-21 |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

| | | | | |
|--------------|-----------------|---|---|---|
| Client ID: | MW21-02 | - | - | - |
| Sample Date: | 23-Aug-21 14:00 | - | - | - |
| Sample ID: | 2135219-01 | - | - | - |
| MDL/Units | Water | - | - | - |

General Inorganics

| | | | | | |
|---------------|--------|----|---|---|---|
| Cyanide, free | 2 ug/L | <2 | - | - | - |
|---------------|--------|----|---|---|---|

Metals

| | | | | | |
|---------------|----------|--------|---|---|---|
| Mercury | 0.1 ug/L | <0.1 | - | - | - |
| Antimony | 0.5 ug/L | <0.5 | - | - | - |
| Arsenic | 1 ug/L | <1 | - | - | - |
| Barium | 1 ug/L | 225 | - | - | - |
| Beryllium | 0.5 ug/L | <0.5 | - | - | - |
| Boron | 10 ug/L | 217 | - | - | - |
| Cadmium | 0.1 ug/L | <0.1 | - | - | - |
| Chromium | 1 ug/L | <1 | - | - | - |
| Chromium (VI) | 10 ug/L | <10 | - | - | - |
| Cobalt | 0.5 ug/L | 1.3 | - | - | - |
| Copper | 0.5 ug/L | <0.5 | - | - | - |
| Lead | 0.1 ug/L | <0.1 | - | - | - |
| Molybdenum | 0.5 ug/L | 2.1 | - | - | - |
| Nickel | 1 ug/L | 3 | - | - | - |
| Selenium | 1 ug/L | <1 | - | - | - |
| Silver | 0.1 ug/L | <0.1 | - | - | - |
| Sodium | 200 ug/L | 648000 | - | - | - |
| Thallium | 0.1 ug/L | <0.1 | - | - | - |
| Uranium | 0.1 ug/L | 0.3 | - | - | - |
| Vanadium | 0.5 ug/L | 0.7 | - | - | - |
| Zinc | 5 ug/L | <5 | - | - | - |

Volatiles

| | | | | | |
|-------------------------|----------|------|---|---|---|
| Acetone | 5.0 ug/L | <5.0 | - | - | - |
| Benzene | 0.5 ug/L | <0.5 | - | - | - |
| Bromodichloromethane | 0.5 ug/L | <0.5 | - | - | - |
| Bromoform | 0.5 ug/L | <0.5 | - | - | - |
| Bromomethane | 0.5 ug/L | <0.5 | - | - | - |
| Carbon Tetrachloride | 0.2 ug/L | <0.2 | - | - | - |
| Chlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| Chloroform | 0.5 ug/L | <0.5 | - | - | - |
| Dibromochloromethane | 0.5 ug/L | <0.5 | - | - | - |
| Dichlorodifluoromethane | 1.0 ug/L | <1.0 | - | - | - |
| 1,2-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

| | Client ID: | MW21-02 | - | - | - |
|--|--------------|-----------------|---|---|---|
| | Sample Date: | 23-Aug-21 14:00 | - | - | - |
| | Sample ID: | 2135219-01 | - | - | - |
| | MDL/Units | Water | - | - | - |
| 1,3-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| 1,4-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1-Dichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,2-Dichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| cis-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| trans-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| 1,2-Dichloropropane | 0.5 ug/L | <0.5 | - | - | - |
| cis-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | - | - | - |
| trans-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | - | - | - |
| 1,3-Dichloropropene, total | 0.5 ug/L | <0.5 | - | - | - |
| Ethylbenzene | 0.5 ug/L | <0.5 | - | - | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | <0.2 | - | - | - |
| Hexane | 1.0 ug/L | <1.0 | - | - | - |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | <5.0 | - | - | - |
| Methyl Isobutyl Ketone | 5.0 ug/L | <5.0 | - | - | - |
| Methyl tert-butyl ether | 2.0 ug/L | <2.0 | - | - | - |
| Methylene Chloride | 5.0 ug/L | <5.0 | - | - | - |
| Styrene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,1,2,2-Tetrachloroethane | 0.5 ug/L | <0.5 | - | - | - |
| Tetrachloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| Toluene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,1-Trichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,2-Trichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| Trichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| Trichlorofluoromethane | 1.0 ug/L | <1.0 | - | - | - |
| Vinyl chloride | 0.5 ug/L | <0.5 | - | - | - |
| m,p-Xylenes | 0.5 ug/L | <0.5 | - | - | - |
| o-Xylene | 0.5 ug/L | <0.5 | - | - | - |
| Xylenes, total | 0.5 ug/L | <0.5 | - | - | - |
| 4-Bromofluorobenzene | Surrogate | 91.6% | - | - | - |
| Dibromofluoromethane | Surrogate | 96.5% | - | - | - |
| Toluene-d8 | Surrogate | 100% | - | - | - |
| Hydrocarbons | | | | | |
| F1 PHCs (C6-C10) | 25 ug/L | <25 | - | - | - |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

| | | | | | |
|--------------------|---------------------|-----------------|---|---|---|
| | Client ID: | MW21-02 | - | - | - |
| | Sample Date: | 23-Aug-21 14:00 | - | - | - |
| | Sample ID: | 2135219-01 | - | - | - |
| | MDL/Units | Water | - | - | - |
| F2 PHCs (C10-C16) | 100 ug/L | <100 | - | - | - |
| F3 PHCs (C16-C34) | 100 ug/L | <100 | - | - | - |
| F4 PHCs (C34-C50) | 100 ug/L | <100 | - | - | - |
| PCBs | | | | | |
| PCBs, total | 0.05 ug/L | <0.10 [1] | - | - | - |
| Decachlorobiphenyl | Surrogate | 97.7% [1] | - | - | - |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | | | | | | |
| Antimony | ND | 0.5 | ug/L | | | | | | |
| Arsenic | ND | 1 | ug/L | | | | | | |
| Barium | ND | 1 | ug/L | | | | | | |
| Beryllium | ND | 0.5 | ug/L | | | | | | |
| Boron | ND | 10 | ug/L | | | | | | |
| Cadmium | ND | 0.1 | ug/L | | | | | | |
| Chromium (VI) | ND | 10 | ug/L | | | | | | |
| Chromium | ND | 1 | ug/L | | | | | | |
| Cobalt | ND | 0.5 | ug/L | | | | | | |
| Copper | ND | 0.5 | ug/L | | | | | | |
| Lead | ND | 0.1 | ug/L | | | | | | |
| Molybdenum | ND | 0.5 | ug/L | | | | | | |
| Nickel | ND | 1 | ug/L | | | | | | |
| Selenium | ND | 1 | ug/L | | | | | | |
| Silver | ND | 0.1 | ug/L | | | | | | |
| Sodium | ND | 200 | ug/L | | | | | | |
| Thallium | ND | 0.1 | ug/L | | | | | | |
| Uranium | ND | 0.1 | ug/L | | | | | | |
| Vanadium | ND | 0.5 | ug/L | | | | | | |
| Zinc | ND | 5 | ug/L | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.518 | | ug/L | | 104 | 60-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|----------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 70.7 | | ug/L | | 88.4 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 42.1 | | ug/L | | 52.6 | 50-140 | | | |
| Surrogate: Toluene-d8 | 79.8 | | ug/L | | 99.8 | 50-140 | | | |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | ND | | | NC | 20 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Antimony | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Arsenic | ND | 1 | ug/L | ND | | | NC | 20 | |
| Barium | 50.2 | 1 | ug/L | 51.9 | | | 3.3 | 20 | |
| Beryllium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Boron | 25 | 10 | ug/L | 25 | | | 0.1 | 20 | |
| Cadmium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Chromium (VI) | ND | 10 | ug/L | ND | | | NC | 20 | |
| Chromium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Cobalt | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Copper | 2.45 | 0.5 | ug/L | 2.47 | | | 0.8 | 20 | |
| Lead | 0.14 | 0.1 | ug/L | 0.13 | | | 5.5 | 20 | |
| Molybdenum | 1.66 | 0.5 | ug/L | 1.53 | | | 8.1 | 20 | |
| Nickel | ND | 1 | ug/L | ND | | | NC | 20 | |
| Selenium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Silver | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Sodium | 23600 | 200 | ug/L | 23600 | | | 0.1 | 20 | |
| Thallium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Uranium | 0.2 | 0.1 | ug/L | 0.2 | | | 0.4 | 20 | |
| Vanadium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Zinc | ND | 5 | ug/L | ND | | | NC | 20 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dibromochloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 74.0 | | ug/L | | 92.5 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 70.5 | | ug/L | | 88.1 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 82.7 | | ug/L | | 103 | 50-140 | | | |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 31.9 | 2 | ug/L | ND | 106 | 70-130 | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 2110 | 25 | ug/L | ND | 106 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1730 | 100 | ug/L | ND | 108 | 60-140 | | | |
| F3 PHCs (C16-C34) | 4110 | 100 | ug/L | ND | 105 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2560 | 100 | ug/L | ND | 103 | 60-140 | | | |
| Metals | | | | | | | | | |
| Mercury | 3.32 | 0.1 | ug/L | ND | 111 | 70-130 | | | |
| Antimony | 50.5 | 0.5 | ug/L | ND | 101 | 80-120 | | | |
| Arsenic | 60.2 | 1 | ug/L | ND | 119 | 80-120 | | | |
| Barium | 102 | 1 | ug/L | 51.9 | 100 | 80-120 | | | |
| Beryllium | 49.3 | 0.5 | ug/L | ND | 98.5 | 80-120 | | | |
| Boron | 67 | 10 | ug/L | 25 | 85.3 | 80-120 | | | |
| Cadmium | 50.1 | 0.1 | ug/L | ND | 100 | 80-120 | | | |
| Chromium (VI) | 196 | 10 | ug/L | ND | 98.0 | 70-130 | | | |
| Chromium | 59.7 | 1 | ug/L | ND | 118 | 80-120 | | | |
| Cobalt | 57.2 | 0.5 | ug/L | ND | 114 | 80-120 | | | |
| Copper | 55.3 | 0.5 | ug/L | 2.47 | 106 | 80-120 | | | |
| Lead | 49.4 | 0.1 | ug/L | 0.13 | 98.5 | 80-120 | | | |
| Molybdenum | 57.8 | 0.5 | ug/L | 1.53 | 113 | 80-120 | | | |
| Nickel | 54.1 | 1 | ug/L | ND | 107 | 80-120 | | | |
| Selenium | 57.8 | 1 | ug/L | ND | 116 | 80-120 | | | |
| Silver | 45.4 | 0.1 | ug/L | ND | 90.8 | 80-120 | | | |
| Sodium | 32400 | 200 | ug/L | 23600 | 88.2 | 80-120 | | | |
| Thallium | 49.7 | 0.1 | ug/L | ND | 99.3 | 80-120 | | | |
| Uranium | 54.5 | 0.1 | ug/L | 0.2 | 109 | 80-120 | | | |
| Vanadium | 61.2 | 0.5 | ug/L | ND | 122 | 80-120 | | | QM-07 |
| Zinc | 55 | 5 | ug/L | ND | 101 | 80-120 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.823 | 0.05 | ug/L | ND | 82.3 | 65-135 | | | |
| Surrogate: Decachlorobiphenyl | 0.360 | | ug/L | | 72.0 | 60-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 67.3 | 5.0 | ug/L | ND | 67.3 | 50-140 | | | |
| Benzene | 40.2 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| Bromodichloromethane | 37.7 | 0.5 | ug/L | ND | 94.2 | 60-130 | | | |
| Bromoform | 36.7 | 0.5 | ug/L | ND | 91.7 | 60-130 | | | |
| Bromomethane | 43.9 | 0.5 | ug/L | ND | 110 | 50-140 | | | |
| Carbon Tetrachloride | 37.5 | 0.2 | ug/L | ND | 93.7 | 60-130 | | | |
| Chlorobenzene | 34.3 | 0.5 | ug/L | ND | 85.7 | 60-130 | | | |
| Chloroform | 41.8 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| Dibromochloromethane | 28.2 | 0.5 | ug/L | ND | 70.6 | 60-130 | | | |
| Dichlorodifluoromethane | 43.6 | 1.0 | ug/L | ND | 109 | 50-140 | | | |
| 1,2-Dichlorobenzene | 44.5 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| 1,3-Dichlorobenzene | 44.5 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| 1,4-Dichlorobenzene | 44.0 | 0.5 | ug/L | ND | 110 | 60-130 | | | |
| 1,1-Dichloroethane | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,2-Dichloroethane | 37.1 | 0.5 | ug/L | ND | 92.8 | 60-130 | | | |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1-Dichloroethylene | 40.0 | 0.5 | ug/L | ND | 99.9 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 40.8 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 39.7 | 0.5 | ug/L | ND | 99.2 | 60-130 | | | |
| 1,2-Dichloropropane | 39.9 | 0.5 | ug/L | ND | 99.8 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 31.4 | 0.5 | ug/L | ND | 78.6 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 30.7 | 0.5 | ug/L | ND | 76.6 | 60-130 | | | |
| Ethylbenzene | 45.2 | 0.5 | ug/L | ND | 113 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2- | 34.3 | 0.2 | ug/L | ND | 85.8 | 60-130 | | | |
| Hexane | 34.0 | 1.0 | ug/L | ND | 85.0 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 101 | 5.0 | ug/L | ND | 101 | 50-140 | | | |
| Methyl Isobutyl Ketone | 105 | 5.0 | ug/L | ND | 105 | 50-140 | | | |
| Methyl tert-butyl ether | 107 | 2.0 | ug/L | ND | 107 | 50-140 | | | |
| Methylene Chloride | 31.0 | 5.0 | ug/L | ND | 77.6 | 60-130 | | | |
| Styrene | 43.6 | 0.5 | ug/L | ND | 109 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 40.2 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 24.0 | 0.5 | ug/L | ND | 60.0 | 60-130 | | | |
| Tetrachloroethylene | 30.9 | 0.5 | ug/L | ND | 77.3 | 60-130 | | | |
| Toluene | 36.3 | 0.5 | ug/L | ND | 90.8 | 60-130 | | | |
| 1,1,1-Trichloroethane | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,1,2-Trichloroethane | 42.5 | 0.5 | ug/L | ND | 106 | 60-130 | | | |
| Trichloroethylene | 42.9 | 0.5 | ug/L | ND | 107 | 60-130 | | | |
| Trichlorofluoromethane | 29.1 | 1.0 | ug/L | ND | 72.8 | 60-130 | | | |
| Vinyl chloride | 37.0 | 0.5 | ug/L | ND | 92.4 | 50-140 | | | |
| m,p-Xylenes | 96.0 | 0.5 | ug/L | ND | 120 | 60-130 | | | |
| o-Xylene | 41.2 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 61.4 | | ug/L | | 76.8 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 72.3 | | ug/L | | 90.4 | 50-140 | | | |
| Surrogate: Toluene-d8 | 66.0 | | ug/L | | 82.6 | 50-140 | | | |

Certificate of Analysis

Report Date: 27-Aug-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193N0

Qualifier Notes:

Sample Qualifiers :

1 : Elevated Reporting Limits due to limited sample volume.

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Chain of Custody
 (Lab Use Only)

Page 1 of 1

Client Name: EXP Services Inc. **Project Reference:** Zibi - Albert and Chaudiere Island

Contact Name: Patricia Stefnack **Quota #:** 21-158

Address: 100-2650 Quorumview Drive **PO #:** OTT-00250193-00

Ottawa, ON, K2B 6H6

Telephone: 613-628-1699 **Email Address:** ~~patricia.stefnack@exp.com~~ **patricia.stefnack@exp.com**
jeremy.eckert@exp.com

Criteria: 0. Reg. 153.04 (As Amended) Table 1 RSC Filing 0. Reg. 558.06 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil Sed.) GM (Ground Water) SW (Surface Water) SS (Sewer Sanitary Sewer) P (Paint) A (Air) O (Other)

Turnaround Time:
 1 Day 3 Day
 2 Day Regular

Date Required: _____

| Parcel Order Number: | | Sample Taken | | Required Analyses | | | | | | | | | | | | | | | | | |
|-------------------------|---------|--------------|------------|-------------------|------------|------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2135219 | | Matrix | Air Volume | # of Containers | Date | Time | PHOS P1-P4-BTEX | VOCs | PAHs | Metals by ICP | Hg | Cd | Pb (diss) | VOC, PHE P1-P4 | PCB | pH | Free Cyanide | | | | |
| Sample ID/Location Name | | | | | | | | | | | | | | | | | | | | | |
| 1 | MW21-02 | GW | | 8 | 2021/08/23 | 1400 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: ~~data will be compared to Table 7+9 SCS; most stringent standard will be used~~
 Data will be compared to Table 7+9 SCS; most stringent standard will be used

Relinquished By (Sign): *[Signature]* **Received by (Sign):** *[Signature]* **Received at Lab:** *Jameson Ohmer* **Verified By:** *[Signature]*

Relinquished By (Print): Jeremy Eckert **Date/Time:** Aug 23/21 **Date/Time:** Aug 24, 2021 18:05 **Date/Time:** Aug 24, 2021 12:58

Date/Time: 2021/08/23 16:00 **Temperature:** 9.2 °C **Temperature:** 8.3 °C **All Verified W/ To:** BJ

15:46 (

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi- Albert and Chaudière Island
Project: OTT00250193P0
Custody:

Report Date: 15-Oct-2021
Order Date: 23-Aug-2021

Revised Report

Order #: 2135221

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|-----------|
| 2135221-01 | D206 |
| 2135221-02 | MW21-03 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------------|---------------------------------|-----------------|---------------|
| Chromium, hexavalent - water | MOE E3056 - colourimetric | 27-Aug-21 | 27-Aug-21 |
| Cyanide, free | MOE E3015 - Auto Colour | 25-Aug-21 | 25-Aug-21 |
| Mercury by CVAA | EPA 245.2 - Cold Vapour AA | 25-Aug-21 | 26-Aug-21 |
| Metals, ICP-MS | EPA 200.8 - ICP-MS | 25-Aug-21 | 25-Aug-21 |
| PCBs, total | EPA 608 - GC-ECD | 24-Aug-21 | 25-Aug-21 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 25-Aug-21 | 26-Aug-21 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 25-Aug-21 | 25-Aug-21 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 26-Aug-21 | 26-Aug-21 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 25-Aug-21 | 26-Aug-21 |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|-----------------|---|---|
| Client ID: | D206 | MW21-03 | - | - |
| Sample Date: | 23-Aug-21 14:00 | 23-Aug-21 10:45 | - | - |
| Sample ID: | 2135221-01 | 2135221-02 | - | - |
| MDL/Units | Water | Water | - | - |

General Inorganics

| | | | | | |
|---------------|--------|----|----|---|---|
| Cyanide, free | 2 ug/L | <2 | <2 | - | - |
|---------------|--------|----|----|---|---|

Metals

| | | | | | |
|---------------|----------|--------|--------|---|---|
| Mercury | 0.1 ug/L | <0.1 | <0.1 | - | - |
| Antimony | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Arsenic | 1 ug/L | <1 | 4 | - | - |
| Barium | 1 ug/L | 226 | 210 | - | - |
| Beryllium | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Boron | 10 ug/L | 213 | 143 | - | - |
| Cadmium | 0.1 ug/L | <0.1 | <0.1 | - | - |
| Chromium | 1 ug/L | <1 | <1 | - | - |
| Chromium (VI) | 10 ug/L | <10 | <10 | - | - |
| Cobalt | 0.5 ug/L | 1.2 | 1.9 | - | - |
| Copper | 0.5 ug/L | <0.5 | 0.9 | - | - |
| Lead | 0.1 ug/L | <0.1 | <0.1 | - | - |
| Molybdenum | 0.5 ug/L | 2.1 | 5.0 | - | - |
| Nickel | 1 ug/L | 3 | 6 | - | - |
| Selenium | 1 ug/L | <1 | <1 | - | - |
| Silver | 0.1 ug/L | <0.1 | <0.1 | - | - |
| Sodium | 200 ug/L | 630000 | 632000 | - | - |
| Thallium | 0.1 ug/L | <0.1 | <0.1 | - | - |
| Uranium | 0.1 ug/L | 0.3 | 9.2 | - | - |
| Vanadium | 0.5 ug/L | 0.7 | 1.7 | - | - |
| Zinc | 5 ug/L | <5 | 7 | - | - |

Volatiles

| | | | | | |
|-------------------------|----------|------|------|---|---|
| Acetone | 5.0 ug/L | <5.0 | <5.0 | - | - |
| Benzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Bromodichloromethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Bromoform | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Bromomethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Carbon Tetrachloride | 0.2 ug/L | <0.2 | <0.2 | - | - |
| Chlorobenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Chloroform | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Dibromochloromethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Dichlorodifluoromethane | 1.0 ug/L | <1.0 | <1.0 | - | - |
| 1,2-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: | D206 | MW21-03 | - | - |
|--|--------------|-----------------|-----------------|---|---|
| | Sample Date: | 23-Aug-21 14:00 | 23-Aug-21 10:45 | - | - |
| | Sample ID: | 2135221-01 | 2135221-02 | - | - |
| | MDL/Units | Water | Water | - | - |
| 1,3-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,4-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,2-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| cis-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| trans-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,2-Dichloropropane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| cis-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| trans-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,3-Dichloropropene, total | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Ethylbenzene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | <0.2 | <0.2 | - | - |
| Hexane | 1.0 ug/L | <1.0 | <1.0 | - | - |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | <5.0 | <5.0 | - | - |
| Methyl Isobutyl Ketone | 5.0 ug/L | <5.0 | <5.0 | - | - |
| Methyl tert-butyl ether | 2.0 ug/L | <2.0 | <2.0 | - | - |
| Methylene Chloride | 5.0 ug/L | <5.0 | <5.0 | - | - |
| Styrene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1,1,2,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Tetrachloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Toluene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1,1-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 1,1,2-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Trichloroethylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Trichlorofluoromethane | 1.0 ug/L | <1.0 | <1.0 | - | - |
| Vinyl chloride | 0.5 ug/L | <0.5 | <0.5 | - | - |
| m,p-Xylenes | 0.5 ug/L | <0.5 | <0.5 | - | - |
| o-Xylene | 0.5 ug/L | <0.5 | <0.5 | - | - |
| Xylenes, total | 0.5 ug/L | <0.5 | <0.5 | - | - |
| 4-Bromofluorobenzene | Surrogate | 86.8% | 91.7% | - | - |
| Dibromofluoromethane | Surrogate | 54.6% | 83.7% | - | - |
| Toluene-d8 | Surrogate | 98.8% | 103% | - | - |
| Hydrocarbons | | | | | |
| F1 PHCs (C6-C10) | 25 ug/L | <25 | <25 | - | - |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

| | Client ID: | D206 | MW21-03 | - | - |
|-------------------|--------------|-----------------|-----------------|---|---|
| | Sample Date: | 23-Aug-21 14:00 | 23-Aug-21 10:45 | - | - |
| | Sample ID: | 2135221-01 | 2135221-02 | - | - |
| | MDL/Units | Water | Water | - | - |
| F2 PHCs (C10-C16) | 100 ug/L | <100 | <100 | - | - |
| F3 PHCs (C16-C34) | 100 ug/L | <100 | <100 | - | - |
| F4 PHCs (C34-C50) | 100 ug/L | <100 | <100 | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|---|-------|---|---|
| Acenaphthene | 0.05 ug/L | - | <0.05 | - | - |
| Acenaphthylene | 0.05 ug/L | - | <0.05 | - | - |
| Anthracene | 0.01 ug/L | - | <0.01 | - | - |
| Benzo [a] anthracene | 0.01 ug/L | - | <0.01 | - | - |
| Benzo [a] pyrene | 0.01 ug/L | - | <0.01 | - | - |
| Benzo [b] fluoranthene | 0.05 ug/L | - | <0.05 | - | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | - | <0.05 | - | - |
| Benzo [k] fluoranthene | 0.05 ug/L | - | <0.05 | - | - |
| Chrysene | 0.05 ug/L | - | <0.05 | - | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | - | <0.05 | - | - |
| Fluoranthene | 0.01 ug/L | - | <0.01 | - | - |
| Fluorene | 0.05 ug/L | - | <0.05 | - | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | - | <0.05 | - | - |
| 1-Methylnaphthalene | 0.05 ug/L | - | <0.05 | - | - |
| 2-Methylnaphthalene | 0.05 ug/L | - | <0.05 | - | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | - | <0.10 | - | - |
| Naphthalene | 0.05 ug/L | - | <0.05 | - | - |
| Phenanthrene | 0.05 ug/L | - | <0.05 | - | - |
| Pyrene | 0.01 ug/L | - | <0.01 | - | - |
| 2-Fluorobiphenyl | Surrogate | - | 81.5% | - | - |
| Terphenyl-d14 | Surrogate | - | 101% | - | - |

PCBs

| | | | | | |
|--------------------|-----------|-----|-------|---|---|
| PCBs, total | 0.05 ug/L | N/A | <0.05 | - | - |
| Decachlorobiphenyl | Surrogate | N/A | 108% | - | - |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | | | | | | |
| Antimony | ND | 0.5 | ug/L | | | | | | |
| Arsenic | ND | 1 | ug/L | | | | | | |
| Barium | ND | 1 | ug/L | | | | | | |
| Beryllium | ND | 0.5 | ug/L | | | | | | |
| Boron | ND | 10 | ug/L | | | | | | |
| Cadmium | ND | 0.1 | ug/L | | | | | | |
| Chromium (VI) | ND | 10 | ug/L | | | | | | |
| Chromium | ND | 1 | ug/L | | | | | | |
| Cobalt | ND | 0.5 | ug/L | | | | | | |
| Copper | ND | 0.5 | ug/L | | | | | | |
| Lead | ND | 0.1 | ug/L | | | | | | |
| Molybdenum | ND | 0.5 | ug/L | | | | | | |
| Nickel | ND | 1 | ug/L | | | | | | |
| Selenium | ND | 1 | ug/L | | | | | | |
| Silver | ND | 0.1 | ug/L | | | | | | |
| Sodium | ND | 200 | ug/L | | | | | | |
| Thallium | ND | 0.1 | ug/L | | | | | | |
| Uranium | ND | 0.1 | ug/L | | | | | | |
| Vanadium | ND | 0.5 | ug/L | | | | | | |
| Zinc | ND | 5 | ug/L | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| Aroclor-1260 | ND | 0.05 | ug/L | | | | | | |
| Aroclor-1254 | ND | 0.05 | ug/L | | | | | | |
| Aroclor-1248 | ND | 0.05 | ug/L | | | | | | |
| Aroclor-1242 | ND | 0.05 | ug/L | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.518 | | ug/L | | 104 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 16.1 | | ug/L | | 80.6 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 21.1 | | ug/L | | 106 | 50-140 | | | |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 70.7 | | ug/L | | 88.4 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 42.1 | | ug/L | | 52.6 | 50-140 | | | |
| Surrogate: Toluene-d8 | 79.8 | | ug/L | | 99.8 | 50-140 | | | |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | ND | | | NC | 20 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Antimony | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Arsenic | ND | 1 | ug/L | ND | | | NC | 20 | |
| Barium | 50.2 | 1 | ug/L | 51.9 | | | 3.3 | 20 | |
| Beryllium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Boron | 25 | 10 | ug/L | 25 | | | 0.1 | 20 | |
| Cadmium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Chromium (VI) | ND | 10 | ug/L | ND | | | NC | 20 | |
| Chromium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Cobalt | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Copper | 2.45 | 0.5 | ug/L | 2.47 | | | 0.8 | 20 | |
| Lead | 0.14 | 0.1 | ug/L | 0.13 | | | 5.5 | 20 | |
| Molybdenum | 1.66 | 0.5 | ug/L | 1.53 | | | 8.1 | 20 | |
| Nickel | ND | 1 | ug/L | ND | | | NC | 20 | |
| Selenium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Silver | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Sodium | 23600 | 200 | ug/L | 23600 | | | 0.1 | 20 | |
| Thallium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Uranium | 0.2 | 0.1 | ug/L | 0.2 | | | 0.4 | 20 | |
| Vanadium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Zinc | ND | 5 | ug/L | ND | | | NC | 20 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dibromochloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 74.0 | | ug/L | | 92.5 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 70.5 | | ug/L | | 88.1 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 82.7 | | ug/L | | 103 | 50-140 | | | |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 31.9 | 2 | ug/L | ND | 106 | 70-130 | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 2110 | 25 | ug/L | ND | 106 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1730 | 100 | ug/L | ND | 108 | 60-140 | | | |
| F3 PHCs (C16-C34) | 4110 | 100 | ug/L | ND | 105 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2560 | 100 | ug/L | ND | 103 | 60-140 | | | |
| Metals | | | | | | | | | |
| Mercury | 3.32 | 0.1 | ug/L | ND | 111 | 70-130 | | | |
| Antimony | 50.5 | 0.5 | ug/L | ND | 101 | 80-120 | | | |
| Arsenic | 60.2 | 1 | ug/L | ND | 119 | 80-120 | | | |
| Barium | 102 | 1 | ug/L | 51.9 | 100 | 80-120 | | | |
| Beryllium | 49.3 | 0.5 | ug/L | ND | 98.5 | 80-120 | | | |
| Boron | 67 | 10 | ug/L | 25 | 85.3 | 80-120 | | | |
| Cadmium | 50.1 | 0.1 | ug/L | ND | 100 | 80-120 | | | |
| Chromium (VI) | 196 | 10 | ug/L | ND | 98.0 | 70-130 | | | |
| Chromium | 59.7 | 1 | ug/L | ND | 118 | 80-120 | | | |
| Cobalt | 57.2 | 0.5 | ug/L | ND | 114 | 80-120 | | | |
| Copper | 55.3 | 0.5 | ug/L | 2.47 | 106 | 80-120 | | | |
| Lead | 49.4 | 0.1 | ug/L | 0.13 | 98.5 | 80-120 | | | |
| Molybdenum | 57.8 | 0.5 | ug/L | 1.53 | 113 | 80-120 | | | |
| Nickel | 54.1 | 1 | ug/L | ND | 107 | 80-120 | | | |
| Selenium | 57.8 | 1 | ug/L | ND | 116 | 80-120 | | | |
| Silver | 45.4 | 0.1 | ug/L | ND | 90.8 | 80-120 | | | |
| Sodium | 32400 | 200 | ug/L | 23600 | 88.2 | 80-120 | | | |
| Thallium | 49.7 | 0.1 | ug/L | ND | 99.3 | 80-120 | | | |
| Uranium | 54.5 | 0.1 | ug/L | 0.2 | 109 | 80-120 | | | |
| Vanadium | 61.2 | 0.5 | ug/L | ND | 122 | 80-120 | | | QM-07 |
| Zinc | 55 | 5 | ug/L | ND | 101 | 80-120 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.823 | 0.05 | ug/L | ND | 82.3 | 65-135 | | | |
| Surrogate: Decachlorobiphenyl | 0.360 | | ug/L | | 72.0 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 4.33 | 0.05 | ug/L | ND | 86.5 | 50-140 | | | |
| Acenaphthylene | 3.05 | 0.05 | ug/L | ND | 61.1 | 50-140 | | | |
| Anthracene | 3.94 | 0.01 | ug/L | ND | 78.9 | 50-140 | | | |
| Benzo [a] anthracene | 4.08 | 0.01 | ug/L | ND | 81.7 | 50-140 | | | |
| Benzo [a] pyrene | 4.76 | 0.01 | ug/L | ND | 95.2 | 50-140 | | | |
| Benzo [b] fluoranthene | 5.63 | 0.05 | ug/L | ND | 113 | 50-140 | | | |
| Benzo [g,h,i] perylene | 4.82 | 0.05 | ug/L | ND | 96.3 | 50-140 | | | |
| Benzo [k] fluoranthene | 5.22 | 0.05 | ug/L | ND | 104 | 50-140 | | | |
| Chrysene | 4.57 | 0.05 | ug/L | ND | 91.5 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 4.93 | 0.05 | ug/L | ND | 98.6 | 50-140 | | | |
| Fluoranthene | 3.89 | 0.01 | ug/L | ND | 77.7 | 50-140 | | | |
| Fluorene | 3.87 | 0.05 | ug/L | ND | 77.3 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 4.23 | 0.05 | ug/L | ND | 84.5 | 50-140 | | | |
| 1-Methylnaphthalene | 4.24 | 0.05 | ug/L | ND | 84.8 | 50-140 | | | |
| 2-Methylnaphthalene | 4.71 | 0.05 | ug/L | ND | 94.3 | 50-140 | | | |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Naphthalene | 4.64 | 0.05 | ug/L | ND | 92.8 | 50-140 | | | |
| Phenanthrene | 3.84 | 0.05 | ug/L | ND | 76.8 | 50-140 | | | |
| Pyrene | 4.01 | 0.01 | ug/L | ND | 80.2 | 50-140 | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 17.7 | | ug/L | | 88.3 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 20.4 | | ug/L | | 102 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 67.3 | 5.0 | ug/L | ND | 67.3 | 50-140 | | | |
| Benzene | 40.2 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| Bromodichloromethane | 37.7 | 0.5 | ug/L | ND | 94.2 | 60-130 | | | |
| Bromoform | 36.7 | 0.5 | ug/L | ND | 91.7 | 60-130 | | | |
| Bromomethane | 43.9 | 0.5 | ug/L | ND | 110 | 50-140 | | | |
| Carbon Tetrachloride | 37.5 | 0.2 | ug/L | ND | 93.7 | 60-130 | | | |
| Chlorobenzene | 34.3 | 0.5 | ug/L | ND | 85.7 | 60-130 | | | |
| Chloroform | 41.8 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| Dibromochloromethane | 28.2 | 0.5 | ug/L | ND | 70.6 | 60-130 | | | |
| Dichlorodifluoromethane | 43.6 | 1.0 | ug/L | ND | 109 | 50-140 | | | |
| 1,2-Dichlorobenzene | 44.5 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| 1,3-Dichlorobenzene | 44.5 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| 1,4-Dichlorobenzene | 44.0 | 0.5 | ug/L | ND | 110 | 60-130 | | | |
| 1,1-Dichloroethane | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,2-Dichloroethane | 37.1 | 0.5 | ug/L | ND | 92.8 | 60-130 | | | |
| 1,1-Dichloroethylene | 40.0 | 0.5 | ug/L | ND | 99.9 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 40.8 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 39.7 | 0.5 | ug/L | ND | 99.2 | 60-130 | | | |
| 1,2-Dichloropropane | 39.9 | 0.5 | ug/L | ND | 99.8 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 31.4 | 0.5 | ug/L | ND | 78.6 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 30.7 | 0.5 | ug/L | ND | 76.6 | 60-130 | | | |
| Ethylbenzene | 45.2 | 0.5 | ug/L | ND | 113 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2-) | 34.3 | 0.2 | ug/L | ND | 85.8 | 60-130 | | | |
| Hexane | 34.0 | 1.0 | ug/L | ND | 85.0 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 101 | 5.0 | ug/L | ND | 101 | 50-140 | | | |
| Methyl Isobutyl Ketone | 105 | 5.0 | ug/L | ND | 105 | 50-140 | | | |
| Methyl tert-butyl ether | 107 | 2.0 | ug/L | ND | 107 | 50-140 | | | |
| Methylene Chloride | 31.0 | 5.0 | ug/L | ND | 77.6 | 60-130 | | | |
| Styrene | 43.6 | 0.5 | ug/L | ND | 109 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 40.2 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 24.0 | 0.5 | ug/L | ND | 60.0 | 60-130 | | | |
| Tetrachloroethylene | 30.9 | 0.5 | ug/L | ND | 77.3 | 60-130 | | | |
| Toluene | 36.3 | 0.5 | ug/L | ND | 90.8 | 60-130 | | | |
| 1,1,1-Trichloroethane | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,1,2-Trichloroethane | 42.5 | 0.5 | ug/L | ND | 106 | 60-130 | | | |
| Trichloroethylene | 42.9 | 0.5 | ug/L | ND | 107 | 60-130 | | | |
| Trichlorofluoromethane | 29.1 | 1.0 | ug/L | ND | 72.8 | 60-130 | | | |
| Vinyl chloride | 37.0 | 0.5 | ug/L | ND | 92.4 | 50-140 | | | |
| m,p-Xylenes | 96.0 | 0.5 | ug/L | ND | 120 | 60-130 | | | |
| o-Xylene | 41.2 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 61.4 | | ug/L | | 76.8 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 72.3 | | ug/L | | 90.4 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 66.0 | | ug/L | | 82.6 | 50-140 | | | |

Certificate of Analysis

Report Date: 15-Oct-2021

Client: exp Services Inc. (Ottawa)

Order Date: 23-Aug-2021

Client PO: Zibi- Albert and Chaudière Island

Project Description: OTT00250193P0

Qualifier Notes:

Sample Qualifiers :

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

Revision 1 - This report excludes PCB data for sample D206 due to possible laboratory contamination.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Client Name: EXP Services Inc. Project Reference: Zibi - Albert and Chaudhri Island
 Contact Name: Patricia Skelmack Quote #: 21-158
 Address: 100-2650 Queenstown Drive PO #: OTT-002601103-90
 Ottawa, ON, K2B 8B6 Email Address: ~~patricia.skelmack@exp.com~~ patricia.skelmack@exp.com jeremy.eckert@exp.com
 Telephone: 613-685-1899 Date Required: _____

Criteria: O. Reg. 153/04 (As Amended) Table 1 RSC Filing O. Reg. 558/06 PAOQ COME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Match Type: S (Soil) GW (Ground Water) SW (Surface Water) SS (Storm Sanitary Sewer) P (Paint) A (Air) O (Other)

Turnaround Time:
 1 Day 3 Day
 2 Day Regular

| Parcel Order Number: 2135221 | | Required Analyses | | | | | | | | | | | | | | |
|------------------------------|---------|-------------------|------------------------|--------------|------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Sample ID/Location Name | Matrix | Air Volume | Liters of Contaminants | Sample Taken | | PAHs (16) | VOCs | PAAHs | Metals by ICP | Hg | CrVl | B (BTEX) | VOC, POC, P1, P4 | POB | pH | Free Cyanide |
| | | | | Date | Time | | | | | | | | | | | |
| 1 | D206 | GW | 8 | 20/08/23 | 1400 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2 | MW21-03 | GW | 9 | 20/08/23 | 1045 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: ~~As per O. Reg. 153/04 Table 7 and Table 9 SW, P, A, O, SS, GW, PAOQ, COME, SUB (Storm) will be used.~~
 Data will be compared to Table 7 and Table 9 SCS; most stringent standard will be used.

Relinquished By (Print): *me* Received by (Print): *[Signature]* Received at Lab: *June 20/21* Verified By: *[Signature]*
 Relinquished By (Print): *Jeremy Eckert* Date/Time: *Aug 23/21 12:05* Date/Time: *Aug 24, 2021 12:05* Date/Time: *Aug 24, 2021 12:05*
 Date/Time: *2021/08/23 16:00* Temperature: *8.1 °C* Temperature: *8.3 °C* pH Verified (Y/N): *BS*

Method of Delivery: *Drop box*

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi-Albert and Chaudiere Island
Project: OTT00250193PO
Custody:

Report Date: 7-Sep-2021
Order Date: 31-Aug-2021

Order #: 2136274

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|-----------|
| 2136274-01 | MW21-02 |
| 2136274-02 | D206 |
| 2136274-03 | MW21-01 |

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 07-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------------|---------------------------------|-----------------|---------------|
| Chromium, hexavalent - water | MOE E3056 - colourimetric | 1-Sep-21 | 2-Sep-21 |
| Cyanide, free | MOE E3015 - Auto Colour | 3-Sep-21 | 3-Sep-21 |
| Mercury by CVAA | EPA 245.2 - Cold Vapour AA | 1-Sep-21 | 2-Sep-21 |
| Metals, ICP-MS | EPA 200.8 - ICP-MS | 2-Sep-21 | 2-Sep-21 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 2-Sep-21 | 2-Sep-21 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 31-Aug-21 | 1-Sep-21 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 3-Sep-21 | 3-Sep-21 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 2-Sep-21 | 2-Sep-21 |

Certificate of Analysis

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Client: exp Services Inc. (Ottawa)

Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

| | | | | |
|---------------------|-----------------|-----------------|-----------------|---|
| Client ID: | MW21-02 | D206 | MW21-01 | - |
| Sample Date: | 31-Aug-21 12:00 | 31-Aug-21 12:00 | 31-Aug-21 12:30 | - |
| Sample ID: | 2136274-01 | 2136274-02 | 2136274-03 | - |
| MDL/Units | Water | Water | Water | - |

General Inorganics

| | | | | | |
|---------------|--------|---|---|----|---|
| Cyanide, free | 2 ug/L | - | - | <2 | - |
|---------------|--------|---|---|----|---|

Metals

| | | | | | |
|---------------|----------|---|---|--------|---|
| Mercury | 0.1 ug/L | - | - | <0.1 | - |
| Antimony | 0.5 ug/L | - | - | <0.5 | - |
| Arsenic | 1 ug/L | - | - | <1 | - |
| Barium | 1 ug/L | - | - | 644 | - |
| Beryllium | 0.5 ug/L | - | - | <0.5 | - |
| Boron | 10 ug/L | - | - | 698 | - |
| Cadmium | 0.1 ug/L | - | - | <0.1 | - |
| Chromium | 1 ug/L | - | - | <1 | - |
| Chromium (VI) | 10 ug/L | - | - | <10 | - |
| Cobalt | 0.5 ug/L | - | - | 0.9 | - |
| Copper | 0.5 ug/L | - | - | 2.0 | - |
| Lead | 0.1 ug/L | - | - | <0.1 | - |
| Molybdenum | 0.5 ug/L | - | - | 5.4 | - |
| Nickel | 1 ug/L | - | - | 4 | - |
| Selenium | 1 ug/L | - | - | <1 | - |
| Silver | 0.1 ug/L | - | - | <0.1 | - |
| Sodium | 200 ug/L | - | - | 348000 | - |
| Thallium | 0.1 ug/L | - | - | <0.1 | - |
| Uranium | 0.1 ug/L | - | - | 1.0 | - |
| Vanadium | 0.5 ug/L | - | - | <0.5 | - |
| Zinc | 5 ug/L | - | - | 11 | - |

Volatiles

| | | | | | |
|-------------------------|----------|---|---|------|---|
| Acetone | 5.0 ug/L | - | - | <5.0 | - |
| Benzene | 0.5 ug/L | - | - | <0.5 | - |
| Bromodichloromethane | 0.5 ug/L | - | - | <0.5 | - |
| Bromoform | 0.5 ug/L | - | - | <0.5 | - |
| Bromomethane | 0.5 ug/L | - | - | <0.5 | - |
| Carbon Tetrachloride | 0.2 ug/L | - | - | <0.2 | - |
| Chlorobenzene | 0.5 ug/L | - | - | <0.5 | - |
| Chloroform | 0.5 ug/L | - | - | <0.5 | - |
| Dibromochloromethane | 0.5 ug/L | - | - | <0.5 | - |
| Dichlorodifluoromethane | 1.0 ug/L | - | - | <1.0 | - |
| 1,2-Dichlorobenzene | 0.5 ug/L | - | - | <0.5 | - |

Certificate of Analysis

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Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

| | Client ID: | MW21-02 | D206 | MW21-01 | - |
|--|--------------|-----------------|-----------------|-----------------|---|
| | Sample Date: | 31-Aug-21 12:00 | 31-Aug-21 12:00 | 31-Aug-21 12:30 | - |
| | Sample ID: | 2136274-01 | 2136274-02 | 2136274-03 | - |
| | MDL/Units | Water | Water | Water | - |
| 1,3-Dichlorobenzene | 0.5 ug/L | - | - | <0.5 | - |
| 1,4-Dichlorobenzene | 0.5 ug/L | - | - | <0.5 | - |
| 1,1-Dichloroethane | 0.5 ug/L | - | - | <0.5 | - |
| 1,2-Dichloroethane | 0.5 ug/L | - | - | <0.5 | - |
| 1,1-Dichloroethylene | 0.5 ug/L | - | - | <0.5 | - |
| cis-1,2-Dichloroethylene | 0.5 ug/L | - | - | <0.5 | - |
| trans-1,2-Dichloroethylene | 0.5 ug/L | - | - | <0.5 | - |
| 1,2-Dichloropropane | 0.5 ug/L | - | - | <0.5 | - |
| cis-1,3-Dichloropropylene | 0.5 ug/L | - | - | <0.5 | - |
| trans-1,3-Dichloropropylene | 0.5 ug/L | - | - | <0.5 | - |
| 1,3-Dichloropropene, total | 0.5 ug/L | - | - | <0.5 | - |
| Ethylbenzene | 0.5 ug/L | - | - | <0.5 | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | - | - | <0.2 | - |
| Hexane | 1.0 ug/L | - | - | <1.0 | - |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | - | - | <5.0 | - |
| Methyl Isobutyl Ketone | 5.0 ug/L | - | - | <5.0 | - |
| Methyl tert-butyl ether | 2.0 ug/L | - | - | <2.0 | - |
| Methylene Chloride | 5.0 ug/L | - | - | <5.0 | - |
| Styrene | 0.5 ug/L | - | - | <0.5 | - |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | - | - | <0.5 | - |
| 1,1,1,2,2-Tetrachloroethane | 0.5 ug/L | - | - | <0.5 | - |
| Tetrachloroethylene | 0.5 ug/L | - | - | <0.5 | - |
| Toluene | 0.5 ug/L | - | - | <0.5 | - |
| 1,1,1-Trichloroethane | 0.5 ug/L | - | - | <0.5 | - |
| 1,1,2-Trichloroethane | 0.5 ug/L | - | - | <0.5 | - |
| Trichloroethylene | 0.5 ug/L | - | - | <0.5 | - |
| Trichlorofluoromethane | 1.0 ug/L | - | - | <1.0 | - |
| Vinyl chloride | 0.5 ug/L | - | - | <0.5 | - |
| m,p-Xylenes | 0.5 ug/L | - | - | <0.5 | - |
| o-Xylene | 0.5 ug/L | - | - | <0.5 | - |
| Xylenes, total | 0.5 ug/L | - | - | <0.5 | - |
| 4-Bromofluorobenzene | Surrogate | - | - | 100% | - |
| Dibromofluoromethane | Surrogate | - | - | 84.2% | - |
| Toluene-d8 | Surrogate | - | - | 94.6% | - |
| Hydrocarbons | | | | | |
| F1 PHCs (C6-C10) | 25 ug/L | - | - | <25 | - |

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Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

| | Client ID: | MW21-02 | D206 | MW21-01 | - |
|-------------------|--------------|-----------------|-----------------|-----------------|---|
| | Sample Date: | 31-Aug-21 12:00 | 31-Aug-21 12:00 | 31-Aug-21 12:30 | - |
| | Sample ID: | 2136274-01 | 2136274-02 | 2136274-03 | - |
| | MDL/Units | Water | Water | Water | - |
| F2 PHCs (C10-C16) | 100 ug/L | - | - | <100 | - |
| F3 PHCs (C16-C34) | 100 ug/L | - | - | <100 | - |
| F4 PHCs (C34-C50) | 100 ug/L | - | - | <100 | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-------|-------|---|---|
| Acenaphthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Acenaphthylene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Anthracene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [a] anthracene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [a] pyrene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Chrysene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Fluoranthene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Fluorene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 | <0.10 | - | - |
| Naphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Phenanthrene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Pyrene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| 2-Fluorobiphenyl | Surrogate | 77.9% | 79.9% | - | - |
| Terphenyl-d14 | Surrogate | 96.1% | 100% | - | - |

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Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | | | | | | |
| Antimony | ND | 0.5 | ug/L | | | | | | |
| Arsenic | ND | 1 | ug/L | | | | | | |
| Barium | ND | 1 | ug/L | | | | | | |
| Beryllium | ND | 0.5 | ug/L | | | | | | |
| Boron | ND | 10 | ug/L | | | | | | |
| Cadmium | ND | 0.1 | ug/L | | | | | | |
| Chromium (VI) | ND | 10 | ug/L | | | | | | |
| Chromium | ND | 1 | ug/L | | | | | | |
| Cobalt | ND | 0.5 | ug/L | | | | | | |
| Copper | ND | 0.5 | ug/L | | | | | | |
| Lead | ND | 0.1 | ug/L | | | | | | |
| Molybdenum | ND | 0.5 | ug/L | | | | | | |
| Nickel | ND | 1 | ug/L | | | | | | |
| Selenium | ND | 1 | ug/L | | | | | | |
| Silver | ND | 0.1 | ug/L | | | | | | |
| Sodium | ND | 200 | ug/L | | | | | | |
| Thallium | ND | 0.1 | ug/L | | | | | | |
| Uranium | ND | 0.1 | ug/L | | | | | | |
| Vanadium | ND | 0.5 | ug/L | | | | | | |
| Zinc | ND | 5 | ug/L | | | | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 16.5 | | ug/L | | 82.4 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 19.7 | | ug/L | | 98.4 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |

Certificate of Analysis

Report Date: 07-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 91.6 | | ug/L | | 115 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 68.0 | | ug/L | | 85.1 | 50-140 | | | |
| Surrogate: Toluene-d8 | 75.6 | | ug/L | | 94.6 | 50-140 | | | |

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Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|------|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | ND | | | NC | 20 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Antimony | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Arsenic | ND | 1 | ug/L | ND | | | NC | 20 | |
| Barium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Beryllium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Boron | ND | 10 | ug/L | ND | | | NC | 20 | |
| Cadmium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Chromium (VI) | ND | 10 | ug/L | ND | | | NC | 20 | |
| Chromium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Cobalt | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Copper | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Lead | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Molybdenum | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Nickel | ND | 1 | ug/L | ND | | | NC | 20 | |
| Selenium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Silver | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Sodium | ND | 200 | ug/L | ND | | | NC | 20 | |
| Thallium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Uranium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Vanadium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Zinc | ND | 5 | ug/L | ND | | | NC | 20 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | 2.06 | 0.5 | ug/L | 3.37 | | | 48.3 | 30 | QR-07 |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | 6.81 | 0.5 | ug/L | 11.6 | | | 52.2 | 30 | QR-07 |
| Dibromochloromethane | ND | 0.5 | ug/L | 1.39 | | | NC | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2) | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |

Certificate of Analysis

Report Date: 07-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Surrogate: 4-Bromofluorobenzene | 82.3 | | ug/L | | 103 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 69.0 | | ug/L | | 86.2 | 50-140 | | | |
| Surrogate: Toluene-d8 | 54.4 | | ug/L | | 68.0 | 50-140 | | | |

Certificate of Analysis

Report Date: 07-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-----------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 28.5 | 2 | ug/L | ND | 94.9 | 70-130 | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 1690 | 25 | ug/L | ND | 84.6 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1410 | 100 | ug/L | ND | 88.4 | 60-140 | | | |
| F3 PHCs (C16-C34) | 3370 | 100 | ug/L | ND | 85.9 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2060 | 100 | ug/L | ND | 83.2 | 60-140 | | | |
| Metals | | | | | | | | | |
| Mercury | 3.64 | 0.1 | ug/L | ND | 121 | 70-130 | | | |
| Antimony | 52.4 | 0.5 | ug/L | ND | 105 | 80-120 | | | |
| Arsenic | 54.1 | 1 | ug/L | ND | 108 | 80-120 | | | |
| Barium | 52.7 | 1 | ug/L | ND | 105 | 80-120 | | | |
| Beryllium | 53.2 | 0.5 | ug/L | ND | 106 | 80-120 | | | |
| Boron | 50 | 10 | ug/L | ND | 93.6 | 80-120 | | | |
| Cadmium | 54.2 | 0.1 | ug/L | ND | 108 | 80-120 | | | |
| Chromium (VI) | 202 | 10 | ug/L | ND | 101 | 70-130 | | | |
| Chromium | 53.9 | 1 | ug/L | ND | 108 | 80-120 | | | |
| Cobalt | 54.3 | 0.5 | ug/L | ND | 109 | 80-120 | | | |
| Copper | 53.3 | 0.5 | ug/L | ND | 106 | 80-120 | | | |
| Lead | 51.9 | 0.1 | ug/L | ND | 104 | 80-120 | | | |
| Molybdenum | 49.1 | 0.5 | ug/L | ND | 98.1 | 80-120 | | | |
| Nickel | 52.8 | 1 | ug/L | ND | 106 | 80-120 | | | |
| Selenium | 53.8 | 1 | ug/L | ND | 108 | 80-120 | | | |
| Silver | 50.4 | 0.1 | ug/L | ND | 101 | 80-120 | | | |
| Sodium | 9900 | 200 | ug/L | ND | 97.2 | 80-120 | | | |
| Thallium | 50.9 | 0.1 | ug/L | ND | 102 | 80-120 | | | |
| Uranium | 49.6 | 0.1 | ug/L | ND | 99.3 | 80-120 | | | |
| Vanadium | 54.1 | 0.5 | ug/L | ND | 108 | 80-120 | | | |
| Zinc | 57 | 5 | ug/L | ND | 114 | 80-120 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 3.47 | 0.05 | ug/L | ND | 69.4 | 50-140 | | | |
| Acenaphthylene | 3.27 | 0.05 | ug/L | ND | 65.5 | 50-140 | | | |
| Anthracene | 3.74 | 0.01 | ug/L | ND | 74.7 | 50-140 | | | |
| Benzo [a] anthracene | 3.71 | 0.01 | ug/L | ND | 74.1 | 50-140 | | | |
| Benzo [a] pyrene | 4.24 | 0.01 | ug/L | ND | 84.8 | 50-140 | | | |
| Benzo [b] fluoranthene | 4.72 | 0.05 | ug/L | ND | 94.3 | 50-140 | | | |
| Benzo [g,h,i] perylene | 4.18 | 0.05 | ug/L | ND | 83.5 | 50-140 | | | |
| Benzo [k] fluoranthene | 4.54 | 0.05 | ug/L | ND | 90.8 | 50-140 | | | |
| Chrysene | 4.19 | 0.05 | ug/L | ND | 83.7 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 4.35 | 0.05 | ug/L | ND | 86.9 | 50-140 | | | |
| Fluoranthene | 3.60 | 0.01 | ug/L | ND | 72.0 | 50-140 | | | |
| Fluorene | 3.32 | 0.05 | ug/L | ND | 66.5 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 3.75 | 0.05 | ug/L | ND | 74.9 | 50-140 | | | |
| 1-Methylnaphthalene | 4.50 | 0.05 | ug/L | ND | 90.0 | 50-140 | | | |
| 2-Methylnaphthalene | 4.86 | 0.05 | ug/L | ND | 97.2 | 50-140 | | | |
| Naphthalene | 4.46 | 0.05 | ug/L | ND | 89.2 | 50-140 | | | |
| Phenanthrene | 3.34 | 0.05 | ug/L | ND | 66.7 | 50-140 | | | |
| Pyrene | 3.66 | 0.01 | ug/L | ND | 73.2 | 50-140 | | | |
| Surrogate: 2-Fluorobiphenyl | 19.0 | | ug/L | | 94.8 | 50-140 | | | |

Certificate of Analysis

Report Date: 07-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| <i>Surrogate: Terphenyl-d14</i> | 18.7 | | ug/L | | 93.4 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 128 | 5.0 | ug/L | ND | 128 | 50-140 | | | |
| Benzene | 32.5 | 0.5 | ug/L | ND | 81.3 | 60-130 | | | |
| Bromodichloromethane | 35.5 | 0.5 | ug/L | ND | 88.8 | 60-130 | | | |
| Bromoform | 41.6 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| Bromomethane | 43.9 | 0.5 | ug/L | ND | 110 | 50-140 | | | |
| Carbon Tetrachloride | 41.3 | 0.2 | ug/L | ND | 103 | 60-130 | | | |
| Chlorobenzene | 31.8 | 0.5 | ug/L | ND | 79.5 | 60-130 | | | |
| Chloroform | 38.4 | 0.5 | ug/L | ND | 96.0 | 60-130 | | | |
| Dibromochloromethane | 38.1 | 0.5 | ug/L | ND | 95.2 | 60-130 | | | |
| Dichlorodifluoromethane | 36.6 | 1.0 | ug/L | ND | 91.6 | 50-140 | | | |
| 1,2-Dichlorobenzene | 45.6 | 0.5 | ug/L | ND | 114 | 60-130 | | | |
| 1,3-Dichlorobenzene | 44.1 | 0.5 | ug/L | ND | 110 | 60-130 | | | |
| 1,4-Dichlorobenzene | 45.6 | 0.5 | ug/L | ND | 114 | 60-130 | | | |
| 1,1-Dichloroethane | 31.8 | 0.5 | ug/L | ND | 79.5 | 60-130 | | | |
| 1,2-Dichloroethane | 40.5 | 0.5 | ug/L | ND | 101 | 60-130 | | | |
| 1,1-Dichloroethylene | 27.6 | 0.5 | ug/L | ND | 69.0 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 31.2 | 0.5 | ug/L | ND | 78.1 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 29.6 | 0.5 | ug/L | ND | 74.0 | 60-130 | | | |
| 1,2-Dichloropropane | 28.7 | 0.5 | ug/L | ND | 71.7 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 39.4 | 0.5 | ug/L | ND | 98.6 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 44.5 | 0.5 | ug/L | ND | 111 | 60-130 | | | |
| Ethylbenzene | 40.0 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2- | 37.3 | 0.2 | ug/L | ND | 93.2 | 60-130 | | | |
| Hexane | 28.6 | 1.0 | ug/L | ND | 71.6 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 67.5 | 5.0 | ug/L | ND | 67.5 | 50-140 | | | |
| Methyl Isobutyl Ketone | 109 | 5.0 | ug/L | ND | 109 | 50-140 | | | |
| Methyl tert-butyl ether | 91.6 | 2.0 | ug/L | ND | 91.6 | 50-140 | | | |
| Methylene Chloride | 37.6 | 5.0 | ug/L | ND | 94.0 | 60-130 | | | |
| Styrene | 39.8 | 0.5 | ug/L | ND | 99.4 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 41.2 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 29.0 | 0.5 | ug/L | ND | 72.5 | 60-130 | | | |
| Tetrachloroethylene | 31.7 | 0.5 | ug/L | ND | 79.2 | 60-130 | | | |
| Toluene | 40.4 | 0.5 | ug/L | ND | 101 | 60-130 | | | |
| 1,1,1-Trichloroethane | 41.6 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| 1,1,2-Trichloroethane | 36.0 | 0.5 | ug/L | ND | 90.1 | 60-130 | | | |
| Trichloroethylene | 35.0 | 0.5 | ug/L | ND | 87.4 | 60-130 | | | |
| Trichlorofluoromethane | 41.0 | 1.0 | ug/L | ND | 103 | 60-130 | | | |
| Vinyl chloride | 42.0 | 0.5 | ug/L | ND | 105 | 50-140 | | | |
| m,p-Xylenes | 78.5 | 0.5 | ug/L | ND | 98.1 | 60-130 | | | |
| o-Xylene | 40.0 | 0.5 | ug/L | ND | 99.9 | 60-130 | | | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 79.8 | | ug/L | | 99.7 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 42.1 | | ug/L | | 52.6 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 76.0 | | ug/L | | 95.0 | 50-140 | | | |

Certificate of Analysis

Report Date: 07-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 31-Aug-2021

Client PO: Zibi-Albert and Chaudiere Island

Project Description: OTT00250193PO

Qualifier Notes:

QC Qualifiers :

QR-07 : Duplicate result exceeds RPD limits due to non-homogeneity between multiple sample vials. Remainder of QA/QC is acceptable.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Client Name: **EXP Services Inc.** Project Reference: **Zoi - Albert and Claudine Island**

Contact Name: **Patricia Stelmack** Quote #: **21-158**

Address: **100-2550 Queensview Drive** PO #: **OTT-00250190 PO**

Ottawa, ON, K2B 8H5

Telephone: **613-688-1899**

Printed Address: **Patricia.Stelmack@exp.com** **jeremy.eckert@exp.com**

Turnaround Time:

1 Day 3 Day

2 Day Regular

Date Required:

Criteria: O. Reg. 151/04 (As Amended) Table 2 RSC Piling O. Reg. 558/00 PM10 COBE SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

| Parcel Order Number: 2136274 | | Matrix | Air Volume | # of Containers | Sample Taken | | PHCs: P1-P4+BITUM | VOCs | PAHs | Metals by ICP | Hg | COT | B (BPA/B) | VOCs: P1C-P1P4 | PCB | pH | Free Cyanide |
|--|---------|--------|------------|-----------------|--------------|------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| Sample ID/Location Name | Date | | | | Time | | | | | | | | | | | | |
| 1 | MW21-02 | SW | | 1 | 02/08/31 | 1205 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | D206 | SW | | 1 | | 1200 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | MW21-01 | GW | | 7 | | 1230 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10 | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: ~~As per the 2018 report for 151 Table 2 and Table 2.3.3, the 2018 report will be used.~~
 Samples will be compared to Table 7 and 9 SCS; most stringent standard will be used.

Method of Delivery: **Walk-in**

| | | | |
|--|------------------------------------|---------------------------------------|-----------------------------|
| Requested By (Sign): | Received by (Sign): | Received at Lab: Superior Labs | Verified By: |
| Requested By (Print): Jeremy Eckert | Date/Time: 08/31/2021 13:00 | Date/Time: 09/01/2021 04:48 | Date/Time: Sept 1/21 |
| Date/Time: 2021/08/31 13:00 | Temperature: 10.7c | Temperature: 14.6c | PH Verified: JK |

(9:12a

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi-Block 206
Project: OTT00250193PO
Custody: 60985

Report Date: 21-Sep-2021
Order Date: 14-Sep-2021

Order #: 2138370

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Paracel ID | Client ID |
|------------|-----------|
| 2138370-01 | MW21-01 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 21-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 14-Sep-2021

Client PO: Zibi-Block 206

Project Description: OTT00250193PO

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------|------------------------------|-----------------|---------------|
| PCBs, total | EPA 608 - GC-ECD | 20-Sep-21 | 20-Sep-21 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 20-Sep-21 | 20-Sep-21 |

Certificate of Analysis

Report Date: 21-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 14-Sep-2021

Client PO: Zibi-Block 206

Project Description: OTT00250193PO

| | | | | |
|--------------|-----------------|---|---|---|
| Client ID: | MW21-01 | - | - | - |
| Sample Date: | 14-Sep-21 15:00 | - | - | - |
| Sample ID: | 2138370-01 | - | - | - |
| MDL/Units | Water | - | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-------|---|---|---|
| Acenaphthene | 0.05 ug/L | <0.05 | - | - | - |
| Acenaphthylene | 0.05 ug/L | <0.05 | - | - | - |
| Anthracene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [a] anthracene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [a] pyrene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 | - | - | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 | - | - | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 | - | - | - |
| Chrysene | 0.05 ug/L | <0.05 | - | - | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 | - | - | - |
| Fluoranthene | 0.01 ug/L | 0.06 | - | - | - |
| Fluorene | 0.05 ug/L | <0.05 | - | - | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 | - | - | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 | - | - | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 | - | - | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 | - | - | - |
| Naphthalene | 0.05 ug/L | <0.05 | - | - | - |
| Phenanthrene | 0.05 ug/L | <0.05 | - | - | - |
| Pyrene | 0.01 ug/L | 0.05 | - | - | - |
| 2-Fluorobiphenyl | Surrogate | 80.1% | - | - | - |
| Terphenyl-d14 | Surrogate | 99.7% | - | - | - |

PCBs

| | | | | | |
|--------------------|-----------|-------|---|---|---|
| PCBs, total | 0.05 ug/L | <0.05 | - | - | - |
| Decachlorobiphenyl | Surrogate | 103% | - | - | - |

Certificate of Analysis

Report Date: 21-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 14-Sep-2021

Client PO: Zibi-Block 206

Project Description: OTT00250193PO

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.432 | | ug/L | | 86.3 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 16.3 | | ug/L | | 81.6 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 19.1 | | ug/L | | 95.7 | 50-140 | | | |

Certificate of Analysis

Report Date: 21-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 14-Sep-2021

Client PO: Zibi-Block 206

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| PCBs | | | | | | | | | |
| PCBs, total | 0.867 | 0.05 | ug/L | ND | 86.7 | 65-135 | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 0.513 | | ug/L | | 103 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 4.05 | 0.05 | ug/L | ND | 80.9 | 50-140 | | | |
| Acenaphthylene | 3.34 | 0.05 | ug/L | ND | 66.8 | 50-140 | | | |
| Anthracene | 3.94 | 0.01 | ug/L | ND | 78.9 | 50-140 | | | |
| Benzo [a] anthracene | 3.84 | 0.01 | ug/L | ND | 76.7 | 50-140 | | | |
| Benzo [a] pyrene | 5.16 | 0.01 | ug/L | ND | 103 | 50-140 | | | |
| Benzo [b] fluoranthene | 4.59 | 0.05 | ug/L | ND | 91.8 | 50-140 | | | |
| Benzo [g,h,i] perylene | 5.33 | 0.05 | ug/L | ND | 107 | 50-140 | | | |
| Benzo [k] fluoranthene | 3.72 | 0.05 | ug/L | ND | 74.3 | 50-140 | | | |
| Chrysene | 4.82 | 0.05 | ug/L | ND | 96.5 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 5.04 | 0.05 | ug/L | ND | 101 | 50-140 | | | |
| Fluoranthene | 4.09 | 0.01 | ug/L | ND | 81.9 | 50-140 | | | |
| Fluorene | 3.63 | 0.05 | ug/L | ND | 72.7 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 4.37 | 0.05 | ug/L | ND | 87.4 | 50-140 | | | |
| 1-Methylnaphthalene | 4.13 | 0.05 | ug/L | ND | 82.7 | 50-140 | | | |
| 2-Methylnaphthalene | 4.26 | 0.05 | ug/L | ND | 85.3 | 50-140 | | | |
| Naphthalene | 4.22 | 0.05 | ug/L | ND | 84.4 | 50-140 | | | |
| Phenanthrene | 3.71 | 0.05 | ug/L | ND | 74.1 | 50-140 | | | |
| Pyrene | 4.16 | 0.01 | ug/L | ND | 83.1 | 50-140 | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 17.5 | | ug/L | | 87.7 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 21.6 | | ug/L | | 108 | 50-140 | | | |

Certificate of Analysis

Report Date: 21-Sep-2021

Client: exp Services Inc. (Ottawa)

Order Date: 14-Sep-2021

Client PO: Zibi-Block 206

Project Description: OTT00250193PO

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated



| | | |
|---|---|--|
| Client Name: Exp Services Inc. | Project Ref: Zibi - Block 206 | Page 1 of 1 |
| Contact Name: Accounts Payable | Quote #: 21-158 | Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular |
| Address: 100-2650 Queensview Dr. | PO #: 071-00250193-PO | |
| Telephone: 613-688-1899 | Email: patricia.stelmuck@exp.com jeremy.eckert@exp.com | Date Required: _____ |

| REG 153/14 <input checked="" type="checkbox"/> REG 406/15 <input type="checkbox"/> | | Other Regulation | | Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other) | | Required Analysis | | | | | | | | | | | | | | | |
|--|--|-----------------------------------|-----------------------------------|---|-------------------|-------------------|----------|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <input type="checkbox"/> Table 1 | <input type="checkbox"/> Rec/Part | <input type="checkbox"/> Med/Plnt | <input type="checkbox"/> REC-558 | <input type="checkbox"/> PWCO | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Table 2 | <input type="checkbox"/> Ind/Comm | <input type="checkbox"/> Course | <input type="checkbox"/> COME | <input type="checkbox"/> MISA | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Table 3 | <input type="checkbox"/> Agri/Other | | <input type="checkbox"/> SU - San | <input type="checkbox"/> SU - Storm | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Table 7+9 | For RSC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | Mun: _____ | <input type="checkbox"/> Other: _____ | | | | | | | | | | | | | | | | | |
| Sample ID/Location Name | | Matrix | Air Volume | # of Containers | Sample Taken | | PCB | PAH | | | | | | | | | | | | | |
| | | | | | Date | Time | | | | | | | | | | | | | | | |
| 1 | MW21-01 | GW | | 2 | 2021/09/14 | 1500 | X | X | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|--|--|---|--------------------------------------|
| Comments: Data will be compared to Table 7+9 SCS; most stringent standard will be used. | | Method of Delivery: Walk-in | |
| Relinquished By (Print): Jeremy Eckert | Received By (Print): Jennegerm Bohmer | Received at Lab: Sept 15, 2021 12:10 | Verified By: [Signature] |
| Date/Time: 2021/09/14 1600 | Date/Time: 09/14/21 4:45 pm | Date/Time: Sept 15, 2021 12:10 | Date/Time: Sept 15, 2021 3:08 |
| Temperature: 4.0 °C | Temperature: 4.0 °C | Temperature: 8.3 °C | Temperature: _____ °C |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Block 206
Project: OTT00250193P0
Custody: 134996

Report Date: 30-Dec-2021
Order Date: 22-Dec-2021

Order #: 2152337

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Paracel ID | Client ID |
|------------|-------------|
| 2152337-01 | MW21-01 |
| 2152337-02 | Duplicate |
| 2152337-03 | MW21-02 |
| 2152337-04 | Field Blank |
| 2152337-05 | Trip Blank |

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 30-Dec-2021

Client: exp Services Inc. (Ottawa)

Order Date: 22-Dec-2021

Client PO: Block 206

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------------|------------------------------|-----------------|---------------|
| Chromium, hexavalent - water | MOE E3056 - colourimetric | 29-Dec-21 | 29-Dec-21 |
| Mercury by CVAA | EPA 245.2 - Cold Vapour AA | 24-Dec-21 | 29-Dec-21 |
| Metals, ICP-MS | EPA 200.8 - ICP-MS | 23-Dec-21 | 23-Dec-21 |

Certificate of Analysis

Report Date: 30-Dec-2021

Client: exp Services Inc. (Ottawa)

Order Date: 22-Dec-2021

Client PO: Block 206

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|-----------------|-----------------|-----------------|
| Client ID: | MW21-01 | Duplicate | MW21-02 | Field Blank |
| Sample Date: | 21-Dec-21 16:00 | 21-Dec-21 16:00 | 22-Dec-21 10:00 | 21-Dec-21 16:00 |
| Sample ID: | 2152337-01 | 2152337-02 | 2152337-03 | 2152337-04 |
| MDL/Units | Water | Water | Water | Water |

Metals

| | MDL/Units | MW21-01 | Duplicate | MW21-02 | Field Blank |
|---------------|-----------|---------|-----------|---------|-------------|
| Mercury | 0.1 ug/L | <0.1 | <0.1 | <0.1 | <0.1 |
| Antimony | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Arsenic | 1 ug/L | <1 | <1 | <1 | <1 |
| Barium | 1 ug/L | 595 | 615 | 179 | <1 |
| Beryllium | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Boron | 10 ug/L | 747 | 748 | 222 | <10 |
| Cadmium | 0.1 ug/L | <0.1 | <0.1 | <0.1 | <0.1 |
| Chromium | 1 ug/L | <1 | <1 | <1 | <1 |
| Chromium (VI) | 10 ug/L | <10 | <10 | <10 | <10 |
| Cobalt | 0.5 ug/L | <0.5 | <0.5 | 0.5 | <0.5 |
| Copper | 0.5 ug/L | 1.2 | 1.1 | 1.2 | 1.7 |
| Lead | 0.1 ug/L | <0.1 | <0.1 | <0.1 | 0.1 |
| Molybdenum | 0.5 ug/L | 3.5 | 3.5 | 4.9 | <0.5 |
| Nickel | 1 ug/L | 4 | 4 | 4 | <1 |
| Selenium | 1 ug/L | <1 | <1 | <1 | <1 |
| Silver | 0.1 ug/L | <0.1 | <0.1 | <0.1 | <0.1 |
| Sodium | 200 ug/L | 342000 | 348000 | 462000 | <200 |
| Thallium | 0.1 ug/L | <0.1 | <0.1 | <0.1 | <0.1 |
| Uranium | 0.1 ug/L | 1.2 | 1.2 | 11.8 | <0.1 |
| Vanadium | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Zinc | 5 ug/L | <5 | <5 | <5 | <5 |

Certificate of Analysis

Report Date: 30-Dec-2021

Client: exp Services Inc. (Ottawa)

Order Date: 22-Dec-2021

Client PO: Block 206

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|---|---|---|
| Client ID: | Trip Blank | - | - | - |
| Sample Date: | 15-Dec-21 16:00 | - | - | - |
| Sample ID: | 2152337-05 | - | - | - |
| MDL/Units | Water | - | - | - |

Metals

| | | | | | |
|---------------|----------|------|---|---|---|
| Mercury | 0.1 ug/L | <0.1 | - | - | - |
| Antimony | 0.5 ug/L | <0.5 | - | - | - |
| Arsenic | 1 ug/L | <1 | - | - | - |
| Barium | 1 ug/L | <1 | - | - | - |
| Beryllium | 0.5 ug/L | <0.5 | - | - | - |
| Boron | 10 ug/L | <10 | - | - | - |
| Cadmium | 0.1 ug/L | <0.1 | - | - | - |
| Chromium | 1 ug/L | <1 | - | - | - |
| Chromium (VI) | 10 ug/L | <10 | - | - | - |
| Cobalt | 0.5 ug/L | <0.5 | - | - | - |
| Copper | 0.5 ug/L | <0.5 | - | - | - |
| Lead | 0.1 ug/L | <0.1 | - | - | - |
| Molybdenum | 0.5 ug/L | <0.5 | - | - | - |
| Nickel | 1 ug/L | <1 | - | - | - |
| Selenium | 1 ug/L | <1 | - | - | - |
| Silver | 0.1 ug/L | <0.1 | - | - | - |
| Sodium | 200 ug/L | <200 | - | - | - |
| Thallium | 0.1 ug/L | <0.1 | - | - | - |
| Uranium | 0.1 ug/L | <0.1 | - | - | - |
| Vanadium | 0.5 ug/L | <0.5 | - | - | - |
| Zinc | 5 ug/L | <5 | - | - | - |

Certificate of Analysis

Report Date: 30-Dec-2021

Client: exp Services Inc. (Ottawa)

Order Date: 22-Dec-2021

Client PO: Block 206

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | | | | | | |
| Antimony | ND | 0.5 | ug/L | | | | | | |
| Arsenic | ND | 1 | ug/L | | | | | | |
| Barium | ND | 1 | ug/L | | | | | | |
| Beryllium | ND | 0.5 | ug/L | | | | | | |
| Boron | ND | 10 | ug/L | | | | | | |
| Cadmium | ND | 0.1 | ug/L | | | | | | |
| Chromium (VI) | ND | 10 | ug/L | | | | | | |
| Chromium | ND | 1 | ug/L | | | | | | |
| Cobalt | ND | 0.5 | ug/L | | | | | | |
| Copper | ND | 0.5 | ug/L | | | | | | |
| Lead | ND | 0.1 | ug/L | | | | | | |
| Molybdenum | ND | 0.5 | ug/L | | | | | | |
| Nickel | ND | 1 | ug/L | | | | | | |
| Selenium | ND | 1 | ug/L | | | | | | |
| Silver | ND | 0.1 | ug/L | | | | | | |
| Sodium | ND | 200 | ug/L | | | | | | |
| Thallium | ND | 0.1 | ug/L | | | | | | |
| Uranium | ND | 0.1 | ug/L | | | | | | |
| Vanadium | ND | 0.5 | ug/L | | | | | | |
| Zinc | ND | 5 | ug/L | | | | | | |

Certificate of Analysis

Report Date: 30-Dec-2021

Client: exp Services Inc. (Ottawa)

Order Date: 22-Dec-2021

Client PO: Block 206

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------|--------|-----------------|-------|---------------|------|------------|------|-----------|-------|
| Metals | | | | | | | | | |
| Mercury | 0.15 | 0.1 | ug/L | 0.14 | | | 2.1 | 20 | |
| Antimony | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Arsenic | ND | 1 | ug/L | ND | | | NC | 20 | |
| Barium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Beryllium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Boron | ND | 10 | ug/L | ND | | | NC | 20 | |
| Cadmium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Chromium (VI) | ND | 10 | ug/L | ND | | | NC | 20 | |
| Chromium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Cobalt | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Copper | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Lead | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Molybdenum | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Nickel | ND | 1 | ug/L | ND | | | NC | 20 | |
| Selenium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Silver | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Sodium | 266 | 200 | ug/L | 234 | | | 12.8 | 20 | |
| Thallium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Uranium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Vanadium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Zinc | ND | 5 | ug/L | ND | | | NC | 20 | |

Certificate of Analysis

Report Date: 30-Dec-2021

Client: exp Services Inc. (Ottawa)

Order Date: 22-Dec-2021

Client PO: Block 206

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Metals | | | | | | | | | |
| Mercury | 3.18 | 0.1 | ug/L | 0.14 | 101 | 70-130 | | | |
| Antimony | 41.4 | 0.5 | ug/L | ND | 82.7 | 80-120 | | | |
| Arsenic | 47.5 | 1 | ug/L | ND | 94.9 | 80-120 | | | |
| Barium | 48.2 | 1 | ug/L | ND | 96.2 | 80-120 | | | |
| Beryllium | 49.0 | 0.5 | ug/L | ND | 97.9 | 80-120 | | | |
| Boron | 49 | 10 | ug/L | ND | 93.9 | 80-120 | | | |
| Cadmium | 49.4 | 0.1 | ug/L | ND | 98.7 | 80-120 | | | |
| Chromium (VI) | 183 | 10 | ug/L | ND | 91.5 | 70-130 | | | |
| Chromium | 46.6 | 1 | ug/L | ND | 93.1 | 80-120 | | | |
| Cobalt | 47.7 | 0.5 | ug/L | ND | 95.3 | 80-120 | | | |
| Copper | 46.0 | 0.5 | ug/L | ND | 91.9 | 80-120 | | | |
| Lead | 43.6 | 0.1 | ug/L | ND | 87.2 | 80-120 | | | |
| Molybdenum | 43.4 | 0.5 | ug/L | ND | 86.6 | 80-120 | | | |
| Nickel | 44.8 | 1 | ug/L | ND | 89.6 | 80-120 | | | |
| Selenium | 48.5 | 1 | ug/L | ND | 96.9 | 80-120 | | | |
| Silver | 47.9 | 0.1 | ug/L | ND | 95.8 | 80-120 | | | |
| Sodium | 8670 | 200 | ug/L | 234 | 84.4 | 80-120 | | | |
| Thallium | 46.8 | 0.1 | ug/L | ND | 93.6 | 80-120 | | | |
| Uranium | 45.3 | 0.1 | ug/L | ND | 90.5 | 80-120 | | | |
| Vanadium | 47.6 | 0.5 | ug/L | ND | 95.2 | 80-120 | | | |
| Zinc | 49 | 5 | ug/L | ND | 97.5 | 80-120 | | | |

Certificate of Analysis

Report Date: 30-Dec-2021

Client: exp Services Inc. (Ottawa)

Order Date: 22-Dec-2021

Client PO: Block 206

Project Description: OTT00250193P0

Qualifier Notes:

QC Qualifiers :

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated



| | |
|---|--|
| Parcel Order Number (Lab Use Only) 1152337 | Chain Of Custody (Lab Use Only) No 134996 |
|---|--|

| | | |
|--|---|--|
| Client Name: EXP SERVICES INC. | Project Ref: OTT-00250193-PO (Phase 206) | Page 1 of 1 |
| Contact Name: Patricia Stelmack | Quote #: 21-58 | Turnaround Time |
| Address: 2650 QUEENSWAY DRIVE, OTTAWA | PO #: _____ | <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day |
| Telephone: 613-688-1899 | E-mail: Patricia.stelmack@exp.com Jeremy.Grant@exp.com | <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular |
| | | Date Required: _____ |

| REGULATIONS | | Other Regulation | Matrix Type: S (Soil/Sed.) <u>GW</u> (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other) | | Required Analysis | | | | | | | | | | | |
|---|------------------------------------|-----------------------------------|--|-----------------------------------|-------------------|------------|-----------------|--------------|------|-----------------|------|------|---------------|----|------|----------|
| <input type="checkbox"/> Table 1 | <input type="checkbox"/> Res/Wrk | <input type="checkbox"/> Med/Line | <input type="checkbox"/> R10-555 | <input type="checkbox"/> PW00 | Matrix | Air Volume | # of Containers | Sample Taken | | PHCS P1-P6-BTEX | VOCs | PAHs | Metals by ICP | Hg | CrVI | BI (HMB) |
| <input type="checkbox"/> Table 2 | <input type="checkbox"/> Ind/Comm | <input type="checkbox"/> Coase | <input type="checkbox"/> CCM | <input type="checkbox"/> MSA | | | | Date | Time | | | | | | | |
| <input type="checkbox"/> Table 3 | <input type="checkbox"/> Agr/Other | | <input type="checkbox"/> SU-San | <input type="checkbox"/> SU-Store | | | | | | | | | | | | |
| <input type="checkbox"/> Table _____ | | | Mun: _____ | Other: _____ | | | | | | | | | | | | |
| For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | |
| 1 | MW21-01 | | GW | 3 | 2021-12-21 | 16:00 | | | | | | X | X | X | | |
| 2 | Duplicate | | GW | 3 | 2021-12-21 | 16:00 | | | | | | X | X | X | | |
| 3 | MW21-02 | | GW | 3 | 2021-12-22 | 10:00 | | | | | | X | X | X | | |
| 4 | FIELD Blank | | | 3 | 2021-12-21 | 16:00 | | | | | | X | X | X | | |
| 5 | TRIP Blank | | | 3 | 2021-12-21 | 16:00 | | | | | | X | X | X | | |
| 6 | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |

| | | |
|--|--|--|
| Comments: -SAMPLES will be compared To Table 7 & 9 SCS, most stringent standard will be | | Method of Delivery: Drop box |
| Requisitioned By (Sign): Philip Oliveira | Received By (Sign): [Signature] | Received at Lab: Sumnerpark Lab |
| Requisitioned By (Print): Philip Oliveira | Date/Time: 12/22/21 2:53pm | Verified By: [Signature] |
| Date/Time: Dec 22 2021 14:45 | Temperature: 1.0 °C | Date/Time: Dec 22 2021 04:14 |
| | | Temperature: 3.8 °C |
| | | Date/Time: Dec 22 2021 9:56 |
| | | pit Verified: [Signature] |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Block 206
Project: OTT00250193P0
Custody: 133472

Report Date: 13-Jan-2022
Order Date: 6-Jan-2022

Order #: 2202236

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|-------------|
| 2202236-01 | MW21-02 |
| 2202236-02 | Duplicate |
| 2202236-03 | Field Blank |
| 2202236-04 | Trip Blank |

Approved By:



Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 13-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 6-Jan-2022

Client PO: Block 206

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|----------------------------|---------------------------------|-----------------|---------------|
| Cyanide, free | MOE E3015 - Auto Colour | 12-Jan-22 | 12-Jan-22 |
| pH | EPA 150.1 - pH probe @25 °C | 10-Jan-22 | 10-Jan-22 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 7-Jan-22 | 8-Jan-22 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 10-Jan-22 | 11-Jan-22 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 7-Jan-22 | 8-Jan-22 |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Block 206

Report Date: 13-Jan-2022

Order Date: 6-Jan-2022

Project Description: OTT00250193P0

| | Client ID: | MW21-02 | Duplicate | Field Blank | Trip Blank |
|--|--------------|-----------------|-----------------|-----------------|-----------------|
| | Sample Date: | 06-Jan-22 14:45 | 06-Jan-22 14:45 | 06-Jan-22 14:45 | 15-Dec-21 14:45 |
| | Sample ID: | 2202236-01 | 2202236-02 | 2202236-03 | 2202236-04 |
| | MDL/Units | Water | Water | Water | Water |

General Inorganics

| | MDL/Units | MW21-02 | Duplicate | Field Blank | Trip Blank |
|---------------|--------------|---------|-----------|-------------|------------|
| Cyanide, free | 2 ug/L | <2 | <2 | <2 | <2 |
| pH | 0.1 pH Units | 6.8 | 6.8 | 7.1 | 6.0 |

Volatiles

| | MDL/Units | MW21-02 | Duplicate | Field Blank | Trip Blank |
|--|-----------|---------|-----------|-------------|------------|
| Acetone | 5.0 ug/L | <5.0 | <5.0 | <5.0 | <5.0 |
| Benzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromodichloromethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromomethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | 0.2 ug/L | <0.2 | <0.2 | <0.2 | <0.2 |
| Chlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | <1.0 |
| 1,2-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| trans-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| trans-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropene, total | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | <0.2 | <0.2 | <0.2 | <0.2 |
| Hexane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | <1.0 |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | <5.0 | <5.0 | <5.0 | <5.0 |
| Methyl Isobutyl Ketone | 5.0 ug/L | <5.0 | <5.0 | <5.0 | <5.0 |
| Methyl tert-butyl ether | 2.0 ug/L | <2.0 | <2.0 | <2.0 | <2.0 |
| Methylene Chloride | 5.0 ug/L | <5.0 | <5.0 | 7.2 | 15.9 |
| Styrene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |

Certificate of Analysis

Report Date: 13-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 6-Jan-2022

Client PO: Block 206

Project Description: OTT00250193P0

| | Client ID: Sample Date: Sample ID: | MW21-02 06-Jan-22 14:45 2202236-01 | Duplicate 06-Jan-22 14:45 2202236-02 | Field Blank 06-Jan-22 14:45 2202236-03 | Trip Blank 15-Dec-21 14:45 2202236-04 |
|------------------------|--|--|--|--|---|
| | MDL/Units | Water | Water | Water | Water |
| Tetrachloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | 1.0 ug/L | <1.0 | <1.0 | <1.0 | <1.0 |
| Vinyl chloride | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| m,p-Xylenes | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| Xylenes, total | 0.5 ug/L | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Bromofluorobenzene | Surrogate | 78.0% | 92.6% | 99.2% | 102% |
| Dibromofluoromethane | Surrogate | 106% | 114% | 110% | 113% |
| Toluene-d8 | Surrogate | 85.0% | 86.9% | 85.4% | 85.9% |

Hydrocarbons

| | | | | | |
|-------------------|----------|------|------|------|------|
| F1 PHCs (C6-C10) | 25 ug/L | <25 | <25 | <25 | <25 |
| F2 PHCs (C10-C16) | 100 ug/L | <100 | <100 | <100 | <100 |
| F3 PHCs (C16-C34) | 100 ug/L | <100 | <100 | <100 | <100 |
| F4 PHCs (C34-C50) | 100 ug/L | <100 | <100 | <100 | <100 |

Certificate of Analysis

Report Date: 13-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 6-Jan-2022

Client PO: Block 206

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2) | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 91.3 | | ug/L | | 114 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 85.5 | | ug/L | | 107 | 50-140 | | | |
| Surrogate: Toluene-d8 | 70.2 | | ug/L | | 87.7 | 50-140 | | | |

Certificate of Analysis

Report Date: 13-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 6-Jan-2022

Client PO: Block 206

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--|--------|-----------------|----------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | ND | | | NC | 20 | |
| pH | 7.7 | 0.1 | pH Units | 7.8 | | | 1.0 | 3.3 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | ND | 0.5 | ug/L | 1.07 | | | NC | 30 | |
| Dibromochloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2-) | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Surrogate: 4-Bromofluorobenzene | 86.4 | | ug/L | | 108 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 90.5 | | ug/L | | 113 | 50-140 | | | |
| Surrogate: Toluene-d8 | 69.1 | | ug/L | | 86.4 | 50-140 | | | |

Certificate of Analysis

Report Date: 13-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 6-Jan-2022

Client PO: Block 206

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 30.7 | 2 | ug/L | ND | 102 | 70-130 | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 2100 | 25 | ug/L | ND | 105 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1560 | 100 | ug/L | ND | 97.3 | 60-140 | | | |
| F3 PHCs (C16-C34) | 4310 | 100 | ug/L | ND | 110 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2550 | 100 | ug/L | ND | 103 | 60-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 89.0 | 5.0 | ug/L | ND | 89.0 | 50-140 | | | |
| Benzene | 39.6 | 0.5 | ug/L | ND | 99.0 | 60-130 | | | |
| Bromodichloromethane | 36.0 | 0.5 | ug/L | ND | 90.1 | 60-130 | | | |
| Bromoform | 41.7 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| Bromomethane | 38.7 | 0.5 | ug/L | ND | 96.7 | 50-140 | | | |
| Carbon Tetrachloride | 39.4 | 0.2 | ug/L | ND | 98.6 | 60-130 | | | |
| Chlorobenzene | 39.4 | 0.5 | ug/L | ND | 98.6 | 60-130 | | | |
| Chloroform | 38.7 | 0.5 | ug/L | ND | 96.8 | 60-130 | | | |
| Dibromochloromethane | 40.1 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| Dichlorodifluoromethane | 34.8 | 1.0 | ug/L | ND | 86.9 | 50-140 | | | |
| 1,2-Dichlorobenzene | 31.5 | 0.5 | ug/L | ND | 78.7 | 60-130 | | | |
| 1,3-Dichlorobenzene | 32.8 | 0.5 | ug/L | ND | 82.0 | 60-130 | | | |
| 1,4-Dichlorobenzene | 32.6 | 0.5 | ug/L | ND | 81.4 | 60-130 | | | |
| 1,1-Dichloroethane | 40.1 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| 1,2-Dichloroethane | 33.9 | 0.5 | ug/L | ND | 84.8 | 60-130 | | | |
| 1,1-Dichloroethylene | 45.1 | 0.5 | ug/L | ND | 113 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 37.7 | 0.5 | ug/L | ND | 94.3 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 40.7 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,2-Dichloropropane | 38.3 | 0.5 | ug/L | ND | 95.8 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 35.6 | 0.5 | ug/L | ND | 88.9 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 36.6 | 0.5 | ug/L | ND | 91.6 | 60-130 | | | |
| Ethylbenzene | 34.6 | 0.5 | ug/L | ND | 86.6 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2- | 41.4 | 0.2 | ug/L | ND | 104 | 60-130 | | | |
| Hexane | 44.9 | 1.0 | ug/L | ND | 112 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 76.3 | 5.0 | ug/L | ND | 76.3 | 50-140 | | | |
| Methyl Isobutyl Ketone | 82.3 | 5.0 | ug/L | ND | 82.3 | 50-140 | | | |
| Methyl tert-butyl ether | 95.1 | 2.0 | ug/L | ND | 95.1 | 50-140 | | | |
| Methylene Chloride | 39.4 | 5.0 | ug/L | ND | 98.4 | 60-130 | | | |
| Styrene | 37.5 | 0.5 | ug/L | ND | 93.7 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 43.0 | 0.5 | ug/L | ND | 107 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 36.7 | 0.5 | ug/L | ND | 91.8 | 60-130 | | | |
| Tetrachloroethylene | 39.4 | 0.5 | ug/L | ND | 98.4 | 60-130 | | | |
| Toluene | 40.6 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| 1,1,1-Trichloroethane | 38.3 | 0.5 | ug/L | ND | 95.8 | 60-130 | | | |
| 1,1,2-Trichloroethane | 38.6 | 0.5 | ug/L | ND | 96.5 | 60-130 | | | |
| Trichloroethylene | 39.5 | 0.5 | ug/L | ND | 98.8 | 60-130 | | | |
| Trichlorofluoromethane | 40.3 | 1.0 | ug/L | ND | 101 | 60-130 | | | |
| Vinyl chloride | 44.2 | 0.5 | ug/L | ND | 111 | 50-140 | | | |
| m,p-Xylenes | 62.6 | 0.5 | ug/L | ND | 78.3 | 60-130 | | | |
| o-Xylene | 40.2 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| Surrogate: 4-Bromofluorobenzene | 63.1 | | ug/L | | 78.9 | 50-140 | | | |

Certificate of Analysis
 Client: exp Services Inc. (Ottawa)
 Client PO: Block 206

Report Date: 13-Jan-2022
 Order Date: 6-Jan-2022
 Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Surrogate: Dibromofluoromethane | 87.0 | | ug/L | | 109 | 50-140 | | | |
| Surrogate: Toluene-d8 | 58.1 | | ug/L | | 72.6 | 50-140 | | | |

Certificate of Analysis

Report Date: 13-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 6-Jan-2022

Client PO: Block 206

Project Description: OTT00250193P0

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

The Sample Date for lab provided Trip QC samples is based on the date of preparation at the lab.

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



| | |
|--|---|
| Parcel Order Number (Lab Use Only) 2202236 | Chain Of Custody (Lab Use Only) No 133472 |
|--|---|

| | | |
|---|---|--|
| Client Name: EXP Services Inc | Project Ref: OTT-00250193-PO (R10020) | Page 1 of 1 |
| Contact Name: Patricia Stelmack | Quote #: 21-58 | Turnaround Time |
| Address: 2650 QUEENSVIEW DRIVE, OTTAWA | PO #: _____ | <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day |
| Telephone: 613-688-1899 | Email: Patricia.Stelmack@exp.com Jeremy.Eckert@exp.com | <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular |
| | | Date Required: _____ |

| | | | | | | | | | | | | | |
|---|---|---|-------------------|--------------|-----------------|---------------|------|------|-----------|---------------|----|------|------|
| <input checked="" type="checkbox"/> REG 510/04 <input type="checkbox"/> REG 06/19 | Other Regulation | Matrix Type: S (Soil/Sed) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other) | Required Analysis | | | | | | | | | | |
| <input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Med/Vet | <input type="checkbox"/> REG 518 <input type="checkbox"/> PWD3 | Sample Taken | PHGs FT-1-4 | VOCs | PAHs | Metals by ICP | Hg | CrVI | B (P-WES) | FREE CHLORINE | pH | | |
| <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Course | <input type="checkbox"/> COME <input type="checkbox"/> MISA | | | | | | | | | | | Date | Time |
| <input type="checkbox"/> Table 1 <input type="checkbox"/> Agr/Other | <input type="checkbox"/> SI - San <input type="checkbox"/> SI - Storm | | | | | | | | | | | | |
| <input type="checkbox"/> Table _____ | Mat: _____ | | | | | | | | | | | | |
| For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Other: _____ | | | | | | | | | | | | |
| Sample ID/Location Name | | | Matrix | Air Volume | # of Containers | Date | Time | | | | | | |
| 1 | MW 21-02 | GW | 5 | 2022-01-06 | 14h45 | X | X | | | | X | X | |
| 2 | Duplicate | GW | 5 | 2022-01-06 | 14h45 | X | X | | | | X | X | |
| 3 | FIELD BLANK | | 5 | 2022-01-06 | 14h45 | X | X | | | | X | X | |
| 4 | TRIP BLANK | | 6 | 2022-01-06 | 14h45 | X | X | | | | X | X | |
| 5 | | | | Dec 15, 2021 | | | | | | | | | |
| 6 | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | |

Comments: **- Samples will be compared to table 749 SES, most stringent standard will be used.**

| | | | |
|--|---|--|--|
| Relinquished By (Sign): Philip Olivier | Received By (Driver Sign): [Signature] | Received at (Site): [Signature] | Method of Delivery: R Drop Box |
| Relinquished By (Print): Philip Olivier | Date/Time: 01/06/2022 4:40pm | Date/Time: 11:45 2017-01-07 | Verified By: [Signature] |
| Date/Time: 2022-01-06 16h30 | Temperature: 3.7 °C | Temperature: 2.6 °C | Date/Time: Jan 07, 2022 12:10 |
| Chain of Custody (Env) slip | | Revision 4.0 | all Verified: <input checked="" type="checkbox"/> W: BS |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi - Albert and Chaudiere Island
Project: OTT00250193P0
Custody:

Report Date: 18-Jan-2022
Order Date: 12-Jan-2022

Order #: 2203309

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Paracel ID | Client ID |
|------------|-------------|
| 2203309-01 | Trip Blank |
| 2203309-02 | Field Blank |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------|------------------------------|-----------------|---------------|
| PCBs, total | EPA 608 - GC-ECD | 13-Jan-22 | 14-Jan-22 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 17-Jan-22 | 18-Jan-22 |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|-----------------|---|---|
| Client ID: | Trip Blank | Field Blank | - | - |
| Sample Date: | 15-Dec-21 12:30 | 12-Jan-22 12:15 | - | - |
| Sample ID: | 2203309-01 | 2203309-02 | - | - |
| MDL/Units | Water | Water | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-------|-------|---|---|
| Acenaphthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Acenaphthylene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Anthracene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [a] anthracene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [a] pyrene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Chrysene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Fluoranthene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Fluorene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 | <0.10 | - | - |
| Naphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Phenanthrene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Pyrene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| 2-Fluorobiphenyl | Surrogate | 86.0% | 107% | - | - |
| Terphenyl-d14 | Surrogate | 108% | 115% | - | - |

PCBs

| | | | | | |
|--------------------|-----------|-------|-------|---|---|
| PCBs, total | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Decachlorobiphenyl | Surrogate | 112% | 127% | - | - |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.627 | | ug/L | | 125 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 17.2 | | ug/L | | 85.8 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 19.8 | | ug/L | | 98.9 | 50-140 | | | |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| PCBs | | | | | | | | | |
| PCBs, total | 0.905 | 0.05 | ug/L | ND | 90.5 | 65-135 | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 0.619 | | ug/L | | 124 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 3.60 | 0.05 | ug/L | ND | 72.1 | 50-140 | | | |
| Acenaphthylene | 3.10 | 0.05 | ug/L | ND | 62.1 | 50-140 | | | |
| Anthracene | 2.98 | 0.01 | ug/L | ND | 59.5 | 50-140 | | | |
| Benzo [a] anthracene | 3.53 | 0.01 | ug/L | ND | 70.5 | 50-140 | | | |
| Benzo [a] pyrene | 4.10 | 0.01 | ug/L | ND | 82.0 | 50-140 | | | |
| Benzo [b] fluoranthene | 4.42 | 0.05 | ug/L | ND | 88.4 | 50-140 | | | |
| Benzo [g,h,i] perylene | 3.66 | 0.05 | ug/L | ND | 73.2 | 50-140 | | | |
| Benzo [k] fluoranthene | 4.45 | 0.05 | ug/L | ND | 89.0 | 50-140 | | | |
| Chrysene | 4.21 | 0.05 | ug/L | ND | 84.2 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 2.95 | 0.05 | ug/L | ND | 59.1 | 50-140 | | | |
| Fluoranthene | 3.45 | 0.01 | ug/L | ND | 69.0 | 50-140 | | | |
| Fluorene | 3.59 | 0.05 | ug/L | ND | 71.9 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 3.02 | 0.05 | ug/L | ND | 60.4 | 50-140 | | | |
| 1-Methylnaphthalene | 4.71 | 0.05 | ug/L | ND | 94.2 | 50-140 | | | |
| 2-Methylnaphthalene | 5.07 | 0.05 | ug/L | ND | 101 | 50-140 | | | |
| Naphthalene | 4.13 | 0.05 | ug/L | ND | 82.6 | 50-140 | | | |
| Phenanthrene | 3.37 | 0.05 | ug/L | ND | 67.3 | 50-140 | | | |
| Pyrene | 3.43 | 0.01 | ug/L | ND | 68.7 | 50-140 | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 17.2 | | ug/L | | 86.0 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 20.1 | | ug/L | | 101 | 50-140 | | | |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

The Sample Date for lab provided Trip QC samples is based on the date of preparation at the lab.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated



| | | |
|---|--|--|
| Client Name: EXP Services Inc. | Project Reference: Zibi - Albert and Chaudiere Island | Turnaround Time: <input type="checkbox"/> 1 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 2 Day <input checked="" type="checkbox"/> Regular Date Required: _____ |
| Contact Name: Patricia Stelmack | Quote #: 21-503 | |
| Address: 503-2650 Queensview Drive Ottawa, ON, K2B 8H6 | PO #: OTT 00250193-P0 Email Address: Patricia.Stelmack@exp.com jeremy.zekent@exp.com | |
| Telephone: 613-688-1899 | | |

Criteria: 0. Reg. 153/04 (As Amended) Table 7 RSC Piling 0. Reg. 558/06 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other) **Required Analyses**

| Parcel Order Number: 2203309 | | Matrix | Air Volume | # of Containers | Sample Taken | | Pb/Cd (Pb+Cd) (BTEX) | VOCs | PAHs | Metals by ICP | Hg | COPC | B (BPA/S) | VOC, PHEC P1-P4 | PCB | pH | | | | |
|---------------------------------|-------------|--------|------------|-----------------|--------------|-------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Sample ID/Location Name | Date | | | | Time | | | | | | | | | | | | | | | |
| 1 | Trip Blank | 0 | | 2 | 22/01/22 | 12:30 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Field Blank | 0 | | 2 | 22/01/22 | 12:15 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used. Method of Delivery: walk-in

| | | | |
|---|---|------------------------------------|---------------------------------|
| Requisitioned By (Sign): <i>[Signature]</i> | Received by Driver (Sign): <i>[Signature]</i> | Arrived at Lab: <i>[Signature]</i> | Verified By: <i>[Signature]</i> |
| Requisitioned By (Print): Jeremy Zekent | Date/Time: Jan 17, 2022 | Date/Time: Jan 17, 2022 12:20 | Date/Time: 2022/01/20 15:00 |
| Date/Time: 22/01/22 15:00 | Temperature: 9.8 °C | Temperature: 10.4 °C | All Verified By: _____ |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi - Albert and Chaudiere Island
Project: OTT00250193P0
Custody:

Report Date: 18-Jan-2022
Order Date: 12-Jan-2022

Order #: 2203311

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Parcel ID | Client ID |
|------------|-----------|
| 2203311-01 | MW21-02 |
| 2203311-02 | D206 |
| 2203311-03 | MW21-01 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------|---------------------------------|-----------------|---------------|
| BTEX by P&T GC-MS | EPA 624 - P&T GC-MS | 14-Jan-22 | 14-Jan-22 |
| PCBs, total | EPA 608 - GC-ECD | 13-Jan-22 | 14-Jan-22 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 14-Jan-22 | 14-Jan-22 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 17-Jan-22 | 17-Jan-22 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 17-Jan-22 | 18-Jan-22 |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|-----------------|-----------------|---|
| Client ID: | MW21-02 | D206 | MW21-01 | - |
| Sample Date: | 12-Jan-22 11:00 | 12-Jan-22 11:00 | 12-Jan-22 12:00 | - |
| Sample ID: | 2203311-01 | 2203311-02 | 2203311-03 | - |
| MDL/Units | Water | Water | Water | - |

Volatiles

| | | | | | |
|----------------|-----------|---|---|-------|---|
| Benzene | 0.5 ug/L | - | - | <0.5 | - |
| Ethylbenzene | 0.5 ug/L | - | - | <0.5 | - |
| Toluene | 0.5 ug/L | - | - | <0.5 | - |
| m,p-Xylenes | 0.5 ug/L | - | - | <0.5 | - |
| o-Xylene | 0.5 ug/L | - | - | <0.5 | - |
| Xylenes, total | 0.5 ug/L | - | - | <0.5 | - |
| Toluene-d8 | Surrogate | - | - | 83.4% | - |

Hydrocarbons

| | | | | | |
|-------------------|----------|---|---|------|---|
| F1 PHCs (C6-C10) | 25 ug/L | - | - | <25 | - |
| F2 PHCs (C10-C16) | 100 ug/L | - | - | <100 | - |
| F3 PHCs (C16-C34) | 100 ug/L | - | - | <100 | - |
| F4 PHCs (C34-C50) | 100 ug/L | - | - | <100 | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-------|-------|---|---|
| Acenaphthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Acenaphthylene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Anthracene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [a] anthracene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [a] pyrene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Chrysene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Fluoranthene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| Fluorene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 | <0.10 | - | - |
| Naphthalene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Phenanthrene | 0.05 ug/L | <0.05 | <0.05 | - | - |
| Pyrene | 0.01 ug/L | <0.01 | <0.01 | - | - |
| 2-Fluorobiphenyl | Surrogate | 86.8% | 92.2% | - | - |
| Terphenyl-d14 | Surrogate | 89.3% | 113% | - | - |

PCBs

| | | | | | |
|-------------|-----------|-------|-------|---|---|
| PCBs, total | 0.05 ug/L | <0.05 | <0.05 | - | - |
|-------------|-----------|-------|-------|---|---|

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

| | Client ID: | MW21-02 | D206 | MW21-01 | - |
|--------------------|--------------|-----------------|-----------------|-----------------|---|
| | Sample Date: | 12-Jan-22 11:00 | 12-Jan-22 11:00 | 12-Jan-22 12:00 | - |
| | Sample ID: | 2203311-01 | 2203311-02 | 2203311-03 | - |
| | MDL/Units | Water | Water | Water | - |
| Decachlorobiphenyl | Surrogate | 110% | 105% | - | - |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.627 | | ug/L | | 125 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 17.2 | | ug/L | | 85.8 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 19.8 | | ug/L | | 98.9 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: Toluene-d8 | 72.9 | | ug/L | | 91.2 | 50-140 | | | |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-----------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Volatiles | | | | | | | | | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Surrogate: Toluene-d8 | 67.9 | | ug/L | | 84.9 | 50-140 | | | |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 1790 | 25 | ug/L | ND | 89.3 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1080 | 100 | ug/L | ND | 67.5 | 60-140 | | | |
| F3 PHCs (C16-C34) | 2720 | 100 | ug/L | ND | 69.5 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2240 | 100 | ug/L | ND | 90.3 | 60-140 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.905 | 0.05 | ug/L | ND | 90.5 | 65-135 | | | |
| <i>Surrogate: Decachlorobiphenyl</i> | 0.619 | | ug/L | | 124 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 3.60 | 0.05 | ug/L | ND | 72.1 | 50-140 | | | |
| Acenaphthylene | 3.10 | 0.05 | ug/L | ND | 62.1 | 50-140 | | | |
| Anthracene | 2.98 | 0.01 | ug/L | ND | 59.5 | 50-140 | | | |
| Benzo [a] anthracene | 3.53 | 0.01 | ug/L | ND | 70.5 | 50-140 | | | |
| Benzo [a] pyrene | 4.10 | 0.01 | ug/L | ND | 82.0 | 50-140 | | | |
| Benzo [b] fluoranthene | 4.42 | 0.05 | ug/L | ND | 88.4 | 50-140 | | | |
| Benzo [g,h,i] perylene | 3.66 | 0.05 | ug/L | ND | 73.2 | 50-140 | | | |
| Benzo [k] fluoranthene | 4.45 | 0.05 | ug/L | ND | 89.0 | 50-140 | | | |
| Chrysene | 4.21 | 0.05 | ug/L | ND | 84.2 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 2.95 | 0.05 | ug/L | ND | 59.1 | 50-140 | | | |
| Fluoranthene | 3.45 | 0.01 | ug/L | ND | 69.0 | 50-140 | | | |
| Fluorene | 3.59 | 0.05 | ug/L | ND | 71.9 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 3.02 | 0.05 | ug/L | ND | 60.4 | 50-140 | | | |
| 1-Methylnaphthalene | 4.71 | 0.05 | ug/L | ND | 94.2 | 50-140 | | | |
| 2-Methylnaphthalene | 5.07 | 0.05 | ug/L | ND | 101 | 50-140 | | | |
| Naphthalene | 4.13 | 0.05 | ug/L | ND | 82.6 | 50-140 | | | |
| Phenanthrene | 3.37 | 0.05 | ug/L | ND | 67.3 | 50-140 | | | |
| Pyrene | 3.43 | 0.01 | ug/L | ND | 68.7 | 50-140 | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 17.2 | | ug/L | | 86.0 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 20.1 | | ug/L | | 101 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Benzene | 37.1 | 0.5 | ug/L | ND | 92.7 | 60-130 | | | |
| Ethylbenzene | 32.2 | 0.5 | ug/L | ND | 80.6 | 60-130 | | | |
| Toluene | 38.7 | 0.5 | ug/L | ND | 96.7 | 60-130 | | | |
| m,p-Xylenes | 59.9 | 0.5 | ug/L | ND | 74.9 | 60-130 | | | |
| o-Xylene | 37.6 | 0.5 | ug/L | ND | 93.9 | 60-130 | | | |
| <i>Surrogate: Toluene-d8</i> | 56.2 | | ug/L | | 70.2 | 50-140 | | | |

Certificate of Analysis

Report Date: 18-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 12-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



Client Name: EXP Services Inc. Project Reference: Zbi - Albert and Claudine Island
 Contact Name: Patricia Skirmack Quote #: 21-123
 Address: 100-2680 Queensview Drive PO #: OTT 0050193-P8
 Ottawa, ON, K2B 8H8 Email Address: Patricia.Skirmack@exp.com
 Telephone: 613-688-1899 Jeremy.Eckert@exp.com

Turnaround Time:
 1 Day 3 Day
 2 Day Regular
 Date Required:

Criteria: O. Reg. 153/04 (As Amended) Table 1 RSC Filing O. Reg. 558/00 PRCO CCME SUB (Storm) SUB (Sanitary) Municipality: Other:

Matrix Type: S (Soil/Sed) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Pit) A (Air) O (Other)

| Sample ID/Location Name | Matrix | Air Volume | # of Containers | Sample Taken | | Required Analytes | | | | | | | | | | | | | |
|-------------------------|--------|------------|-----------------|--------------|-------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| | | | | Date | Time | PHOS (P-PAS-PTES) | VOCK | PAHS | Metals by ICP | As | CPV | BOHMSO | VOC, PHEC, P-FA | PCB | pH | | | | |
| | | | | | | | | | | | | | | | | | | | |
| MW21-02 | GW | | 2 | 22/01/12 | 11:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| D206 | GW | | 2 | 22/01/12 | 11:00 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| MW21-01 | GW | | 3 | 22/01/12 | 12:00 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used.

Method of Delivery: Waste

| | | | |
|---|---|---|---|
| Relinquished By (Sign): <u>[Signature]</u> | Received By (Direct/Temp): <u>[Signature]</u> | Relinquished at Lab: <u>Whispering Bohmer</u> | Verified By: <u>[Signature]</u> |
| Relinquished By (Print): <u>Jeremy Eckert</u> | Date/Time: <u>Jan 12/12</u> | Date/Time: <u>2012/01/22 12:30</u> | Date/Time: <u>2013/01/22 13:55</u> |
| Date/Time: <u>22/01/12 15:00</u> | Temperature: <u>9.8 °C</u> | Temperature: <u>10.4 °C</u> | All Verified () By: <u>[Signature]</u> |

16:22

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi - Albert and Chaudiere Island
Project: OTT00250193P0
Custody:

Report Date: 26-Jan-2022
Order Date: 20-Jan-2022

Order #: 2204302

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Paracel ID | Client ID |
|------------|-----------|
| 2204302-01 | MW21-03 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|------------------------------|---------------------------------|-----------------|---------------|
| Chromium, hexavalent - water | MOE E3056 - colourimetric | 20-Jan-22 | 20-Jan-22 |
| Cyanide, free | MOE E3015 - Auto Colour | 21-Jan-22 | 21-Jan-22 |
| Mercury by CVAA | EPA 245.2 - Cold Vapour AA | 26-Jan-22 | 26-Jan-22 |
| Metals, ICP-MS | EPA 200.8 - ICP-MS | 21-Jan-22 | 21-Jan-22 |
| PCBs, total | EPA 608 - GC-ECD | 24-Jan-22 | 24-Jan-22 |
| pH | EPA 150.1 - pH probe @25 °C | 21-Jan-22 | 21-Jan-22 |
| PHC F1 | CWS Tier 1 - P&T GC-FID | 21-Jan-22 | 21-Jan-22 |
| PHCs F2 to F4 | CWS Tier 1 - GC-FID, extraction | 21-Jan-22 | 22-Jan-22 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 21-Jan-22 | 21-Jan-22 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 21-Jan-22 | 21-Jan-22 |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

| | | | | |
|---------------------|-----------------|---|---|---|
| Client ID: | MW21-03 | - | - | - |
| Sample Date: | 19-Jan-22 14:00 | - | - | - |
| Sample ID: | 2204302-01 | - | - | - |
| MDL/Units | Water | - | - | - |

General Inorganics

| | | | | | |
|---------------|--------------|-----|---|---|---|
| Cyanide, free | 2 ug/L | <2 | - | - | - |
| pH | 0.1 pH Units | 7.6 | - | - | - |

Metals

| | | | | | |
|---------------|----------|--------|---|---|---|
| Mercury | 0.1 ug/L | <0.1 | - | - | - |
| Antimony | 0.5 ug/L | <0.5 | - | - | - |
| Arsenic | 1 ug/L | <1 | - | - | - |
| Barium | 1 ug/L | 195 | - | - | - |
| Beryllium | 0.5 ug/L | <0.5 | - | - | - |
| Boron | 10 ug/L | 94 | - | - | - |
| Cadmium | 0.1 ug/L | <0.1 | - | - | - |
| Chromium | 1 ug/L | <1 | - | - | - |
| Chromium (VI) | 10 ug/L | <10 | - | - | - |
| Cobalt | 0.5 ug/L | 0.6 | - | - | - |
| Copper | 0.5 ug/L | <0.5 | - | - | - |
| Lead | 0.1 ug/L | <0.1 | - | - | - |
| Molybdenum | 0.5 ug/L | 1.7 | - | - | - |
| Nickel | 1 ug/L | 3 | - | - | - |
| Selenium | 1 ug/L | <1 | - | - | - |
| Silver | 0.1 ug/L | <0.1 | - | - | - |
| Sodium | 200 ug/L | 463000 | - | - | - |
| Thallium | 0.1 ug/L | <0.1 | - | - | - |
| Uranium | 0.1 ug/L | 3.3 | - | - | - |
| Vanadium | 0.5 ug/L | 0.5 | - | - | - |
| Zinc | 5 ug/L | <5 | - | - | - |

Volatiles

| | | | | | |
|-------------------------|----------|------|---|---|---|
| Acetone | 5.0 ug/L | <5.0 | - | - | - |
| Benzene | 0.5 ug/L | <0.5 | - | - | - |
| Bromodichloromethane | 0.5 ug/L | <0.5 | - | - | - |
| Bromoform | 0.5 ug/L | <0.5 | - | - | - |
| Bromomethane | 0.5 ug/L | <0.5 | - | - | - |
| Carbon Tetrachloride | 0.2 ug/L | <0.2 | - | - | - |
| Chlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| Chloroform | 0.5 ug/L | <0.5 | - | - | - |
| Dibromochloromethane | 0.5 ug/L | <0.5 | - | - | - |
| Dichlorodifluoromethane | 1.0 ug/L | <1.0 | - | - | - |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

| | Client ID: | MW21-03 | - | - | - |
|--|--------------|-----------------|---|---|---|
| | Sample Date: | 19-Jan-22 14:00 | - | - | - |
| | Sample ID: | 2204302-01 | - | - | - |
| | MDL/Units | Water | - | - | - |
| 1,2-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| 1,3-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| 1,4-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1-Dichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,2-Dichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| cis-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| trans-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| 1,2-Dichloropropane | 0.5 ug/L | <0.5 | - | - | - |
| cis-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | - | - | - |
| trans-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | - | - | - |
| 1,3-Dichloropropene, total | 0.5 ug/L | <0.5 | - | - | - |
| Ethylbenzene | 0.5 ug/L | <0.5 | - | - | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | <0.2 | - | - | - |
| Hexane | 1.0 ug/L | <1.0 | - | - | - |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | <5.0 | - | - | - |
| Methyl Isobutyl Ketone | 5.0 ug/L | <5.0 | - | - | - |
| Methyl tert-butyl ether | 2.0 ug/L | <2.0 | - | - | - |
| Methylene Chloride | 5.0 ug/L | <5.0 | - | - | - |
| Styrene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,2,2-Tetrachloroethane | 0.5 ug/L | <0.5 | - | - | - |
| Tetrachloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| Toluene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,1-Trichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,2-Trichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| Trichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| Trichlorofluoromethane | 1.0 ug/L | <1.0 | - | - | - |
| Vinyl chloride | 0.5 ug/L | <0.5 | - | - | - |
| m,p-Xylenes | 0.5 ug/L | <0.5 | - | - | - |
| o-Xylene | 0.5 ug/L | <0.5 | - | - | - |
| Xylenes, total | 0.5 ug/L | <0.5 | - | - | - |
| 4-Bromofluorobenzene | Surrogate | 97.6% | - | - | - |
| Dibromofluoromethane | Surrogate | 61.0% | - | - | - |
| Toluene-d8 | Surrogate | 104% | - | - | - |

Hydrocarbons

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

| | Client ID: | MW21-03 | - | - | - |
|-------------------|--------------|-----------------|---|---|---|
| | Sample Date: | 19-Jan-22 14:00 | - | - | - |
| | Sample ID: | 2204302-01 | - | - | - |
| | MDL/Units | Water | - | - | - |
| F1 PHCs (C6-C10) | 25 ug/L | <25 | - | - | - |
| F2 PHCs (C10-C16) | 100 ug/L | <100 | - | - | - |
| F3 PHCs (C16-C34) | 100 ug/L | <100 | - | - | - |
| F4 PHCs (C34-C50) | 100 ug/L | <100 | - | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-------|---|---|---|
| Acenaphthene | 0.05 ug/L | <0.05 | - | - | - |
| Acenaphthylene | 0.05 ug/L | <0.05 | - | - | - |
| Anthracene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [a] anthracene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [a] pyrene | 0.01 ug/L | <0.01 | - | - | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 | - | - | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 | - | - | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 | - | - | - |
| Chrysene | 0.05 ug/L | <0.05 | - | - | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 | - | - | - |
| Fluoranthene | 0.01 ug/L | <0.01 | - | - | - |
| Fluorene | 0.05 ug/L | <0.05 | - | - | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 | - | - | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 | - | - | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 | - | - | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 | - | - | - |
| Naphthalene | 0.05 ug/L | <0.05 | - | - | - |
| Phenanthrene | 0.05 ug/L | <0.05 | - | - | - |
| Pyrene | 0.01 ug/L | <0.01 | - | - | - |
| 2-Fluorobiphenyl | Surrogate | 116% | - | - | - |
| Terphenyl-d14 | Surrogate | 118% | - | - | - |

PCBs

| | | | | | |
|--------------------|-----------|-------|---|---|---|
| PCBs, total | 0.05 ug/L | <0.05 | - | - | - |
| Decachlorobiphenyl | Surrogate | 104% | - | - | - |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | | | | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | | | | | | |
| F2 PHCs (C10-C16) | ND | 100 | ug/L | | | | | | |
| F3 PHCs (C16-C34) | ND | 100 | ug/L | | | | | | |
| F4 PHCs (C34-C50) | ND | 100 | ug/L | | | | | | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | | | | | | |
| Antimony | ND | 0.5 | ug/L | | | | | | |
| Arsenic | ND | 1 | ug/L | | | | | | |
| Barium | ND | 1 | ug/L | | | | | | |
| Beryllium | ND | 0.5 | ug/L | | | | | | |
| Boron | ND | 10 | ug/L | | | | | | |
| Cadmium | ND | 0.1 | ug/L | | | | | | |
| Chromium (VI) | ND | 10 | ug/L | | | | | | |
| Chromium | ND | 1 | ug/L | | | | | | |
| Cobalt | ND | 0.5 | ug/L | | | | | | |
| Copper | ND | 0.5 | ug/L | | | | | | |
| Lead | ND | 0.1 | ug/L | | | | | | |
| Molybdenum | ND | 0.5 | ug/L | | | | | | |
| Nickel | ND | 1 | ug/L | | | | | | |
| Selenium | ND | 1 | ug/L | | | | | | |
| Silver | ND | 0.1 | ug/L | | | | | | |
| Sodium | ND | 200 | ug/L | | | | | | |
| Thallium | ND | 0.1 | ug/L | | | | | | |
| Uranium | ND | 0.1 | ug/L | | | | | | |
| Vanadium | ND | 0.5 | ug/L | | | | | | |
| Zinc | ND | 5 | ug/L | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.522 | | ug/L | | 104 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 41.3 | | ug/L | | 103 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 40.9 | | ug/L | | 102 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2-Hexane | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 79.2 | | ug/L | | 99.0 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 72.9 | | ug/L | | 91.1 | 50-140 | | | |
| Surrogate: Toluene-d8 | 84.3 | | ug/L | | 105 | 50-140 | | | |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | ND | | | NC | 20 | |
| pH | 7.4 | 0.1 | pH Units | 7.5 | | | 1.2 | 3.3 | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | ND | 25 | ug/L | ND | | | NC | 30 | |
| Metals | | | | | | | | | |
| Mercury | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Antimony | 0.65 | 0.5 | ug/L | ND | | | NC | 20 | |
| Arsenic | ND | 1 | ug/L | ND | | | NC | 20 | |
| Barium | 22.0 | 1 | ug/L | 20.7 | | | 6.3 | 20 | |
| Beryllium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Boron | 19 | 10 | ug/L | 19 | | | 2.3 | 20 | |
| Cadmium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Chromium (VI) | ND | 10 | ug/L | ND | | | NC | 20 | |
| Chromium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Cobalt | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Copper | 0.71 | 0.5 | ug/L | 0.73 | | | 2.4 | 20 | |
| Lead | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Molybdenum | 1.21 | 0.5 | ug/L | 1.09 | | | 10.5 | 20 | |
| Nickel | ND | 1 | ug/L | ND | | | NC | 20 | |
| Selenium | ND | 1 | ug/L | ND | | | NC | 20 | |
| Silver | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Sodium | 15500 | 200 | ug/L | 15700 | | | 1.5 | 20 | |
| Thallium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Uranium | ND | 0.1 | ug/L | ND | | | NC | 20 | |
| Vanadium | ND | 0.5 | ug/L | ND | | | NC | 20 | |
| Zinc | ND | 5 | ug/L | ND | | | NC | 20 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | 2.68 | 0.5 | ug/L | 2.26 | | | 17.0 | 30 | |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | 5.02 | 0.5 | ug/L | 4.47 | | | 11.6 | 30 | |
| Dibromochloromethane | 1.63 | 0.5 | ug/L | 1.56 | | | 4.4 | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2) | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Surrogate: 4-Bromofluorobenzene | 79.2 | | ug/L | | 99.0 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 73.3 | | ug/L | | 91.6 | 50-140 | | | |
| Surrogate: Toluene-d8 | 83.6 | | ug/L | | 104 | 50-140 | | | |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 28.9 | 2 | ug/L | ND | 96.3 | 70-130 | | | |
| Hydrocarbons | | | | | | | | | |
| F1 PHCs (C6-C10) | 1750 | 25 | ug/L | ND | 87.5 | 68-117 | | | |
| F2 PHCs (C10-C16) | 1110 | 100 | ug/L | ND | 69.6 | 60-140 | | | |
| F3 PHCs (C16-C34) | 3580 | 100 | ug/L | ND | 91.4 | 60-140 | | | |
| F4 PHCs (C34-C50) | 2560 | 100 | ug/L | ND | 103 | 60-140 | | | |
| Metals | | | | | | | | | |
| Mercury | 2.93 | 0.1 | ug/L | ND | 97.7 | 70-130 | | | |
| Antimony | 48.4 | 0.5 | ug/L | ND | 96.6 | 80-120 | | | |
| Arsenic | 49.0 | 1 | ug/L | ND | 97.5 | 80-120 | | | |
| Barium | 65.7 | 1 | ug/L | 20.7 | 90.0 | 80-120 | | | |
| Beryllium | 46.3 | 0.5 | ug/L | ND | 92.7 | 80-120 | | | |
| Boron | 61 | 10 | ug/L | 19 | 85.4 | 80-120 | | | |
| Cadmium | 46.6 | 0.1 | ug/L | ND | 93.1 | 80-120 | | | |
| Chromium (VI) | 200 | 10 | ug/L | ND | 100 | 70-130 | | | |
| Chromium | 47.3 | 1 | ug/L | ND | 94.4 | 80-120 | | | |
| Cobalt | 47.7 | 0.5 | ug/L | ND | 95.4 | 80-120 | | | |
| Copper | 46.1 | 0.5 | ug/L | 0.73 | 90.7 | 80-120 | | | |
| Lead | 43.7 | 0.1 | ug/L | ND | 87.3 | 80-120 | | | |
| Molybdenum | 45.1 | 0.5 | ug/L | 1.09 | 88.0 | 80-120 | | | |
| Nickel | 46.9 | 1 | ug/L | ND | 92.7 | 80-120 | | | |
| Selenium | 48.6 | 1 | ug/L | ND | 97.0 | 80-120 | | | |
| Silver | 45.0 | 0.1 | ug/L | ND | 90.0 | 80-120 | | | |
| Sodium | 23500 | 200 | ug/L | 15700 | 77.2 | 80-120 | | | QM-07 |
| Thallium | 46.3 | 0.1 | ug/L | ND | 92.6 | 80-120 | | | |
| Uranium | 45.7 | 0.1 | ug/L | ND | 91.5 | 80-120 | | | |
| Vanadium | 47.9 | 0.5 | ug/L | ND | 95.7 | 80-120 | | | |
| Zinc | 54 | 5 | ug/L | 5 | 98.1 | 80-120 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 0.842 | 0.05 | ug/L | ND | 84.2 | 65-135 | | | |
| Surrogate: Decachlorobiphenyl | 0.529 | | ug/L | | 106 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 3.94 | 0.05 | ug/L | ND | 78.9 | 50-140 | | | |
| Acenaphthylene | 3.47 | 0.05 | ug/L | ND | 69.5 | 50-140 | | | |
| Anthracene | 3.76 | 0.01 | ug/L | ND | 75.2 | 50-140 | | | |
| Benzo [a] anthracene | 4.07 | 0.01 | ug/L | ND | 81.5 | 50-140 | | | |
| Benzo [a] pyrene | 4.56 | 0.01 | ug/L | ND | 91.3 | 50-140 | | | |
| Benzo [b] fluoranthene | 5.42 | 0.05 | ug/L | ND | 108 | 50-140 | | | |
| Benzo [g,h,i] perylene | 4.79 | 0.05 | ug/L | ND | 95.9 | 50-140 | | | |
| Benzo [k] fluoranthene | 5.01 | 0.05 | ug/L | ND | 100 | 50-140 | | | |
| Chrysene | 4.89 | 0.05 | ug/L | ND | 97.7 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 5.11 | 0.05 | ug/L | ND | 102 | 50-140 | | | |
| Fluoranthene | 3.89 | 0.01 | ug/L | ND | 77.9 | 50-140 | | | |
| Fluorene | 4.31 | 0.05 | ug/L | ND | 86.2 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 5.01 | 0.05 | ug/L | ND | 100 | 50-140 | | | |
| 1-Methylnaphthalene | 5.82 | 0.05 | ug/L | ND | 116 | 50-140 | | | |
| 2-Methylnaphthalene | 6.06 | 0.05 | ug/L | ND | 121 | 50-140 | | | |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| Naphthalene | 4.40 | 0.05 | ug/L | ND | 88.0 | 50-140 | | | |
| Phenanthrene | 3.90 | 0.05 | ug/L | ND | 77.9 | 50-140 | | | |
| Pyrene | 3.96 | 0.01 | ug/L | ND | 79.2 | 50-140 | | | |
| <i>Surrogate: 2-Fluorobiphenyl</i> | 42.2 | | ug/L | | 105 | 50-140 | | | |
| <i>Surrogate: Terphenyl-d14</i> | 44.6 | | ug/L | | 111 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 110 | 5.0 | ug/L | ND | 110 | 50-140 | | | |
| Benzene | 40.4 | 0.5 | ug/L | ND | 101 | 60-130 | | | |
| Bromodichloromethane | 33.9 | 0.5 | ug/L | ND | 84.7 | 60-130 | | | |
| Bromoform | 38.5 | 0.5 | ug/L | ND | 96.3 | 60-130 | | | |
| Bromomethane | 45.0 | 0.5 | ug/L | ND | 112 | 50-140 | | | |
| Carbon Tetrachloride | 33.6 | 0.2 | ug/L | ND | 84.1 | 60-130 | | | |
| Chlorobenzene | 40.1 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| Chloroform | 38.2 | 0.5 | ug/L | ND | 95.5 | 60-130 | | | |
| Dibromochloromethane | 36.3 | 0.5 | ug/L | ND | 90.8 | 60-130 | | | |
| Dichlorodifluoromethane | 40.6 | 1.0 | ug/L | ND | 102 | 50-140 | | | |
| 1,2-Dichlorobenzene | 38.7 | 0.5 | ug/L | ND | 96.7 | 60-130 | | | |
| 1,3-Dichlorobenzene | 38.6 | 0.5 | ug/L | ND | 96.5 | 60-130 | | | |
| 1,4-Dichlorobenzene | 39.9 | 0.5 | ug/L | ND | 99.6 | 60-130 | | | |
| 1,1-Dichloroethane | 38.7 | 0.5 | ug/L | ND | 96.7 | 60-130 | | | |
| 1,2-Dichloroethane | 41.4 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| 1,1-Dichloroethylene | 39.1 | 0.5 | ug/L | ND | 97.7 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 37.9 | 0.5 | ug/L | ND | 94.8 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 40.4 | 0.5 | ug/L | ND | 101 | 60-130 | | | |
| 1,2-Dichloropropane | 38.5 | 0.5 | ug/L | ND | 96.3 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 35.6 | 0.5 | ug/L | ND | 89.0 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 38.0 | 0.5 | ug/L | ND | 95.0 | 60-130 | | | |
| Ethylbenzene | 41.2 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| Ethylene dibromide (dibromoethane, 1,2- | 36.0 | 0.2 | ug/L | ND | 89.9 | 60-130 | | | |
| Hexane | 34.8 | 1.0 | ug/L | ND | 87.0 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 110 | 5.0 | ug/L | ND | 110 | 50-140 | | | |
| Methyl Isobutyl Ketone | 124 | 5.0 | ug/L | ND | 124 | 50-140 | | | |
| Methyl tert-butyl ether | 112 | 2.0 | ug/L | ND | 112 | 50-140 | | | |
| Methylene Chloride | 42.2 | 5.0 | ug/L | ND | 105 | 60-130 | | | |
| Styrene | 37.6 | 0.5 | ug/L | ND | 93.9 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 36.6 | 0.5 | ug/L | ND | 91.6 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 38.0 | 0.5 | ug/L | ND | 95.1 | 60-130 | | | |
| Tetrachloroethylene | 37.6 | 0.5 | ug/L | ND | 94.1 | 60-130 | | | |
| Toluene | 40.1 | 0.5 | ug/L | ND | 100 | 60-130 | | | |
| 1,1,1-Trichloroethane | 46.7 | 0.5 | ug/L | ND | 117 | 60-130 | | | |
| 1,1,2-Trichloroethane | 41.6 | 0.5 | ug/L | ND | 104 | 60-130 | | | |
| Trichloroethylene | 41.3 | 0.5 | ug/L | ND | 103 | 60-130 | | | |
| Trichlorofluoromethane | 35.9 | 1.0 | ug/L | ND | 89.7 | 60-130 | | | |
| Vinyl chloride | 36.3 | 0.5 | ug/L | ND | 90.8 | 50-140 | | | |
| m,p-Xylenes | 81.9 | 0.5 | ug/L | ND | 102 | 60-130 | | | |
| o-Xylene | 42.5 | 0.5 | ug/L | ND | 106 | 60-130 | | | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | 80.6 | | ug/L | | 101 | 50-140 | | | |
| <i>Surrogate: Dibromofluoromethane</i> | 81.1 | | ug/L | | 101 | 50-140 | | | |
| <i>Surrogate: Toluene-d8</i> | 80.6 | | ug/L | | 101 | 50-140 | | | |

Certificate of Analysis

Report Date: 26-Jan-2022

Client: exp Services Inc. (Ottawa)

Order Date: 20-Jan-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Qualifier Notes:

QC Qualifiers :

QM-07 : The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.



| | |
|---|--|
| Client Name: EXP Services Inc. | Project Reference: Zbl - Albert and Chaudiere Island |
| Contact Name: Patricia Steimack | Order #: 25-158 |
| Address: 100-2650 Queensview Drive Ottawa, ON, K2B 8H6 | PO #: 011-002833 |
| Telephone: 613-688-1899 | Email Address: Patricia.Steimack@exp.com, jerry.ekhart@exp.com |

Turnaround Time:

1 Day 3 Day

2 Day Regular

Date Required: _____

Criteria: O. Reg. 151/04 (As Amended) Table 3 RSC P4 (aq) O. Reg. 558/00 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: _____ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm Sanitary Sewer) P (Paint) A (Air) O (Other)

Required Analyses

| Sample ID/Location Name | Matrix | Air Volume | # of Containers | Sample Taken | | PHC P1-P4-BTEX | VOCs | PAHs | Metals by ICP | Hg | Cyanide | Inorganics | VOC, PHC P1-P4 | PCB | pH | Free Cyanide | | | |
|-------------------------|--------|------------|-----------------|--------------|-------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | | | Date | Time | | | | | | | | | | | | | | |
| 2202302 MW21-03 | GW | | 10 | 23/01/19 | 14:00 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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| | | | | | | | | | | | | | | | | | | | |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used.

Method of Delivery:

Prop Box

| | | | |
|--|--|--|------------------------------------|
| Relinquished By (Sign): <i>[Signature]</i> | Received by (Print/Sign): <i>[Signature]</i> | Received by (Sign): <i>[Signature]</i> | Verified By: <i>[Signature]</i> |
| Relinquished By (Print): <i>Jeremy Eckhart</i> | Date/Time: <i>23/01/19 17:00</i> | Date/Time: <i>Jan 23 2019 17:00</i> | Date/Time: <i>Jan 20, 22 12:24</i> |
| | Temperature: <i>8.7 °C</i> | Temperature: <i>9.7 °C</i> | pH Verified (V): <i>8</i> |

Certificate of Analysis

exp Services Inc. (Ottawa)

100-2650 Queensview Dr.
Ottawa, ON K2B8K2
Attn: Patricia Stelmack

Client PO: Zibi - Albert and Chaudiere Island
Project: OTT00250193P0
Custody:

Report Date: 24-Feb-2022
Order Date: 17-Feb-2022

Order #: 2208458

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

| Paracel ID | Client ID |
|------------|-----------|
| 2208458-01 | MW21-01 |

Approved By:



Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Analysis Summary Table

| Analysis | Method Reference/Description | Extraction Date | Analysis Date |
|----------------------------|------------------------------|-----------------|---------------|
| Cyanide, free | MOE E3015 - Auto Colour | 18-Feb-22 | 18-Feb-22 |
| PCBs, total | EPA 608 - GC-ECD | 23-Feb-22 | 23-Feb-22 |
| REG 153: PAHs by GC-MS | EPA 625 - GC-MS, extraction | 22-Feb-22 | 22-Feb-22 |
| REG 153: VOCs by P&T GC/MS | EPA 624 - P&T GC-MS | 18-Feb-22 | 19-Feb-22 |

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

| | | | | |
|--------------|-----------------|---|---|---|
| Client ID: | MW21-01 | - | - | - |
| Sample Date: | 16-Feb-22 17:30 | - | - | - |
| Sample ID: | 2208458-01 | - | - | - |
| MDL/Units | Water | - | - | - |

General Inorganics

| | | | | | |
|---------------|--------|----|---|---|---|
| Cyanide, free | 2 ug/L | <2 | - | - | - |
|---------------|--------|----|---|---|---|

Volatiles

| | | | | | |
|--|----------|------|---|---|---|
| Acetone | 5.0 ug/L | <5.0 | - | - | - |
| Bromodichloromethane | 0.5 ug/L | <0.5 | - | - | - |
| Bromoform | 0.5 ug/L | <0.5 | - | - | - |
| Bromomethane | 0.5 ug/L | <0.5 | - | - | - |
| Carbon Tetrachloride | 0.2 ug/L | <0.2 | - | - | - |
| Chlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| Chloroform | 0.5 ug/L | <0.5 | - | - | - |
| Dibromochloromethane | 0.5 ug/L | <0.5 | - | - | - |
| Dichlorodifluoromethane | 1.0 ug/L | <1.0 | - | - | - |
| 1,2-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| 1,3-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| 1,4-Dichlorobenzene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1-Dichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,2-Dichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| cis-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| trans-1,2-Dichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| 1,2-Dichloropropane | 0.5 ug/L | <0.5 | - | - | - |
| cis-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | - | - | - |
| trans-1,3-Dichloropropylene | 0.5 ug/L | <0.5 | - | - | - |
| 1,3-Dichloropropene, total | 0.5 ug/L | <0.5 | - | - | - |
| Ethylene dibromide (dibromoethane, 1,2-) | 0.2 ug/L | <0.2 | - | - | - |
| Hexane | 1.0 ug/L | <1.0 | - | - | - |
| Methyl Ethyl Ketone (2-Butanone) | 5.0 ug/L | <5.0 | - | - | - |
| Methyl Isobutyl Ketone | 5.0 ug/L | <5.0 | - | - | - |
| Methyl tert-butyl ether | 2.0 ug/L | <2.0 | - | - | - |
| Methylene Chloride | 5.0 ug/L | <5.0 | - | - | - |
| Styrene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,1,2-Tetrachloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,2,2-Tetrachloroethane | 0.5 ug/L | <0.5 | - | - | - |
| Tetrachloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,1-Trichloroethane | 0.5 ug/L | <0.5 | - | - | - |
| 1,1,2-Trichloroethane | 0.5 ug/L | <0.5 | - | - | - |

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

| | Client ID: | MW21-01 | - | - | - |
|------------------------|--------------|-----------------|---|---|---|
| | Sample Date: | 16-Feb-22 17:30 | - | - | - |
| | Sample ID: | 2208458-01 | - | - | - |
| | MDL/Units | Water | - | - | - |
| Trichloroethylene | 0.5 ug/L | <0.5 | - | - | - |
| Trichlorofluoromethane | 1.0 ug/L | <1.0 | - | - | - |
| Vinyl chloride | 0.5 ug/L | <0.5 | - | - | - |
| 4-Bromofluorobenzene | Surrogate | 100% | - | - | - |
| Dibromofluoromethane | Surrogate | 92.3% | - | - | - |
| Toluene-d8 | Surrogate | 103% | - | - | - |

Semi-Volatiles

| | | | | | |
|--------------------------|-----------|-----------|---|---|---|
| Acenaphthene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Acenaphthylene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Anthracene | 0.01 ug/L | 0.01 [1] | - | - | - |
| Benzo [a] anthracene | 0.01 ug/L | <0.01 [1] | - | - | - |
| Benzo [a] pyrene | 0.01 ug/L | <0.01 [1] | - | - | - |
| Benzo [b] fluoranthene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Benzo [g,h,i] perylene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Benzo [k] fluoranthene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Chrysene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Dibenzo [a,h] anthracene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Fluoranthene | 0.01 ug/L | 0.05 [1] | - | - | - |
| Fluorene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Indeno [1,2,3-cd] pyrene | 0.05 ug/L | <0.05 [1] | - | - | - |
| 1-Methylnaphthalene | 0.05 ug/L | <0.05 [1] | - | - | - |
| 2-Methylnaphthalene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Methylnaphthalene (1&2) | 0.10 ug/L | <0.10 [1] | - | - | - |
| Naphthalene | 0.05 ug/L | <0.05 [1] | - | - | - |
| Phenanthrene | 0.05 ug/L | 0.05 [1] | - | - | - |
| Pyrene | 0.01 ug/L | 0.05 [1] | - | - | - |

PCBs

| | | | | | |
|--------------------|-----------|-------|---|---|---|
| PCBs, total | 0.05 ug/L | <0.05 | - | - | - |
| Decachlorobiphenyl | Surrogate | 115% | - | - | - |

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | | | | | | |
| PCBs | | | | | | | | | |
| PCBs, total | ND | 0.05 | ug/L | | | | | | |
| Surrogate: Decachlorobiphenyl | 0.655 | | ug/L | | 131 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | ND | 0.05 | ug/L | | | | | | |
| Acenaphthylene | ND | 0.05 | ug/L | | | | | | |
| Anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] anthracene | ND | 0.01 | ug/L | | | | | | |
| Benzo [a] pyrene | ND | 0.01 | ug/L | | | | | | |
| Benzo [b] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Benzo [g,h,i] perylene | ND | 0.05 | ug/L | | | | | | |
| Benzo [k] fluoranthene | ND | 0.05 | ug/L | | | | | | |
| Chrysene | ND | 0.05 | ug/L | | | | | | |
| Dibenzo [a,h] anthracene | ND | 0.05 | ug/L | | | | | | |
| Fluoranthene | ND | 0.01 | ug/L | | | | | | |
| Fluorene | ND | 0.05 | ug/L | | | | | | |
| Indeno [1,2,3-cd] pyrene | ND | 0.05 | ug/L | | | | | | |
| 1-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| 2-Methylnaphthalene | ND | 0.05 | ug/L | | | | | | |
| Methylnaphthalene (1&2) | ND | 0.10 | ug/L | | | | | | |
| Naphthalene | ND | 0.05 | ug/L | | | | | | |
| Phenanthrene | ND | 0.05 | ug/L | | | | | | |
| Pyrene | ND | 0.01 | ug/L | | | | | | |
| Surrogate: 2-Fluorobiphenyl | 22.3 | | ug/L | | 112 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 23.7 | | ug/L | | 119 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | | | | | | |
| Benzene | ND | 0.5 | ug/L | | | | | | |
| Bromodichloromethane | ND | 0.5 | ug/L | | | | | | |
| Bromoform | ND | 0.5 | ug/L | | | | | | |
| Bromomethane | ND | 0.5 | ug/L | | | | | | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | | | | | | |
| Chlorobenzene | ND | 0.5 | ug/L | | | | | | |
| Chloroform | ND | 0.5 | ug/L | | | | | | |
| Dibromochloromethane | ND | 0.5 | ug/L | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | | | | | | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | | | | | | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | | | | | | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | | | | | | |
| 1,3-Dichloropropene, total | ND | 0.5 | ug/L | | | | | | |
| Ethylbenzene | ND | 0.5 | ug/L | | | | | | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | | | | | | |
| Hexane | ND | 1.0 | ug/L | | | | | | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | | | | | | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | | | | | | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | | | | | | |
| Methylene Chloride | ND | 5.0 | ug/L | | | | | | |
| Styrene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Blank

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | | | | | | |
| Tetrachloroethylene | ND | 0.5 | ug/L | | | | | | |
| Toluene | ND | 0.5 | ug/L | | | | | | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | | | | | | |
| Trichloroethylene | ND | 0.5 | ug/L | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | | | | | | |
| Vinyl chloride | ND | 0.5 | ug/L | | | | | | |
| m,p-Xylenes | ND | 0.5 | ug/L | | | | | | |
| o-Xylene | ND | 0.5 | ug/L | | | | | | |
| Xylenes, total | ND | 0.5 | ug/L | | | | | | |
| Surrogate: 4-Bromofluorobenzene | 84.4 | | ug/L | | 106 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 60.3 | | ug/L | | 75.4 | 50-140 | | | |
| Surrogate: Toluene-d8 | 84.8 | | ug/L | | 106 | 50-140 | | | |

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Duplicate

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | ND | 2 | ug/L | ND | | | NC | 20 | |
| Volatiles | | | | | | | | | |
| Acetone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Benzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromodichloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromoform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Bromomethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Carbon Tetrachloride | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Chlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Chloroform | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dibromochloromethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Dichlorodifluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,3-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,4-Dichlorobenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,2-Dichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,2-Dichloropropane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| cis-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| trans-1,3-Dichloropropylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylbenzene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Ethylene dibromide (dibromoethane, 1,2- | ND | 0.2 | ug/L | ND | | | NC | 30 | |
| Hexane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Methyl Ethyl Ketone (2-Butanone) | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl Isobutyl Ketone | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Methyl tert-butyl ether | ND | 2.0 | ug/L | ND | | | NC | 30 | |
| Methylene Chloride | ND | 5.0 | ug/L | ND | | | NC | 30 | |
| Styrene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2,2-Tetrachloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Tetrachloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Toluene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,1-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| 1,1,2-Trichloroethane | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichloroethylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Trichlorofluoromethane | ND | 1.0 | ug/L | ND | | | NC | 30 | |
| Vinyl chloride | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| m,p-Xylenes | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| o-Xylene | ND | 0.5 | ug/L | ND | | | NC | 30 | |
| Surrogate: 4-Bromofluorobenzene | 82.9 | | ug/L | | 104 | 50-140 | | | |
| Surrogate: Dibromofluoromethane | 62.6 | | ug/L | | 78.3 | 50-140 | | | |
| Surrogate: Toluene-d8 | 83.0 | | ug/L | | 104 | 50-140 | | | |

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193PO

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| General Inorganics | | | | | | | | | |
| Cyanide, free | 49.1 | 2 | ug/L | ND | 98.1 | 61-139 | | | |
| PCBs | | | | | | | | | |
| PCBs, total | 1.07 | 0.05 | ug/L | ND | 107 | 65-135 | | | |
| Surrogate: Decachlorobiphenyl | 0.571 | | ug/L | | 114 | 60-140 | | | |
| Semi-Volatiles | | | | | | | | | |
| Acenaphthene | 2.97 | 0.05 | ug/L | ND | 59.4 | 50-140 | | | |
| Acenaphthylene | 4.02 | 0.05 | ug/L | ND | 80.5 | 50-140 | | | |
| Anthracene | 3.79 | 0.01 | ug/L | ND | 75.8 | 50-140 | | | |
| Benzo [a] anthracene | 3.74 | 0.01 | ug/L | ND | 74.8 | 50-140 | | | |
| Benzo [a] pyrene | 4.30 | 0.01 | ug/L | ND | 86.0 | 50-140 | | | |
| Benzo [b] fluoranthene | 3.55 | 0.05 | ug/L | ND | 71.1 | 50-140 | | | |
| Benzo [g,h,i] perylene | 4.75 | 0.05 | ug/L | ND | 95.0 | 50-140 | | | |
| Benzo [k] fluoranthene | 3.12 | 0.05 | ug/L | ND | 62.4 | 50-140 | | | |
| Chrysene | 4.10 | 0.05 | ug/L | ND | 82.0 | 50-140 | | | |
| Dibenzo [a,h] anthracene | 4.90 | 0.05 | ug/L | ND | 97.9 | 50-140 | | | |
| Fluoranthene | 3.69 | 0.01 | ug/L | ND | 73.8 | 50-140 | | | |
| Fluorene | 4.12 | 0.05 | ug/L | ND | 82.4 | 50-140 | | | |
| Indeno [1,2,3-cd] pyrene | 4.89 | 0.05 | ug/L | ND | 97.9 | 50-140 | | | |
| 1-Methylnaphthalene | 5.61 | 0.05 | ug/L | ND | 112 | 50-140 | | | |
| 2-Methylnaphthalene | 5.91 | 0.05 | ug/L | ND | 118 | 50-140 | | | |
| Naphthalene | 4.43 | 0.05 | ug/L | ND | 88.7 | 50-140 | | | |
| Phenanthrene | 3.93 | 0.05 | ug/L | ND | 78.7 | 50-140 | | | |
| Pyrene | 3.31 | 0.01 | ug/L | ND | 66.1 | 50-140 | | | |
| Surrogate: 2-Fluorobiphenyl | 25.4 | | ug/L | | 127 | 50-140 | | | |
| Surrogate: Terphenyl-d14 | 25.7 | | ug/L | | 128 | 50-140 | | | |
| Volatiles | | | | | | | | | |
| Acetone | 78.1 | 5.0 | ug/L | ND | 78.1 | 50-140 | | | |
| Benzene | 28.5 | 0.5 | ug/L | ND | 71.2 | 60-130 | | | |
| Bromodichloromethane | 31.9 | 0.5 | ug/L | ND | 79.7 | 60-130 | | | |
| Bromoform | 35.3 | 0.5 | ug/L | ND | 88.2 | 60-130 | | | |
| Bromomethane | 32.0 | 0.5 | ug/L | ND | 79.9 | 50-140 | | | |
| Carbon Tetrachloride | 30.7 | 0.2 | ug/L | ND | 76.8 | 60-130 | | | |
| Chlorobenzene | 29.5 | 0.5 | ug/L | ND | 73.8 | 60-130 | | | |
| Chloroform | 32.0 | 0.5 | ug/L | ND | 80.0 | 60-130 | | | |
| Dibromochloromethane | 45.5 | 0.5 | ug/L | ND | 114 | 60-130 | | | |
| Dichlorodifluoromethane | 37.5 | 1.0 | ug/L | ND | 93.8 | 50-140 | | | |
| 1,2-Dichlorobenzene | 34.0 | 0.5 | ug/L | ND | 85.0 | 60-130 | | | |
| 1,3-Dichlorobenzene | 33.9 | 0.5 | ug/L | ND | 84.8 | 60-130 | | | |
| 1,4-Dichlorobenzene | 29.8 | 0.5 | ug/L | ND | 74.6 | 60-130 | | | |
| 1,1-Dichloroethane | 34.1 | 0.5 | ug/L | ND | 85.4 | 60-130 | | | |
| 1,2-Dichloroethane | 30.5 | 0.5 | ug/L | ND | 76.3 | 60-130 | | | |
| 1,1-Dichloroethylene | 29.1 | 0.5 | ug/L | ND | 72.6 | 60-130 | | | |
| cis-1,2-Dichloroethylene | 39.8 | 0.5 | ug/L | ND | 99.4 | 60-130 | | | |
| trans-1,2-Dichloroethylene | 29.1 | 0.5 | ug/L | ND | 72.7 | 60-130 | | | |
| 1,2-Dichloropropane | 35.4 | 0.5 | ug/L | ND | 88.6 | 60-130 | | | |
| cis-1,3-Dichloropropylene | 42.6 | 0.5 | ug/L | ND | 107 | 60-130 | | | |
| trans-1,3-Dichloropropylene | 37.9 | 0.5 | ug/L | ND | 94.7 | 60-130 | | | |
| Ethylbenzene | 30.0 | 0.5 | ug/L | ND | 75.0 | 60-130 | | | |

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Method Quality Control: Spike

| Analyte | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---|-------------|-----------------|-------------|---------------|-------------|---------------|-----|-----------|-------|
| Ethylene dibromide (dibromoethane, 1,2- | 40.7 | 0.2 | ug/L | ND | 102 | 60-130 | | | |
| Hexane | 39.6 | 1.0 | ug/L | ND | 99.0 | 60-130 | | | |
| Methyl Ethyl Ketone (2-Butanone) | 85.5 | 5.0 | ug/L | ND | 85.5 | 50-140 | | | |
| Methyl Isobutyl Ketone | 64.9 | 5.0 | ug/L | ND | 64.9 | 50-140 | | | |
| Methyl tert-butyl ether | 85.8 | 2.0 | ug/L | ND | 85.8 | 50-140 | | | |
| Methylene Chloride | 31.9 | 5.0 | ug/L | ND | 79.6 | 60-130 | | | |
| Styrene | 30.2 | 0.5 | ug/L | ND | 75.6 | 60-130 | | | |
| 1,1,1,2-Tetrachloroethane | 28.8 | 0.5 | ug/L | ND | 72.0 | 60-130 | | | |
| 1,1,2,2-Tetrachloroethane | 36.5 | 0.5 | ug/L | ND | 91.3 | 60-130 | | | |
| Tetrachloroethylene | 31.4 | 0.5 | ug/L | ND | 78.6 | 60-130 | | | |
| Toluene | 30.8 | 0.5 | ug/L | ND | 77.0 | 60-130 | | | |
| 1,1,1-Trichloroethane | 28.1 | 0.5 | ug/L | ND | 70.2 | 60-130 | | | |
| 1,1,2-Trichloroethane | 36.7 | 0.5 | ug/L | ND | 91.7 | 60-130 | | | |
| Trichloroethylene | 43.8 | 0.5 | ug/L | ND | 110 | 60-130 | | | |
| Trichlorofluoromethane | 31.0 | 1.0 | ug/L | ND | 77.4 | 60-130 | | | |
| Vinyl chloride | 40.3 | 0.5 | ug/L | ND | 101 | 50-140 | | | |
| m,p-Xylenes | 58.3 | 0.5 | ug/L | ND | 72.9 | 60-130 | | | |
| o-Xylene | 38.1 | 0.5 | ug/L | ND | 95.2 | 60-130 | | | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | <i>84.7</i> | | <i>ug/L</i> | | <i>106</i> | <i>50-140</i> | | | |
| <i>Surrogate: Dibromofluoromethane</i> | <i>79.5</i> | | <i>ug/L</i> | | <i>99.3</i> | <i>50-140</i> | | | |
| <i>Surrogate: Toluene-d8</i> | <i>81.0</i> | | <i>ug/L</i> | | <i>101</i> | <i>50-140</i> | | | |

Certificate of Analysis

Report Date: 24-Feb-2022

Client: exp Services Inc. (Ottawa)

Order Date: 17-Feb-2022

Client PO: Zibi - Albert and Chaudiere Island

Project Description: OTT00250193P0

Qualifier Notes:

Sample Qualifiers :

1 : Surrogate recoveries not available.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated



ice
St. Laurent Blvd.
Toronto, ON M5S 4J8
416-1847
www.paracel-lab.com

Chain of Custody
(Lab Use Only)

Page 1 of 1

Turnaround Time:

1 Day 3 Day

2 Day Regular

Date Required:

Client Name: EXP Services Inc. Project Followup: Zbl - Albert and Chevlers Island
Contact Name: Patricia Stelmack Quote #: 21-100
Address: 100-2890 Queenview Drive PO #: OTT-00250/00-P0
Ottawa, ON, K2B 8H8 Email Address: Patricia.Stelmack@exp.com
Telephone: 613-688-1899

Criteria: O. Reg. 153/04 (As Amended) Table 7 RSC Filing O. Reg. 558/09 PWQO CCME SUB (Storm) SUB (Sanitary) Municipality: Other

Matrix Type: 1 (Soil Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Pit) A (Air) D (Dust)

Required Analyses

| Parcel Order Number: <i>2208458</i> | Sample ID/Location Name | Matrix | Air Volume | # of Containers | Sample Taken | | PHCS (F1-04-BTEX) | VOCs | PAHs | Metals by ICP | Hg | Cd | Pb | Cu | Zn | Mn | Ni | Co | Cr | Molybdenum | Se | As | Selenium | Cyanide | PCB | pH | Free Cyanide | | | | | | | | | | |
|--|-------------------------|--------|------------|-----------------|-------------------|--------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | | | | | Date | Time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <i>MW 21-01</i> | GW | | 5 | <i>2022-02-16</i> | <i>17h30</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | <i>MW 21-108</i> | GW | | 10 | <i>2022-02-16</i> | <i>11h30</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | <i>MW 21-103</i> | GW | | 10 | <i>2022-02-16</i> | <i>12h35</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | <i>MW 21-101</i> | GW | | 10 | <i>2022-02-16</i> | <i>14h45</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | <i>MW 21-106</i> | GW | | 10 | <i>2022-02-16</i> | <i>16h30</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| | <i>Dup 103</i> | GW | | 4 | <i>2022-02-16</i> | <i>12h35</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | <i>Dup 101</i> | GW | | 6 | <i>2022-02-16</i> | <i>14h45</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | <i>FIELD BLANK</i> | DI | | 10 | <i>2022-02-16</i> | <i>15h00</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | <i>TRIP BLANK</i> | | | 10 | <i>2022-02-16</i> | <i>15h00</i> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |

Comments: Data will be compared to Reg. 153 Table 7 and Table 9 SCS; most stringent standard will be used.

Method of Delivery: *Drop Box*

Requisitioned By: *Phil D'Amico* Received by Delivery Dept: *[Signature]* Forwarded at Lab: *Winnipeg, Manitoba* Verified By: *[Signature]*

Requisitioned by (Print): *Phil D'Amico* Date/Time: *2022-02-16 8:20 AM* Date/Time: *Feb 17, 2022 12:30* Date/Time: *Feb 17, 2022 12:30*

Date/Time: *2022-02-16 19h02* Temperature: *10.0°C* Temperature: *11.6°C* All Verified: *[Signature]*

EXP Services Inc.

*Windmill Dream Zibi Ontario Inc.
Phase Two Environmental Site Assessment
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0
April 20, 2022*

Appendix I: Hydraulic Conductivity

Rising Head Test Analysis (Bail Test) - BH/MW21-3
Hvorslev Method (1951)
315 Mìwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

| | | |
|----------------------------|----------|--------------------------------|
| Standpipe radius: | r = | 0.025 |
| Borehole radius: | R = | 0.102 |
| Length of gravel pack zone | $L_e =$ | 3.05 m |
| Static water level: | $H_0 =$ | 12.91 m |
| First water level reading: | | 10.64 m |
| | | |
| Time for 37% change | t_{37} | 54360 sec |
| | | |
| Hydraulic Conductivity: | $K =$ | $r^2 \ln(L_e/R) / 2L_e t_{37}$ |
| Hydraulic Conductivity: | K | 6.61107E-09 (m/s) |
| Hydraulic Conductivity: | K | 6.6111E-07 (cm/s) |

Data Quality High: 70 to 100% recovery to original water level
 Low: Less than 50% recovery to original water level

Rising Head Test Analysis (Bail Test) - BH/MW21-3
Hvorslev Method (1951)
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

H₀ 12.91 Relative static water level

| Date | Time | LEVEL | Seconds | Drawdown | H/H0 | % Recovery |
|-----------|-------------|-------|---------|----------|------|------------|
| 8/23/2021 | 10:38:52 AM | 10.64 | 0 | 2.27 | 1.00 | 0 |
| 8/23/2021 | 10:39:52 AM | 10.65 | 60 | 2.27 | 1.00 | 0 |
| 8/23/2021 | 10:40:52 AM | 10.65 | 120 | 2.26 | 1.00 | 0 |
| 8/23/2021 | 10:41:52 AM | 10.72 | 180 | 2.19 | 0.97 | 3 |
| 8/23/2021 | 10:42:52 AM | 10.72 | 240 | 2.19 | 0.97 | 3 |
| 8/23/2021 | 10:43:52 AM | 10.72 | 300 | 2.19 | 0.97 | 3 |
| 8/23/2021 | 10:44:52 AM | 10.72 | 360 | 2.19 | 0.96 | 4 |
| 8/23/2021 | 10:45:52 AM | 10.72 | 420 | 2.19 | 0.96 | 4 |
| 8/23/2021 | 10:46:52 AM | 10.72 | 480 | 2.19 | 0.96 | 4 |
| 8/23/2021 | 10:47:52 AM | 10.73 | 540 | 2.18 | 0.96 | 4 |
| 8/23/2021 | 10:48:52 AM | 10.73 | 600 | 2.18 | 0.96 | 4 |
| 8/23/2021 | 10:49:52 AM | 10.73 | 660 | 2.18 | 0.96 | 4 |
| 8/23/2021 | 10:50:52 AM | 10.73 | 720 | 2.18 | 0.96 | 4 |
| 8/23/2021 | 10:51:52 AM | 10.73 | 780 | 2.18 | 0.96 | 4 |
| 8/23/2021 | 10:52:52 AM | 10.73 | 840 | 2.18 | 0.96 | 4 |
| 8/23/2021 | 10:53:52 AM | 10.73 | 900 | 2.18 | 0.96 | 4 |
| 8/23/2021 | 10:54:52 AM | 10.74 | 960 | 2.17 | 0.96 | 4 |
| 8/23/2021 | 10:55:52 AM | 10.74 | 1020 | 2.17 | 0.96 | 4 |
| 8/23/2021 | 10:56:52 AM | 10.74 | 1080 | 2.17 | 0.96 | 4 |
| 8/23/2021 | 10:57:52 AM | 10.74 | 1140 | 2.17 | 0.96 | 4 |
| 8/23/2021 | 10:58:52 AM | 10.74 | 1200 | 2.17 | 0.96 | 4 |
| 8/23/2021 | 10:59:52 AM | 10.74 | 1260 | 2.17 | 0.95 | 5 |
| 8/23/2021 | 11:00:52 AM | 10.74 | 1320 | 2.17 | 0.95 | 5 |
| 8/23/2021 | 11:01:52 AM | 10.75 | 1380 | 2.16 | 0.95 | 5 |
| 8/23/2021 | 11:02:52 AM | 10.75 | 1440 | 2.16 | 0.95 | 5 |
| 8/23/2021 | 11:03:52 AM | 10.75 | 1500 | 2.16 | 0.95 | 5 |
| 8/23/2021 | 11:04:52 AM | 10.75 | 1560 | 2.16 | 0.95 | 5 |
| 8/23/2021 | 11:05:52 AM | 10.75 | 1620 | 2.16 | 0.95 | 5 |
| 8/23/2021 | 11:06:52 AM | 10.75 | 1680 | 2.16 | 0.95 | 5 |
| 8/23/2021 | 11:07:52 AM | 10.75 | 1740 | 2.16 | 0.95 | 5 |
| 8/23/2021 | 11:08:52 AM | 10.76 | 1800 | 2.15 | 0.95 | 5 |
| 8/23/2021 | 11:09:52 AM | 10.76 | 1860 | 2.15 | 0.95 | 5 |
| 8/23/2021 | 11:10:52 AM | 10.76 | 1920 | 2.15 | 0.95 | 5 |
| 8/23/2021 | 11:11:52 AM | 10.76 | 1980 | 2.15 | 0.95 | 5 |
| 8/23/2021 | 11:12:52 AM | 10.76 | 2040 | 2.15 | 0.95 | 5 |
| 8/23/2021 | 11:13:52 AM | 10.76 | 2100 | 2.15 | 0.95 | 5 |
| 8/23/2021 | 11:14:52 AM | 10.76 | 2160 | 2.15 | 0.95 | 5 |
| 8/23/2021 | 11:15:52 AM | 10.77 | 2220 | 2.14 | 0.94 | 6 |
| 8/23/2021 | 11:16:52 AM | 10.77 | 2280 | 2.14 | 0.94 | 6 |
| 8/23/2021 | 11:17:52 AM | 10.77 | 2340 | 2.14 | 0.94 | 6 |
| 8/23/2021 | 11:18:52 AM | 10.77 | 2400 | 2.14 | 0.94 | 6 |
| 8/23/2021 | 11:19:52 AM | 10.77 | 2460 | 2.14 | 0.94 | 6 |
| 8/23/2021 | 11:20:52 AM | 10.77 | 2520 | 2.14 | 0.94 | 6 |
| 8/23/2021 | 11:21:52 AM | 10.77 | 2580 | 2.14 | 0.94 | 6 |
| 8/23/2021 | 11:22:52 AM | 10.77 | 2640 | 2.14 | 0.94 | 6 |
| 8/23/2021 | 11:23:52 AM | 10.78 | 2700 | 2.13 | 0.94 | 6 |
| 8/23/2021 | 11:24:52 AM | 10.78 | 2760 | 2.13 | 0.94 | 6 |
| 8/23/2021 | 11:25:52 AM | 10.78 | 2820 | 2.13 | 0.94 | 6 |
| 8/23/2021 | 11:26:52 AM | 10.78 | 2880 | 2.13 | 0.94 | 6 |
| 8/23/2021 | 11:27:52 AM | 10.78 | 2940 | 2.13 | 0.94 | 6 |
| 8/23/2021 | 11:28:52 AM | 10.78 | 3000 | 2.13 | 0.94 | 6 |
| 8/23/2021 | 11:29:52 AM | 10.78 | 3060 | 2.13 | 0.94 | 6 |
| 8/23/2021 | 11:30:52 AM | 10.78 | 3120 | 2.13 | 0.94 | 6 |
| 8/23/2021 | 11:31:52 AM | 10.79 | 3180 | 2.12 | 0.94 | 6 |
| 8/23/2021 | 11:32:52 AM | 10.79 | 3240 | 2.12 | 0.94 | 6 |
| 8/23/2021 | 11:33:52 AM | 10.79 | 3300 | 2.12 | 0.94 | 6 |
| 8/23/2021 | 11:34:52 AM | 10.79 | 3360 | 2.12 | 0.93 | 7 |
| 8/23/2021 | 11:35:52 AM | 10.79 | 3420 | 2.12 | 0.93 | 7 |
| 8/23/2021 | 11:36:52 AM | 10.79 | 3480 | 2.12 | 0.93 | 7 |
| 8/23/2021 | 11:37:52 AM | 10.79 | 3540 | 2.12 | 0.93 | 7 |
| 8/23/2021 | 11:38:52 AM | 10.79 | 3600 | 2.12 | 0.93 | 7 |
| 8/23/2021 | 11:39:52 AM | 10.80 | 3660 | 2.12 | 0.93 | 7 |
| 8/23/2021 | 11:40:52 AM | 10.80 | 3720 | 2.11 | 0.93 | 7 |
| 8/23/2021 | 11:41:52 AM | 10.80 | 3780 | 2.11 | 0.93 | 7 |
| 8/23/2021 | 11:42:52 AM | 10.80 | 3840 | 2.11 | 0.93 | 7 |
| 8/23/2021 | 11:43:52 AM | 10.80 | 3900 | 2.11 | 0.93 | 7 |
| 8/23/2021 | 11:44:52 AM | 10.80 | 3960 | 2.11 | 0.93 | 7 |
| 8/23/2021 | 11:45:52 AM | 10.80 | 4020 | 2.11 | 0.93 | 7 |
| 8/23/2021 | 11:46:52 AM | 10.80 | 4080 | 2.11 | 0.93 | 7 |
| 8/23/2021 | 11:47:52 AM | 10.80 | 4140 | 2.11 | 0.93 | 7 |

| | | | | | | |
|-----------|-------------|-------|------|------|------|----|
| 8/23/2021 | 11:48:52 AM | 10.81 | 4200 | 2.10 | 0.93 | 7 |
| 8/23/2021 | 11:49:52 AM | 10.81 | 4260 | 2.10 | 0.93 | 7 |
| 8/23/2021 | 11:50:52 AM | 10.81 | 4320 | 2.10 | 0.93 | 7 |
| 8/23/2021 | 11:51:52 AM | 10.81 | 4380 | 2.10 | 0.93 | 7 |
| 8/23/2021 | 11:52:52 AM | 10.81 | 4440 | 2.10 | 0.92 | 8 |
| 8/23/2021 | 11:53:52 AM | 10.81 | 4500 | 2.10 | 0.92 | 8 |
| 8/23/2021 | 11:54:52 AM | 10.81 | 4560 | 2.10 | 0.92 | 8 |
| 8/23/2021 | 11:55:52 AM | 10.81 | 4620 | 2.10 | 0.92 | 8 |
| 8/23/2021 | 11:56:52 AM | 10.81 | 4680 | 2.10 | 0.92 | 8 |
| 8/23/2021 | 11:57:52 AM | 10.82 | 4740 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 11:58:52 AM | 10.82 | 4800 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 11:59:52 AM | 10.82 | 4860 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 12:00:52 PM | 10.82 | 4920 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 12:01:52 PM | 10.82 | 4980 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 12:02:52 PM | 10.82 | 5040 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 12:03:52 PM | 10.82 | 5100 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 12:04:52 PM | 10.82 | 5160 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 12:05:52 PM | 10.82 | 5220 | 2.09 | 0.92 | 8 |
| 8/23/2021 | 12:06:52 PM | 10.83 | 5280 | 2.08 | 0.92 | 8 |
| 8/23/2021 | 12:07:52 PM | 10.83 | 5340 | 2.08 | 0.92 | 8 |
| 8/23/2021 | 12:08:52 PM | 10.83 | 5400 | 2.08 | 0.92 | 8 |
| 8/23/2021 | 12:09:52 PM | 10.83 | 5460 | 2.08 | 0.92 | 8 |
| 8/23/2021 | 12:10:52 PM | 10.83 | 5520 | 2.08 | 0.92 | 8 |
| 8/23/2021 | 12:11:52 PM | 10.83 | 5580 | 2.08 | 0.92 | 8 |
| 8/23/2021 | 12:12:52 PM | 10.83 | 5640 | 2.08 | 0.92 | 8 |
| 8/23/2021 | 12:13:52 PM | 10.83 | 5700 | 2.08 | 0.92 | 8 |
| 8/23/2021 | 12:14:52 PM | 10.83 | 5760 | 2.08 | 0.91 | 9 |
| 8/23/2021 | 12:15:52 PM | 10.84 | 5820 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:16:52 PM | 10.84 | 5880 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:17:52 PM | 10.84 | 5940 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:18:52 PM | 10.84 | 6000 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:19:52 PM | 10.84 | 6060 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:20:52 PM | 10.84 | 6120 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:21:52 PM | 10.84 | 6180 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:22:52 PM | 10.84 | 6240 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:23:52 PM | 10.84 | 6300 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:24:52 PM | 10.84 | 6360 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:25:52 PM | 10.84 | 6420 | 2.07 | 0.91 | 9 |
| 8/23/2021 | 12:26:52 PM | 10.85 | 6480 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:27:52 PM | 10.85 | 6540 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:28:52 PM | 10.85 | 6600 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:29:52 PM | 10.85 | 6660 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:30:52 PM | 10.85 | 6720 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:31:52 PM | 10.85 | 6780 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:32:52 PM | 10.85 | 6840 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:33:52 PM | 10.85 | 6900 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:34:52 PM | 10.85 | 6960 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:35:52 PM | 10.85 | 7020 | 2.06 | 0.91 | 9 |
| 8/23/2021 | 12:36:52 PM | 10.86 | 7080 | 2.05 | 0.91 | 9 |
| 8/23/2021 | 12:37:52 PM | 10.86 | 7140 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:38:52 PM | 10.86 | 7200 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:39:52 PM | 10.86 | 7260 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:40:52 PM | 10.86 | 7320 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:41:52 PM | 10.86 | 7380 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:42:52 PM | 10.86 | 7440 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:43:52 PM | 10.86 | 7500 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:44:52 PM | 10.86 | 7560 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:45:52 PM | 10.86 | 7620 | 2.05 | 0.90 | 10 |
| 8/23/2021 | 12:46:52 PM | 10.87 | 7680 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:47:52 PM | 10.87 | 7740 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:48:52 PM | 10.87 | 7800 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:49:52 PM | 10.87 | 7860 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:50:52 PM | 10.87 | 7920 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:51:52 PM | 10.87 | 7980 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:52:52 PM | 10.87 | 8040 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:53:52 PM | 10.87 | 8100 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:54:52 PM | 10.87 | 8160 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:55:52 PM | 10.87 | 8220 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:56:52 PM | 10.88 | 8280 | 2.04 | 0.90 | 10 |
| 8/23/2021 | 12:57:52 PM | 10.88 | 8340 | 2.03 | 0.90 | 10 |
| 8/23/2021 | 12:58:52 PM | 10.88 | 8400 | 2.03 | 0.90 | 10 |
| 8/23/2021 | 12:59:52 PM | 10.88 | 8460 | 2.03 | 0.89 | 11 |
| 8/23/2021 | 1:00:52 PM | 10.88 | 8520 | 2.03 | 0.89 | 11 |
| 8/23/2021 | 1:01:52 PM | 10.88 | 8580 | 2.03 | 0.89 | 11 |
| 8/23/2021 | 1:02:52 PM | 10.88 | 8640 | 2.03 | 0.89 | 11 |
| 8/23/2021 | 1:03:52 PM | 10.88 | 8700 | 2.03 | 0.89 | 11 |
| 8/23/2021 | 1:04:52 PM | 10.88 | 8760 | 2.03 | 0.89 | 11 |
| 8/23/2021 | 1:05:52 PM | 10.89 | 8820 | 2.02 | 0.89 | 11 |
| 8/23/2021 | 1:06:52 PM | 10.89 | 8880 | 2.02 | 0.89 | 11 |

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|-----------|------------|-------|-------|------|------|----|
| 8/23/2021 | 1:07:52 PM | 10.89 | 8940 | 2.02 | 0.89 | 11 |
| 8/23/2021 | 1:08:52 PM | 10.89 | 9000 | 2.02 | 0.89 | 11 |
| 8/23/2021 | 1:09:52 PM | 10.89 | 9060 | 2.02 | 0.89 | 11 |
| 8/23/2021 | 1:10:52 PM | 10.89 | 9120 | 2.02 | 0.89 | 11 |
| 8/23/2021 | 1:11:52 PM | 10.89 | 9180 | 2.02 | 0.89 | 11 |
| 8/23/2021 | 1:12:52 PM | 10.89 | 9240 | 2.02 | 0.89 | 11 |
| 8/23/2021 | 1:13:52 PM | 10.89 | 9300 | 2.02 | 0.89 | 11 |
| 8/23/2021 | 1:14:52 PM | 10.90 | 9360 | 2.01 | 0.89 | 11 |
| 8/23/2021 | 1:15:52 PM | 10.90 | 9420 | 2.01 | 0.89 | 11 |
| 8/23/2021 | 1:16:52 PM | 10.90 | 9480 | 2.01 | 0.89 | 11 |
| 8/23/2021 | 1:17:52 PM | 10.90 | 9540 | 2.01 | 0.89 | 11 |
| 8/23/2021 | 1:18:52 PM | 10.90 | 9600 | 2.01 | 0.89 | 11 |
| 8/23/2021 | 1:19:52 PM | 10.90 | 9660 | 2.01 | 0.89 | 11 |
| 8/23/2021 | 1:20:52 PM | 10.90 | 9720 | 2.01 | 0.88 | 12 |
| 8/23/2021 | 1:21:52 PM | 10.90 | 9780 | 2.01 | 0.88 | 12 |
| 8/23/2021 | 1:22:52 PM | 10.90 | 9840 | 2.01 | 0.88 | 12 |
| 8/23/2021 | 1:23:52 PM | 10.91 | 9900 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:24:52 PM | 10.91 | 9960 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:25:52 PM | 10.91 | 10020 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:26:52 PM | 10.91 | 10080 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:27:52 PM | 10.91 | 10140 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:28:52 PM | 10.91 | 10200 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:29:52 PM | 10.91 | 10260 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:30:52 PM | 10.91 | 10320 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:31:52 PM | 10.91 | 10380 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:32:52 PM | 10.91 | 10440 | 2.00 | 0.88 | 12 |
| 8/23/2021 | 1:33:52 PM | 10.92 | 10500 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:34:52 PM | 10.92 | 10560 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:35:52 PM | 10.92 | 10620 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:36:52 PM | 10.92 | 10680 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:37:52 PM | 10.92 | 10740 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:38:52 PM | 10.92 | 10800 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:39:52 PM | 10.92 | 10860 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:40:52 PM | 10.92 | 10920 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:41:52 PM | 10.92 | 10980 | 1.99 | 0.88 | 12 |
| 8/23/2021 | 1:42:52 PM | 10.92 | 11040 | 1.99 | 0.87 | 13 |
| 8/23/2021 | 1:43:52 PM | 10.93 | 11100 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:44:52 PM | 10.93 | 11160 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:45:52 PM | 10.93 | 11220 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:46:52 PM | 10.93 | 11280 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:47:52 PM | 10.93 | 11340 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:48:52 PM | 10.93 | 11400 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:49:52 PM | 10.93 | 11460 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:50:52 PM | 10.93 | 11520 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:51:52 PM | 10.93 | 11580 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:52:52 PM | 10.93 | 11640 | 1.98 | 0.87 | 13 |
| 8/23/2021 | 1:53:52 PM | 10.94 | 11700 | 1.97 | 0.87 | 13 |
| 8/23/2021 | 1:54:52 PM | 10.94 | 11760 | 1.97 | 0.87 | 13 |
| 8/23/2021 | 1:55:52 PM | 10.94 | 11820 | 1.97 | 0.87 | 13 |
| 8/23/2021 | 1:56:52 PM | 10.94 | 11880 | 1.97 | 0.87 | 13 |
| 8/23/2021 | 1:57:52 PM | 10.94 | 11940 | 1.97 | 0.87 | 13 |
| 8/23/2021 | 1:58:52 PM | 10.94 | 12000 | 1.97 | 0.87 | 13 |
| 8/23/2021 | 1:59:52 PM | 10.94 | 12060 | 1.97 | 0.87 | 13 |
| 8/23/2021 | 2:00:52 PM | 10.94 | 12120 | 1.97 | 0.87 | 13 |
| 8/23/2021 | 2:01:52 PM | 10.95 | 12180 | 1.96 | 0.87 | 13 |
| 8/23/2021 | 2:02:52 PM | 10.95 | 12240 | 1.96 | 0.87 | 13 |
| 8/23/2021 | 2:03:52 PM | 10.95 | 12300 | 1.96 | 0.86 | 14 |
| 8/23/2021 | 2:04:52 PM | 10.95 | 12360 | 1.96 | 0.86 | 14 |
| 8/23/2021 | 2:05:52 PM | 10.95 | 12420 | 1.96 | 0.86 | 14 |
| 8/23/2021 | 2:06:52 PM | 10.95 | 12480 | 1.96 | 0.86 | 14 |
| 8/23/2021 | 2:07:52 PM | 10.95 | 12540 | 1.96 | 0.86 | 14 |
| 8/23/2021 | 2:08:52 PM | 10.95 | 12600 | 1.96 | 0.86 | 14 |
| 8/23/2021 | 2:09:52 PM | 10.95 | 12660 | 1.96 | 0.86 | 14 |
| 8/23/2021 | 2:10:52 PM | 10.96 | 12720 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:11:52 PM | 10.96 | 12780 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:12:52 PM | 10.96 | 12840 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:13:52 PM | 10.96 | 12900 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:14:52 PM | 10.96 | 12960 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:15:52 PM | 10.96 | 13020 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:16:52 PM | 10.96 | 13080 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:17:52 PM | 10.96 | 13140 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:18:52 PM | 10.96 | 13200 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:19:52 PM | 10.96 | 13260 | 1.95 | 0.86 | 14 |
| 8/23/2021 | 2:20:52 PM | 10.97 | 13320 | 1.94 | 0.86 | 14 |
| 8/23/2021 | 2:21:52 PM | 10.97 | 13380 | 1.94 | 0.86 | 14 |
| 8/23/2021 | 2:22:52 PM | 10.97 | 13440 | 1.94 | 0.86 | 14 |
| 8/23/2021 | 2:23:52 PM | 10.97 | 13500 | 1.94 | 0.85 | 15 |
| 8/23/2021 | 2:24:52 PM | 10.97 | 13560 | 1.94 | 0.85 | 15 |
| 8/23/2021 | 2:25:52 PM | 10.97 | 13620 | 1.94 | 0.85 | 15 |

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|-----------|------------|-------|-------|------|------|----|
| 8/23/2021 | 2:26:52 PM | 10.97 | 13680 | 1.94 | 0.85 | 15 |
| 8/23/2021 | 2:27:52 PM | 10.97 | 13740 | 1.94 | 0.85 | 15 |
| 8/23/2021 | 2:28:52 PM | 10.97 | 13800 | 1.94 | 0.85 | 15 |
| 8/23/2021 | 2:29:52 PM | 10.98 | 13860 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:30:52 PM | 10.98 | 13920 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:31:52 PM | 10.98 | 13980 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:32:52 PM | 10.98 | 14040 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:33:52 PM | 10.98 | 14100 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:34:52 PM | 10.98 | 14160 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:35:52 PM | 10.98 | 14220 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:36:52 PM | 10.98 | 14280 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:37:52 PM | 10.98 | 14340 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:38:52 PM | 10.98 | 14400 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:39:52 PM | 10.99 | 14460 | 1.93 | 0.85 | 15 |
| 8/23/2021 | 2:40:52 PM | 10.99 | 14520 | 1.92 | 0.85 | 15 |
| 8/23/2021 | 2:41:52 PM | 10.99 | 14580 | 1.92 | 0.85 | 15 |
| 8/23/2021 | 2:42:52 PM | 10.99 | 14640 | 1.92 | 0.85 | 15 |
| 8/23/2021 | 2:43:52 PM | 10.99 | 14700 | 1.92 | 0.85 | 15 |
| 8/23/2021 | 2:44:52 PM | 10.99 | 14760 | 1.92 | 0.85 | 15 |
| 8/23/2021 | 2:45:52 PM | 10.99 | 14820 | 1.92 | 0.85 | 15 |
| 8/23/2021 | 2:46:52 PM | 10.99 | 14880 | 1.92 | 0.85 | 15 |
| 8/23/2021 | 2:47:52 PM | 10.99 | 14940 | 1.92 | 0.84 | 16 |
| 8/23/2021 | 2:48:52 PM | 10.99 | 15000 | 1.92 | 0.84 | 16 |
| 8/23/2021 | 2:49:52 PM | 10.99 | 15060 | 1.92 | 0.84 | 16 |
| 8/23/2021 | 2:50:52 PM | 11.00 | 15120 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:51:52 PM | 11.00 | 15180 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:52:52 PM | 11.00 | 15240 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:53:52 PM | 11.00 | 15300 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:54:52 PM | 11.00 | 15360 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:55:52 PM | 11.00 | 15420 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:56:52 PM | 11.00 | 15480 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:57:52 PM | 11.00 | 15540 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:58:52 PM | 11.00 | 15600 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 2:59:52 PM | 11.00 | 15660 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 3:00:52 PM | 11.00 | 15720 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 3:01:52 PM | 11.00 | 15780 | 1.91 | 0.84 | 16 |
| 8/23/2021 | 3:02:52 PM | 11.01 | 15840 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:03:52 PM | 11.01 | 15900 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:04:52 PM | 11.01 | 15960 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:05:52 PM | 11.01 | 16020 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:06:52 PM | 11.01 | 16080 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:07:52 PM | 11.01 | 16140 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:08:52 PM | 11.01 | 16200 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:09:52 PM | 11.01 | 16260 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:10:52 PM | 11.01 | 16320 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:11:52 PM | 11.01 | 16380 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:12:52 PM | 11.01 | 16440 | 1.90 | 0.84 | 16 |
| 8/23/2021 | 3:13:52 PM | 11.02 | 16500 | 1.90 | 0.83 | 17 |
| 8/23/2021 | 3:14:52 PM | 11.02 | 16560 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:15:52 PM | 11.02 | 16620 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:16:52 PM | 11.02 | 16680 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:17:52 PM | 11.02 | 16740 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:18:52 PM | 11.02 | 16800 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:19:52 PM | 11.02 | 16860 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:20:52 PM | 11.02 | 16920 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:21:52 PM | 11.02 | 16980 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:22:52 PM | 11.02 | 17040 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:23:52 PM | 11.02 | 17100 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:24:52 PM | 11.02 | 17160 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:25:52 PM | 11.02 | 17220 | 1.89 | 0.83 | 17 |
| 8/23/2021 | 3:26:52 PM | 11.03 | 17280 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:27:52 PM | 11.03 | 17340 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:28:52 PM | 11.03 | 17400 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:29:52 PM | 11.03 | 17460 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:30:52 PM | 11.03 | 17520 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:31:52 PM | 11.03 | 17580 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:32:52 PM | 11.03 | 17640 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:33:52 PM | 11.03 | 17700 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:34:52 PM | 11.03 | 17760 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:35:52 PM | 11.03 | 17820 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:36:52 PM | 11.03 | 17880 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:37:52 PM | 11.03 | 17940 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:38:52 PM | 11.04 | 18000 | 1.88 | 0.83 | 17 |
| 8/23/2021 | 3:39:52 PM | 11.04 | 18060 | 1.87 | 0.83 | 17 |
| 8/23/2021 | 3:40:52 PM | 11.04 | 18120 | 1.87 | 0.83 | 17 |
| 8/23/2021 | 3:41:52 PM | 11.04 | 18180 | 1.87 | 0.83 | 17 |
| 8/23/2021 | 3:42:52 PM | 11.04 | 18240 | 1.87 | 0.82 | 18 |
| 8/23/2021 | 3:43:52 PM | 11.04 | 18300 | 1.87 | 0.82 | 18 |
| 8/23/2021 | 3:44:52 PM | 11.04 | 18360 | 1.87 | 0.82 | 18 |

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|-----------|------------|-------|-------|------|------|----|
| 8/23/2021 | 3:45:52 PM | 11.04 | 18420 | 1.87 | 0.82 | 18 |
| 8/23/2021 | 3:46:52 PM | 11.04 | 18480 | 1.87 | 0.82 | 18 |
| 8/23/2021 | 3:47:52 PM | 11.04 | 18540 | 1.87 | 0.82 | 18 |
| 8/23/2021 | 3:48:52 PM | 11.04 | 18600 | 1.87 | 0.82 | 18 |
| 8/23/2021 | 3:49:52 PM | 11.04 | 18660 | 1.87 | 0.82 | 18 |
| 8/23/2021 | 3:50:52 PM | 11.04 | 18720 | 1.87 | 0.82 | 18 |
| 8/23/2021 | 3:51:52 PM | 11.05 | 18780 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 3:52:52 PM | 11.05 | 18840 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 3:53:52 PM | 11.05 | 18900 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 3:54:52 PM | 11.05 | 18960 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 3:55:52 PM | 11.05 | 19020 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 3:56:52 PM | 11.05 | 19080 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 3:57:52 PM | 11.05 | 19140 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 3:58:52 PM | 11.05 | 19200 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 3:59:52 PM | 11.05 | 19260 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 4:00:52 PM | 11.05 | 19320 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 4:01:52 PM | 11.05 | 19380 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 4:02:52 PM | 11.05 | 19440 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 4:03:52 PM | 11.06 | 19500 | 1.86 | 0.82 | 18 |
| 8/23/2021 | 4:04:52 PM | 11.06 | 19560 | 1.85 | 0.82 | 18 |
| 8/23/2021 | 4:05:52 PM | 11.06 | 19620 | 1.85 | 0.82 | 18 |
| 8/23/2021 | 4:06:52 PM | 11.06 | 19680 | 1.85 | 0.82 | 18 |
| 8/23/2021 | 4:07:52 PM | 11.06 | 19740 | 1.85 | 0.82 | 18 |
| 8/23/2021 | 4:08:52 PM | 11.06 | 19800 | 1.85 | 0.82 | 18 |
| 8/23/2021 | 4:09:52 PM | 11.06 | 19860 | 1.85 | 0.82 | 18 |
| 8/23/2021 | 4:10:52 PM | 11.06 | 19920 | 1.85 | 0.82 | 18 |
| 8/23/2021 | 4:11:52 PM | 11.06 | 19980 | 1.85 | 0.81 | 19 |
| 8/23/2021 | 4:12:52 PM | 11.06 | 20040 | 1.85 | 0.81 | 19 |
| 8/23/2021 | 4:13:52 PM | 11.06 | 20100 | 1.85 | 0.81 | 19 |
| 8/23/2021 | 4:14:52 PM | 11.06 | 20160 | 1.85 | 0.81 | 19 |
| 8/23/2021 | 4:15:52 PM | 11.06 | 20220 | 1.85 | 0.81 | 19 |
| 8/23/2021 | 4:16:52 PM | 11.06 | 20280 | 1.85 | 0.81 | 19 |
| 8/23/2021 | 4:17:52 PM | 11.06 | 20340 | 1.85 | 0.81 | 19 |
| 8/23/2021 | 4:18:52 PM | 11.07 | 20400 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:19:52 PM | 11.07 | 20460 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:20:52 PM | 11.07 | 20520 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:21:52 PM | 11.07 | 20580 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:22:52 PM | 11.07 | 20640 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:23:52 PM | 11.07 | 20700 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:24:52 PM | 11.07 | 20760 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:25:52 PM | 11.07 | 20820 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:26:52 PM | 11.07 | 20880 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:27:52 PM | 11.07 | 20940 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:28:52 PM | 11.07 | 21000 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:29:52 PM | 11.07 | 21060 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:30:52 PM | 11.07 | 21120 | 1.84 | 0.81 | 19 |
| 8/23/2021 | 4:31:52 PM | 11.08 | 21180 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:32:52 PM | 11.08 | 21240 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:33:52 PM | 11.08 | 21300 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:34:52 PM | 11.08 | 21360 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:35:52 PM | 11.08 | 21420 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:36:52 PM | 11.08 | 21480 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:37:52 PM | 11.08 | 21540 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:38:52 PM | 11.08 | 21600 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:39:52 PM | 11.08 | 21660 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:40:52 PM | 11.08 | 21720 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:41:52 PM | 11.08 | 21780 | 1.83 | 0.81 | 19 |
| 8/23/2021 | 4:42:52 PM | 11.08 | 21840 | 1.83 | 0.80 | 20 |
| 8/23/2021 | 4:43:52 PM | 11.08 | 21900 | 1.83 | 0.80 | 20 |
| 8/23/2021 | 4:44:52 PM | 11.08 | 21960 | 1.83 | 0.80 | 20 |
| 8/23/2021 | 4:45:52 PM | 11.09 | 22020 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:46:52 PM | 11.09 | 22080 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:47:52 PM | 11.09 | 22140 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:48:52 PM | 11.09 | 22200 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:49:52 PM | 11.09 | 22260 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:50:52 PM | 11.09 | 22320 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:51:52 PM | 11.09 | 22380 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:52:52 PM | 11.09 | 22440 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:53:52 PM | 11.09 | 22500 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:54:52 PM | 11.09 | 22560 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:55:52 PM | 11.09 | 22620 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:56:52 PM | 11.10 | 22680 | 1.82 | 0.80 | 20 |
| 8/23/2021 | 4:57:52 PM | 11.10 | 22740 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 4:58:52 PM | 11.10 | 22800 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 4:59:52 PM | 11.10 | 22860 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:00:52 PM | 11.10 | 22920 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:01:52 PM | 11.10 | 22980 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:02:52 PM | 11.10 | 23040 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:03:52 PM | 11.10 | 23100 | 1.81 | 0.80 | 20 |

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|-----------|------------|-------|-------|------|------|----|
| 8/23/2021 | 5:04:52 PM | 11.10 | 23160 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:05:52 PM | 11.10 | 23220 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:06:52 PM | 11.10 | 23280 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:07:52 PM | 11.10 | 23340 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:08:52 PM | 11.10 | 23400 | 1.81 | 0.80 | 20 |
| 8/23/2021 | 5:09:52 PM | 11.11 | 23460 | 1.80 | 0.80 | 20 |
| 8/23/2021 | 5:10:52 PM | 11.11 | 23520 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:11:52 PM | 11.11 | 23580 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:12:52 PM | 11.11 | 23640 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:13:52 PM | 11.11 | 23700 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:14:52 PM | 11.11 | 23760 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:15:52 PM | 11.11 | 23820 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:16:52 PM | 11.11 | 23880 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:17:52 PM | 11.11 | 23940 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:18:52 PM | 11.11 | 24000 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:19:52 PM | 11.11 | 24060 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:20:52 PM | 11.11 | 24120 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:21:52 PM | 11.11 | 24180 | 1.80 | 0.79 | 21 |
| 8/23/2021 | 5:22:52 PM | 11.12 | 24240 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:23:52 PM | 11.12 | 24300 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:24:52 PM | 11.12 | 24360 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:25:52 PM | 11.12 | 24420 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:26:52 PM | 11.12 | 24480 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:27:52 PM | 11.12 | 24540 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:28:52 PM | 11.12 | 24600 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:29:52 PM | 11.12 | 24660 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:30:52 PM | 11.12 | 24720 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:31:52 PM | 11.12 | 24780 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:32:52 PM | 11.12 | 24840 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:33:52 PM | 11.13 | 24900 | 1.79 | 0.79 | 21 |
| 8/23/2021 | 5:34:52 PM | 11.13 | 24960 | 1.78 | 0.79 | 21 |
| 8/23/2021 | 5:35:52 PM | 11.13 | 25020 | 1.78 | 0.79 | 21 |
| 8/23/2021 | 5:36:52 PM | 11.13 | 25080 | 1.78 | 0.79 | 21 |
| 8/23/2021 | 5:37:52 PM | 11.13 | 25140 | 1.78 | 0.79 | 21 |
| 8/23/2021 | 5:38:52 PM | 11.13 | 25200 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:39:52 PM | 11.13 | 25260 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:40:52 PM | 11.13 | 25320 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:41:52 PM | 11.13 | 25380 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:42:52 PM | 11.13 | 25440 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:43:52 PM | 11.13 | 25500 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:44:52 PM | 11.13 | 25560 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:45:52 PM | 11.13 | 25620 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:46:52 PM | 11.13 | 25680 | 1.78 | 0.78 | 22 |
| 8/23/2021 | 5:47:52 PM | 11.14 | 25740 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:48:52 PM | 11.14 | 25800 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:49:52 PM | 11.14 | 25860 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:50:52 PM | 11.14 | 25920 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:51:52 PM | 11.14 | 25980 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:52:52 PM | 11.14 | 26040 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:53:52 PM | 11.14 | 26100 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:54:52 PM | 11.14 | 26160 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:55:52 PM | 11.14 | 26220 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:56:52 PM | 11.14 | 26280 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:57:52 PM | 11.14 | 26340 | 1.77 | 0.78 | 22 |
| 8/23/2021 | 5:58:52 PM | 11.15 | 26400 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 5:59:52 PM | 11.15 | 26460 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:00:52 PM | 11.15 | 26520 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:01:52 PM | 11.15 | 26580 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:02:52 PM | 11.15 | 26640 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:03:52 PM | 11.15 | 26700 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:04:52 PM | 11.15 | 26760 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:05:52 PM | 11.15 | 26820 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:06:52 PM | 11.15 | 26880 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:07:52 PM | 11.15 | 26940 | 1.76 | 0.78 | 22 |
| 8/23/2021 | 6:08:52 PM | 11.15 | 27000 | 1.76 | 0.77 | 23 |
| 8/23/2021 | 6:09:52 PM | 11.15 | 27060 | 1.76 | 0.77 | 23 |
| 8/23/2021 | 6:10:52 PM | 11.15 | 27120 | 1.76 | 0.77 | 23 |
| 8/23/2021 | 6:11:52 PM | 11.15 | 27180 | 1.76 | 0.77 | 23 |
| 8/23/2021 | 6:12:52 PM | 11.15 | 27240 | 1.76 | 0.77 | 23 |
| 8/23/2021 | 6:13:52 PM | 11.15 | 27300 | 1.76 | 0.77 | 23 |
| 8/23/2021 | 6:14:52 PM | 11.16 | 27360 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:15:52 PM | 11.16 | 27420 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:16:52 PM | 11.16 | 27480 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:17:52 PM | 11.16 | 27540 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:18:52 PM | 11.16 | 27600 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:19:52 PM | 11.16 | 27660 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:20:52 PM | 11.16 | 27720 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:21:52 PM | 11.16 | 27780 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:22:52 PM | 11.16 | 27840 | 1.75 | 0.77 | 23 |

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|-----------|------------|-------|-------|------|------|----|
| 8/23/2021 | 6:23:52 PM | 11.16 | 27900 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:24:52 PM | 11.16 | 27960 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:25:52 PM | 11.16 | 28020 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:26:52 PM | 11.16 | 28080 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:27:52 PM | 11.16 | 28140 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:28:52 PM | 11.16 | 28200 | 1.75 | 0.77 | 23 |
| 8/23/2021 | 6:29:52 PM | 11.17 | 28260 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:30:52 PM | 11.17 | 28320 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:31:52 PM | 11.17 | 28380 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:32:52 PM | 11.17 | 28440 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:33:52 PM | 11.17 | 28500 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:34:52 PM | 11.17 | 28560 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:35:52 PM | 11.17 | 28620 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:36:52 PM | 11.17 | 28680 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:37:52 PM | 11.17 | 28740 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:38:52 PM | 11.17 | 28800 | 1.74 | 0.77 | 23 |
| 8/23/2021 | 6:39:52 PM | 11.17 | 28860 | 1.74 | 0.76 | 24 |
| 8/23/2021 | 6:40:52 PM | 11.17 | 28920 | 1.74 | 0.76 | 24 |
| 8/23/2021 | 6:41:52 PM | 11.18 | 28980 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:42:52 PM | 11.18 | 29040 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:43:52 PM | 11.18 | 29100 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:44:52 PM | 11.18 | 29160 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:45:52 PM | 11.18 | 29220 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:46:52 PM | 11.18 | 29280 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:47:52 PM | 11.18 | 29340 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:48:52 PM | 11.18 | 29400 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:49:52 PM | 11.18 | 29460 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:50:52 PM | 11.18 | 29520 | 1.73 | 0.76 | 24 |
| 8/23/2021 | 6:51:52 PM | 11.19 | 29580 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 6:52:52 PM | 11.19 | 29640 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 6:53:52 PM | 11.19 | 29700 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 6:54:52 PM | 11.19 | 29760 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 6:55:52 PM | 11.19 | 29820 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 6:56:52 PM | 11.19 | 29880 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 6:57:52 PM | 11.19 | 29940 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 6:58:52 PM | 11.19 | 30000 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 6:59:52 PM | 11.19 | 30060 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:00:52 PM | 11.19 | 30120 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:01:52 PM | 11.19 | 30180 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:02:52 PM | 11.19 | 30240 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:03:52 PM | 11.19 | 30300 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:04:52 PM | 11.19 | 30360 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:05:52 PM | 11.19 | 30420 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:06:52 PM | 11.19 | 30480 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:07:52 PM | 11.19 | 30540 | 1.72 | 0.76 | 24 |
| 8/23/2021 | 7:08:52 PM | 11.20 | 30600 | 1.71 | 0.76 | 24 |
| 8/23/2021 | 7:09:52 PM | 11.20 | 30660 | 1.71 | 0.76 | 24 |
| 8/23/2021 | 7:10:52 PM | 11.20 | 30720 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:11:52 PM | 11.20 | 30780 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:12:52 PM | 11.20 | 30840 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:13:52 PM | 11.20 | 30900 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:14:52 PM | 11.20 | 30960 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:15:52 PM | 11.20 | 31020 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:16:52 PM | 11.20 | 31080 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:17:52 PM | 11.20 | 31140 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:18:52 PM | 11.20 | 31200 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:19:52 PM | 11.20 | 31260 | 1.71 | 0.75 | 25 |
| 8/23/2021 | 7:20:52 PM | 11.21 | 31320 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:21:52 PM | 11.21 | 31380 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:22:52 PM | 11.21 | 31440 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:23:52 PM | 11.21 | 31500 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:24:52 PM | 11.21 | 31560 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:25:52 PM | 11.21 | 31620 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:26:52 PM | 11.21 | 31680 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:27:52 PM | 11.21 | 31740 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:28:52 PM | 11.21 | 31800 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:29:52 PM | 11.21 | 31860 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:30:52 PM | 11.21 | 31920 | 1.70 | 0.75 | 25 |
| 8/23/2021 | 7:31:52 PM | 11.22 | 31980 | 1.69 | 0.75 | 25 |
| 8/23/2021 | 7:32:52 PM | 11.22 | 32040 | 1.69 | 0.75 | 25 |
| 8/23/2021 | 7:33:52 PM | 11.22 | 32100 | 1.69 | 0.75 | 25 |
| 8/23/2021 | 7:34:52 PM | 11.22 | 32160 | 1.69 | 0.75 | 25 |
| 8/23/2021 | 7:35:52 PM | 11.22 | 32220 | 1.69 | 0.75 | 25 |
| 8/23/2021 | 7:36:52 PM | 11.22 | 32280 | 1.69 | 0.75 | 25 |
| 8/23/2021 | 7:37:52 PM | 11.22 | 32340 | 1.69 | 0.75 | 25 |
| 8/23/2021 | 7:38:52 PM | 11.22 | 32400 | 1.69 | 0.74 | 26 |
| 8/23/2021 | 7:39:52 PM | 11.22 | 32460 | 1.69 | 0.74 | 26 |
| 8/23/2021 | 7:40:52 PM | 11.22 | 32520 | 1.69 | 0.74 | 26 |
| 8/23/2021 | 7:41:52 PM | 11.22 | 32580 | 1.69 | 0.74 | 26 |

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|-----------|------------|-------|-------|------|------|----|
| 8/23/2021 | 7:42:52 PM | 11.22 | 32640 | 1.69 | 0.74 | 26 |
| 8/23/2021 | 7:43:52 PM | 11.22 | 32700 | 1.69 | 0.74 | 26 |
| 8/23/2021 | 7:44:52 PM | 11.22 | 32760 | 1.69 | 0.74 | 26 |
| 8/23/2021 | 7:45:52 PM | 11.23 | 32820 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:46:52 PM | 11.23 | 32880 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:47:52 PM | 11.23 | 32940 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:48:52 PM | 11.23 | 33000 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:49:52 PM | 11.23 | 33060 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:50:52 PM | 11.23 | 33120 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:51:52 PM | 11.23 | 33180 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:52:52 PM | 11.23 | 33240 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:53:52 PM | 11.23 | 33300 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:54:52 PM | 11.23 | 33360 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:55:52 PM | 11.23 | 33420 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:56:52 PM | 11.23 | 33480 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:57:52 PM | 11.23 | 33540 | 1.68 | 0.74 | 26 |
| 8/23/2021 | 7:58:52 PM | 11.24 | 33600 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 7:59:52 PM | 11.24 | 33660 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 8:00:52 PM | 11.24 | 33720 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 8:01:52 PM | 11.24 | 33780 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 8:02:52 PM | 11.24 | 33840 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 8:03:52 PM | 11.24 | 33900 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 8:04:52 PM | 11.24 | 33960 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 8:05:52 PM | 11.24 | 34020 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 8:06:52 PM | 11.24 | 34080 | 1.67 | 0.74 | 26 |
| 8/23/2021 | 8:07:52 PM | 11.24 | 34140 | 1.67 | 0.73 | 27 |
| 8/23/2021 | 8:08:52 PM | 11.24 | 34200 | 1.67 | 0.73 | 27 |
| 8/23/2021 | 8:09:52 PM | 11.24 | 34260 | 1.67 | 0.73 | 27 |
| 8/23/2021 | 8:10:52 PM | 11.24 | 34320 | 1.67 | 0.73 | 27 |
| 8/23/2021 | 8:11:52 PM | 11.25 | 34380 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:12:52 PM | 11.25 | 34440 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:13:52 PM | 11.25 | 34500 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:14:52 PM | 11.25 | 34560 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:15:52 PM | 11.25 | 34620 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:16:52 PM | 11.25 | 34680 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:17:52 PM | 11.25 | 34740 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:18:52 PM | 11.25 | 34800 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:19:52 PM | 11.25 | 34860 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:20:52 PM | 11.25 | 34920 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:21:52 PM | 11.25 | 34980 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:22:52 PM | 11.25 | 35040 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:23:52 PM | 11.25 | 35100 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:24:52 PM | 11.26 | 35160 | 1.66 | 0.73 | 27 |
| 8/23/2021 | 8:25:52 PM | 11.26 | 35220 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:26:52 PM | 11.26 | 35280 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:27:52 PM | 11.26 | 35340 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:28:52 PM | 11.26 | 35400 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:29:52 PM | 11.26 | 35460 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:30:52 PM | 11.26 | 35520 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:31:52 PM | 11.26 | 35580 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:32:52 PM | 11.26 | 35640 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:33:52 PM | 11.26 | 35700 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:34:52 PM | 11.26 | 35760 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:35:52 PM | 11.26 | 35820 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:36:52 PM | 11.26 | 35880 | 1.65 | 0.73 | 27 |
| 8/23/2021 | 8:37:52 PM | 11.26 | 35940 | 1.65 | 0.72 | 28 |
| 8/23/2021 | 8:38:52 PM | 11.27 | 36000 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:39:52 PM | 11.27 | 36060 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:40:52 PM | 11.27 | 36120 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:41:52 PM | 11.27 | 36180 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:42:52 PM | 11.27 | 36240 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:43:52 PM | 11.27 | 36300 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:44:52 PM | 11.27 | 36360 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:45:52 PM | 11.27 | 36420 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:46:52 PM | 11.27 | 36480 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:47:52 PM | 11.27 | 36540 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:48:52 PM | 11.27 | 36600 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:49:52 PM | 11.27 | 36660 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:50:52 PM | 11.27 | 36720 | 1.64 | 0.72 | 28 |
| 8/23/2021 | 8:51:52 PM | 11.28 | 36780 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 8:52:52 PM | 11.28 | 36840 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 8:53:52 PM | 11.28 | 36900 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 8:54:52 PM | 11.28 | 36960 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 8:55:52 PM | 11.28 | 37020 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 8:56:52 PM | 11.28 | 37080 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 8:57:52 PM | 11.28 | 37140 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 8:58:52 PM | 11.28 | 37200 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 8:59:52 PM | 11.28 | 37260 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 9:00:52 PM | 11.28 | 37320 | 1.63 | 0.72 | 28 |

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|-----------|-------------|-------|-------|------|------|----|
| 8/23/2021 | 9:01:52 PM | 11.28 | 37380 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 9:02:52 PM | 11.28 | 37440 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 9:03:52 PM | 11.29 | 37500 | 1.63 | 0.72 | 28 |
| 8/23/2021 | 9:04:52 PM | 11.29 | 37560 | 1.62 | 0.72 | 28 |
| 8/23/2021 | 9:05:52 PM | 11.29 | 37620 | 1.62 | 0.72 | 28 |
| 8/23/2021 | 9:06:52 PM | 11.29 | 37680 | 1.62 | 0.72 | 28 |
| 8/23/2021 | 9:07:52 PM | 11.29 | 37740 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:08:52 PM | 11.29 | 37800 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:09:52 PM | 11.29 | 37860 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:10:52 PM | 11.29 | 37920 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:11:52 PM | 11.29 | 37980 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:12:52 PM | 11.29 | 38040 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:13:52 PM | 11.29 | 38100 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:14:52 PM | 11.29 | 38160 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:15:52 PM | 11.29 | 38220 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:16:52 PM | 11.29 | 38280 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:17:52 PM | 11.30 | 38340 | 1.62 | 0.71 | 29 |
| 8/23/2021 | 9:18:52 PM | 11.30 | 38400 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:19:52 PM | 11.30 | 38460 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:20:52 PM | 11.30 | 38520 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:21:52 PM | 11.30 | 38580 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:22:52 PM | 11.30 | 38640 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:23:52 PM | 11.30 | 38700 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:24:52 PM | 11.30 | 38760 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:25:52 PM | 11.30 | 38820 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:26:52 PM | 11.30 | 38880 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:27:52 PM | 11.30 | 38940 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:28:52 PM | 11.30 | 39000 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:29:52 PM | 11.30 | 39060 | 1.61 | 0.71 | 29 |
| 8/23/2021 | 9:30:52 PM | 11.31 | 39120 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:31:52 PM | 11.31 | 39180 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:32:52 PM | 11.31 | 39240 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:33:52 PM | 11.31 | 39300 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:34:52 PM | 11.31 | 39360 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:35:52 PM | 11.31 | 39420 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:36:52 PM | 11.31 | 39480 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:37:52 PM | 11.31 | 39540 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:38:52 PM | 11.31 | 39600 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:39:52 PM | 11.31 | 39660 | 1.60 | 0.71 | 29 |
| 8/23/2021 | 9:40:52 PM | 11.31 | 39720 | 1.60 | 0.70 | 30 |
| 8/23/2021 | 9:41:52 PM | 11.31 | 39780 | 1.60 | 0.70 | 30 |
| 8/23/2021 | 9:42:52 PM | 11.31 | 39840 | 1.60 | 0.70 | 30 |
| 8/23/2021 | 9:43:52 PM | 11.31 | 39900 | 1.60 | 0.70 | 30 |
| 8/23/2021 | 9:44:52 PM | 11.31 | 39960 | 1.60 | 0.70 | 30 |
| 8/23/2021 | 9:45:52 PM | 11.31 | 40020 | 1.60 | 0.70 | 30 |
| 8/23/2021 | 9:46:52 PM | 11.31 | 40080 | 1.60 | 0.70 | 30 |
| 8/23/2021 | 9:47:52 PM | 11.31 | 40140 | 1.60 | 0.70 | 30 |
| 8/23/2021 | 9:48:52 PM | 11.32 | 40200 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:49:52 PM | 11.32 | 40260 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:50:52 PM | 11.32 | 40320 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:51:52 PM | 11.32 | 40380 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:52:52 PM | 11.32 | 40440 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:53:52 PM | 11.32 | 40500 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:54:52 PM | 11.32 | 40560 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:55:52 PM | 11.32 | 40620 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:56:52 PM | 11.32 | 40680 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:57:52 PM | 11.32 | 40740 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:58:52 PM | 11.32 | 40800 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 9:59:52 PM | 11.32 | 40860 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 10:00:52 PM | 11.32 | 40920 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 10:01:52 PM | 11.32 | 40980 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 10:02:52 PM | 11.32 | 41040 | 1.59 | 0.70 | 30 |
| 8/23/2021 | 10:03:52 PM | 11.33 | 41100 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:04:52 PM | 11.33 | 41160 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:05:52 PM | 11.33 | 41220 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:06:52 PM | 11.33 | 41280 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:07:52 PM | 11.33 | 41340 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:08:52 PM | 11.33 | 41400 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:09:52 PM | 11.33 | 41460 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:10:52 PM | 11.33 | 41520 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:11:52 PM | 11.33 | 41580 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:12:52 PM | 11.33 | 41640 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:13:52 PM | 11.33 | 41700 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:14:52 PM | 11.33 | 41760 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:15:52 PM | 11.33 | 41820 | 1.58 | 0.70 | 30 |
| 8/23/2021 | 10:16:52 PM | 11.33 | 41880 | 1.58 | 0.69 | 31 |
| 8/23/2021 | 10:17:52 PM | 11.33 | 41940 | 1.58 | 0.69 | 31 |
| 8/23/2021 | 10:18:52 PM | 11.33 | 42000 | 1.58 | 0.69 | 31 |
| 8/23/2021 | 10:19:52 PM | 11.33 | 42060 | 1.58 | 0.69 | 31 |

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|-----------|-------------|-------|-------|------|------|----|
| 8/23/2021 | 10:20:52 PM | 11.34 | 42120 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:21:52 PM | 11.34 | 42180 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:22:52 PM | 11.34 | 42240 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:23:52 PM | 11.34 | 42300 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:24:52 PM | 11.34 | 42360 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:25:52 PM | 11.34 | 42420 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:26:52 PM | 11.34 | 42480 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:27:52 PM | 11.34 | 42540 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:28:52 PM | 11.34 | 42600 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:29:52 PM | 11.34 | 42660 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:30:52 PM | 11.34 | 42720 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:31:52 PM | 11.34 | 42780 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:32:52 PM | 11.34 | 42840 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:33:52 PM | 11.34 | 42900 | 1.57 | 0.69 | 31 |
| 8/23/2021 | 10:34:52 PM | 11.35 | 42960 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:35:52 PM | 11.35 | 43020 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:36:52 PM | 11.35 | 43080 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:37:52 PM | 11.35 | 43140 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:38:52 PM | 11.35 | 43200 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:39:52 PM | 11.35 | 43260 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:40:52 PM | 11.35 | 43320 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:41:52 PM | 11.35 | 43380 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:42:52 PM | 11.35 | 43440 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:43:52 PM | 11.35 | 43500 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:44:52 PM | 11.35 | 43560 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:45:52 PM | 11.35 | 43620 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:46:52 PM | 11.35 | 43680 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:47:52 PM | 11.35 | 43740 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:48:52 PM | 11.35 | 43800 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:49:52 PM | 11.35 | 43860 | 1.56 | 0.69 | 31 |
| 8/23/2021 | 10:50:52 PM | 11.36 | 43920 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:51:52 PM | 11.36 | 43980 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:52:52 PM | 11.36 | 44040 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:53:52 PM | 11.36 | 44100 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:54:52 PM | 11.36 | 44160 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:55:52 PM | 11.36 | 44220 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:56:52 PM | 11.36 | 44280 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:57:52 PM | 11.36 | 44340 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:58:52 PM | 11.36 | 44400 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 10:59:52 PM | 11.36 | 44460 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 11:00:52 PM | 11.36 | 44520 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 11:01:52 PM | 11.36 | 44580 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 11:02:52 PM | 11.36 | 44640 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 11:03:52 PM | 11.36 | 44700 | 1.55 | 0.68 | 32 |
| 8/23/2021 | 11:04:52 PM | 11.37 | 44760 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:05:52 PM | 11.37 | 44820 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:06:52 PM | 11.37 | 44880 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:07:52 PM | 11.37 | 44940 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:08:52 PM | 11.37 | 45000 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:09:52 PM | 11.37 | 45060 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:10:52 PM | 11.37 | 45120 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:11:52 PM | 11.37 | 45180 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:12:52 PM | 11.37 | 45240 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:13:52 PM | 11.37 | 45300 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:14:52 PM | 11.37 | 45360 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:15:52 PM | 11.37 | 45420 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:16:52 PM | 11.37 | 45480 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:17:52 PM | 11.37 | 45540 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:18:52 PM | 11.37 | 45600 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:19:52 PM | 11.37 | 45660 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:20:52 PM | 11.37 | 45720 | 1.54 | 0.68 | 32 |
| 8/23/2021 | 11:21:52 PM | 11.38 | 45780 | 1.53 | 0.68 | 32 |
| 8/23/2021 | 11:22:52 PM | 11.38 | 45840 | 1.53 | 0.68 | 32 |
| 8/23/2021 | 11:23:52 PM | 11.38 | 45900 | 1.53 | 0.68 | 32 |
| 8/23/2021 | 11:24:52 PM | 11.38 | 45960 | 1.53 | 0.68 | 32 |
| 8/23/2021 | 11:25:52 PM | 11.38 | 46020 | 1.53 | 0.68 | 32 |
| 8/23/2021 | 11:26:52 PM | 11.38 | 46080 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:27:52 PM | 11.38 | 46140 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:28:52 PM | 11.38 | 46200 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:29:52 PM | 11.38 | 46260 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:30:52 PM | 11.38 | 46320 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:31:52 PM | 11.38 | 46380 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:32:52 PM | 11.38 | 46440 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:33:52 PM | 11.38 | 46500 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:34:52 PM | 11.38 | 46560 | 1.53 | 0.67 | 33 |
| 8/23/2021 | 11:35:52 PM | 11.39 | 46620 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:36:52 PM | 11.39 | 46680 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:37:52 PM | 11.39 | 46740 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:38:52 PM | 11.39 | 46800 | 1.52 | 0.67 | 33 |

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|-----------|-------------|-------|-------|------|------|----|
| 8/23/2021 | 11:39:52 PM | 11.39 | 46860 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:40:52 PM | 11.39 | 46920 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:41:52 PM | 11.39 | 46980 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:42:52 PM | 11.39 | 47040 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:43:52 PM | 11.39 | 47100 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:44:52 PM | 11.39 | 47160 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:45:52 PM | 11.39 | 47220 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:46:52 PM | 11.39 | 47280 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:47:52 PM | 11.39 | 47340 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:48:52 PM | 11.39 | 47400 | 1.52 | 0.67 | 33 |
| 8/23/2021 | 11:49:52 PM | 11.40 | 47460 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:50:52 PM | 11.40 | 47520 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:51:52 PM | 11.40 | 47580 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:52:52 PM | 11.40 | 47640 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:53:52 PM | 11.40 | 47700 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:54:52 PM | 11.40 | 47760 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:55:52 PM | 11.40 | 47820 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:56:52 PM | 11.40 | 47880 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:57:52 PM | 11.40 | 47940 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:58:52 PM | 11.40 | 48000 | 1.51 | 0.67 | 33 |
| 8/23/2021 | 11:59:52 PM | 11.40 | 48060 | 1.51 | 0.66 | 34 |
| 8/24/2021 | 12:00:52 AM | 11.40 | 48120 | 1.51 | 0.66 | 34 |
| 8/24/2021 | 12:01:52 AM | 11.40 | 48180 | 1.51 | 0.66 | 34 |
| 8/24/2021 | 12:02:52 AM | 11.40 | 48240 | 1.51 | 0.66 | 34 |
| 8/24/2021 | 12:03:52 AM | 11.40 | 48300 | 1.51 | 0.66 | 34 |
| 8/24/2021 | 12:04:52 AM | 11.40 | 48360 | 1.51 | 0.66 | 34 |
| 8/24/2021 | 12:05:52 AM | 11.40 | 48420 | 1.51 | 0.66 | 34 |
| 8/24/2021 | 12:06:52 AM | 11.41 | 48480 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:07:52 AM | 11.41 | 48540 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:08:52 AM | 11.41 | 48600 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:09:52 AM | 11.41 | 48660 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:10:52 AM | 11.41 | 48720 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:11:52 AM | 11.41 | 48780 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:12:52 AM | 11.41 | 48840 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:13:52 AM | 11.41 | 48900 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:14:52 AM | 11.41 | 48960 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:15:52 AM | 11.41 | 49020 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:16:52 AM | 11.41 | 49080 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:17:52 AM | 11.41 | 49140 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:18:52 AM | 11.41 | 49200 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:19:52 AM | 11.41 | 49260 | 1.50 | 0.66 | 34 |
| 8/24/2021 | 12:20:52 AM | 11.42 | 49320 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:21:52 AM | 11.42 | 49380 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:22:52 AM | 11.42 | 49440 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:23:52 AM | 11.42 | 49500 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:24:52 AM | 11.42 | 49560 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:25:52 AM | 11.42 | 49620 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:26:52 AM | 11.42 | 49680 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:27:52 AM | 11.42 | 49740 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:28:52 AM | 11.42 | 49800 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:29:52 AM | 11.42 | 49860 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:30:52 AM | 11.42 | 49920 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:31:52 AM | 11.42 | 49980 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:32:52 AM | 11.42 | 50040 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:33:52 AM | 11.42 | 50100 | 1.49 | 0.66 | 34 |
| 8/24/2021 | 12:34:52 AM | 11.42 | 50160 | 1.49 | 0.65 | 35 |
| 8/24/2021 | 12:35:52 AM | 11.42 | 50220 | 1.49 | 0.65 | 35 |
| 8/24/2021 | 12:36:52 AM | 11.43 | 50280 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:37:52 AM | 11.43 | 50340 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:38:52 AM | 11.43 | 50400 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:39:52 AM | 11.43 | 50460 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:40:52 AM | 11.43 | 50520 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:41:52 AM | 11.43 | 50580 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:42:52 AM | 11.43 | 50640 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:43:52 AM | 11.43 | 50700 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:44:52 AM | 11.43 | 50760 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:45:52 AM | 11.43 | 50820 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:46:52 AM | 11.43 | 50880 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:47:52 AM | 11.43 | 50940 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:48:52 AM | 11.43 | 51000 | 1.48 | 0.65 | 35 |
| 8/24/2021 | 12:49:52 AM | 11.44 | 51060 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:50:52 AM | 11.44 | 51120 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:51:52 AM | 11.44 | 51180 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:52:52 AM | 11.44 | 51240 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:53:52 AM | 11.44 | 51300 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:54:52 AM | 11.44 | 51360 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:55:52 AM | 11.44 | 51420 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:56:52 AM | 11.44 | 51480 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:57:52 AM | 11.44 | 51540 | 1.47 | 0.65 | 35 |

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|-----------|-------------|-------|-------|------|------|----|
| 8/24/2021 | 12:58:52 AM | 11.44 | 51600 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 12:59:52 AM | 11.44 | 51660 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 1:00:52 AM | 11.44 | 51720 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 1:01:52 AM | 11.44 | 51780 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 1:02:52 AM | 11.44 | 51840 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 1:03:52 AM | 11.44 | 51900 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 1:04:52 AM | 11.44 | 51960 | 1.47 | 0.65 | 35 |
| 8/24/2021 | 1:05:52 AM | 11.45 | 52020 | 1.46 | 0.65 | 35 |
| 8/24/2021 | 1:06:52 AM | 11.45 | 52080 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:07:52 AM | 11.45 | 52140 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:08:52 AM | 11.45 | 52200 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:09:52 AM | 11.45 | 52260 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:10:52 AM | 11.45 | 52320 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:11:52 AM | 11.45 | 52380 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:12:52 AM | 11.45 | 52440 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:13:52 AM | 11.45 | 52500 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:14:52 AM | 11.45 | 52560 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:15:52 AM | 11.45 | 52620 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:16:52 AM | 11.45 | 52680 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:17:52 AM | 11.45 | 52740 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:18:52 AM | 11.45 | 52800 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:19:52 AM | 11.45 | 52860 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:20:52 AM | 11.45 | 52920 | 1.46 | 0.64 | 36 |
| 8/24/2021 | 1:21:52 AM | 11.46 | 52980 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:22:52 AM | 11.46 | 53040 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:23:52 AM | 11.46 | 53100 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:24:52 AM | 11.46 | 53160 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:25:52 AM | 11.46 | 53220 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:26:52 AM | 11.46 | 53280 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:27:52 AM | 11.46 | 53340 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:28:52 AM | 11.46 | 53400 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:29:52 AM | 11.46 | 53460 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:30:52 AM | 11.46 | 53520 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:31:52 AM | 11.46 | 53580 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:32:52 AM | 11.46 | 53640 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:33:52 AM | 11.46 | 53700 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:34:52 AM | 11.46 | 53760 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:35:52 AM | 11.46 | 53820 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:36:52 AM | 11.46 | 53880 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:37:52 AM | 11.46 | 53940 | 1.45 | 0.64 | 36 |
| 8/24/2021 | 1:38:52 AM | 11.47 | 54000 | 1.44 | 0.64 | 36 |
| 8/24/2021 | 1:39:52 AM | 11.47 | 54060 | 1.44 | 0.64 | 36 |
| 8/24/2021 | 1:40:52 AM | 11.47 | 54120 | 1.44 | 0.64 | 36 |
| 8/24/2021 | 1:41:52 AM | 11.47 | 54180 | 1.44 | 0.64 | 36 |
| 8/24/2021 | 1:42:52 AM | 11.47 | 54240 | 1.44 | 0.64 | 36 |
| 8/24/2021 | 1:43:52 AM | 11.47 | 54300 | 1.44 | 0.64 | 36 |
| 8/24/2021 | 1:44:52 AM | 11.47 | 54360 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:45:52 AM | 11.47 | 54420 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:46:52 AM | 11.47 | 54480 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:47:52 AM | 11.47 | 54540 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:48:52 AM | 11.47 | 54600 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:49:52 AM | 11.47 | 54660 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:50:52 AM | 11.47 | 54720 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:51:52 AM | 11.47 | 54780 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:52:52 AM | 11.47 | 54840 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:53:52 AM | 11.47 | 54900 | 1.44 | 0.63 | 37 |
| 8/24/2021 | 1:54:52 AM | 11.48 | 54960 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 1:55:52 AM | 11.48 | 55020 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 1:56:52 AM | 11.48 | 55080 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 1:57:52 AM | 11.48 | 55140 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 1:58:52 AM | 11.48 | 55200 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 1:59:52 AM | 11.48 | 55260 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:00:52 AM | 11.48 | 55320 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:01:52 AM | 11.48 | 55380 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:02:52 AM | 11.48 | 55440 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:03:52 AM | 11.48 | 55500 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:04:52 AM | 11.48 | 55560 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:05:52 AM | 11.48 | 55620 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:06:52 AM | 11.48 | 55680 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:07:52 AM | 11.48 | 55740 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:08:52 AM | 11.48 | 55800 | 1.43 | 0.63 | 37 |
| 8/24/2021 | 2:09:52 AM | 11.49 | 55860 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:10:52 AM | 11.49 | 55920 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:11:52 AM | 11.49 | 55980 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:12:52 AM | 11.49 | 56040 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:13:52 AM | 11.49 | 56100 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:14:52 AM | 11.49 | 56160 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:15:52 AM | 11.49 | 56220 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:16:52 AM | 11.49 | 56280 | 1.42 | 0.63 | 37 |

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|-----------|------------|-------|-------|------|------|----|
| 8/24/2021 | 2:17:52 AM | 11.49 | 56340 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:18:52 AM | 11.49 | 56400 | 1.42 | 0.63 | 37 |
| 8/24/2021 | 2:19:52 AM | 11.49 | 56460 | 1.42 | 0.62 | 38 |
| 8/24/2021 | 2:20:52 AM | 11.49 | 56520 | 1.42 | 0.62 | 38 |
| 8/24/2021 | 2:21:52 AM | 11.49 | 56580 | 1.42 | 0.62 | 38 |
| 8/24/2021 | 2:22:52 AM | 11.49 | 56640 | 1.42 | 0.62 | 38 |
| 8/24/2021 | 2:23:52 AM | 11.49 | 56700 | 1.42 | 0.62 | 38 |
| 8/24/2021 | 2:24:52 AM | 11.49 | 56760 | 1.42 | 0.62 | 38 |
| 8/24/2021 | 2:25:52 AM | 11.50 | 56820 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:26:52 AM | 11.50 | 56880 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:27:52 AM | 11.50 | 56940 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:28:52 AM | 11.50 | 57000 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:29:52 AM | 11.50 | 57060 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:30:52 AM | 11.50 | 57120 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:31:52 AM | 11.50 | 57180 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:32:52 AM | 11.50 | 57240 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:33:52 AM | 11.50 | 57300 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:34:52 AM | 11.50 | 57360 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:35:52 AM | 11.50 | 57420 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:36:52 AM | 11.50 | 57480 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:37:52 AM | 11.50 | 57540 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:38:52 AM | 11.50 | 57600 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:39:52 AM | 11.51 | 57660 | 1.41 | 0.62 | 38 |
| 8/24/2021 | 2:40:52 AM | 11.51 | 57720 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:41:52 AM | 11.51 | 57780 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:42:52 AM | 11.51 | 57840 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:43:52 AM | 11.51 | 57900 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:44:52 AM | 11.51 | 57960 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:45:52 AM | 11.51 | 58020 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:46:52 AM | 11.51 | 58080 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:47:52 AM | 11.51 | 58140 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:48:52 AM | 11.51 | 58200 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:49:52 AM | 11.51 | 58260 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:50:52 AM | 11.51 | 58320 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:51:52 AM | 11.51 | 58380 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:52:52 AM | 11.51 | 58440 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:53:52 AM | 11.51 | 58500 | 1.40 | 0.62 | 38 |
| 8/24/2021 | 2:54:52 AM | 11.51 | 58560 | 1.40 | 0.61 | 39 |
| 8/24/2021 | 2:55:52 AM | 11.52 | 58620 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 2:56:52 AM | 11.52 | 58680 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 2:57:52 AM | 11.52 | 58740 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 2:58:52 AM | 11.52 | 58800 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 2:59:52 AM | 11.52 | 58860 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:00:52 AM | 11.52 | 58920 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:01:52 AM | 11.52 | 58980 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:02:52 AM | 11.52 | 59040 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:03:52 AM | 11.52 | 59100 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:04:52 AM | 11.52 | 59160 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:05:52 AM | 11.52 | 59220 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:06:52 AM | 11.52 | 59280 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:07:52 AM | 11.52 | 59340 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:08:52 AM | 11.52 | 59400 | 1.39 | 0.61 | 39 |
| 8/24/2021 | 3:09:52 AM | 11.53 | 59460 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:10:52 AM | 11.53 | 59520 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:11:52 AM | 11.53 | 59580 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:12:52 AM | 11.53 | 59640 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:13:52 AM | 11.53 | 59700 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:14:52 AM | 11.53 | 59760 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:15:52 AM | 11.53 | 59820 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:16:52 AM | 11.53 | 59880 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:17:52 AM | 11.53 | 59940 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:18:52 AM | 11.53 | 60000 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:19:52 AM | 11.53 | 60060 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:20:52 AM | 11.53 | 60120 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:21:52 AM | 11.53 | 60180 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:22:52 AM | 11.53 | 60240 | 1.38 | 0.61 | 39 |
| 8/24/2021 | 3:23:52 AM | 11.54 | 60300 | 1.37 | 0.61 | 39 |
| 8/24/2021 | 3:24:52 AM | 11.54 | 60360 | 1.37 | 0.61 | 39 |
| 8/24/2021 | 3:25:52 AM | 11.54 | 60420 | 1.37 | 0.61 | 39 |
| 8/24/2021 | 3:26:52 AM | 11.54 | 60480 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:27:52 AM | 11.54 | 60540 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:28:52 AM | 11.54 | 60600 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:29:52 AM | 11.54 | 60660 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:30:52 AM | 11.54 | 60720 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:31:52 AM | 11.54 | 60780 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:32:52 AM | 11.54 | 60840 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:33:52 AM | 11.54 | 60900 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:34:52 AM | 11.54 | 60960 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:35:52 AM | 11.54 | 61020 | 1.37 | 0.60 | 40 |

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|-----------|------------|-------|-------|------|------|----|
| 8/24/2021 | 3:36:52 AM | 11.54 | 61080 | 1.37 | 0.60 | 40 |
| 8/24/2021 | 3:37:52 AM | 11.55 | 61140 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:38:52 AM | 11.55 | 61200 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:39:52 AM | 11.55 | 61260 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:40:52 AM | 11.55 | 61320 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:41:52 AM | 11.55 | 61380 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:42:52 AM | 11.55 | 61440 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:43:52 AM | 11.55 | 61500 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:44:52 AM | 11.55 | 61560 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:45:52 AM | 11.55 | 61620 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:46:52 AM | 11.55 | 61680 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:47:52 AM | 11.55 | 61740 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:48:52 AM | 11.55 | 61800 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:49:52 AM | 11.55 | 61860 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:50:52 AM | 11.55 | 61920 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:51:52 AM | 11.55 | 61980 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:52:52 AM | 11.55 | 62040 | 1.36 | 0.60 | 40 |
| 8/24/2021 | 3:53:52 AM | 11.56 | 62100 | 1.35 | 0.60 | 40 |
| 8/24/2021 | 3:54:52 AM | 11.56 | 62160 | 1.35 | 0.60 | 40 |
| 8/24/2021 | 3:55:52 AM | 11.56 | 62220 | 1.35 | 0.60 | 40 |
| 8/24/2021 | 3:56:52 AM | 11.56 | 62280 | 1.35 | 0.60 | 40 |
| 8/24/2021 | 3:57:52 AM | 11.56 | 62340 | 1.35 | 0.60 | 40 |
| 8/24/2021 | 3:58:52 AM | 11.56 | 62400 | 1.35 | 0.60 | 40 |
| 8/24/2021 | 3:59:52 AM | 11.56 | 62460 | 1.35 | 0.60 | 40 |
| 8/24/2021 | 4:00:52 AM | 11.56 | 62520 | 1.35 | 0.59 | 41 |
| 8/24/2021 | 4:01:52 AM | 11.56 | 62580 | 1.35 | 0.59 | 41 |
| 8/24/2021 | 4:02:52 AM | 11.56 | 62640 | 1.35 | 0.59 | 41 |
| 8/24/2021 | 4:03:52 AM | 11.56 | 62700 | 1.35 | 0.59 | 41 |
| 8/24/2021 | 4:04:52 AM | 11.56 | 62760 | 1.35 | 0.59 | 41 |
| 8/24/2021 | 4:05:52 AM | 11.56 | 62820 | 1.35 | 0.59 | 41 |
| 8/24/2021 | 4:06:52 AM | 11.56 | 62880 | 1.35 | 0.59 | 41 |
| 8/24/2021 | 4:07:52 AM | 11.57 | 62940 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:08:52 AM | 11.57 | 63000 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:09:52 AM | 11.57 | 63060 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:10:52 AM | 11.57 | 63120 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:11:52 AM | 11.57 | 63180 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:12:52 AM | 11.57 | 63240 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:13:52 AM | 11.57 | 63300 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:14:52 AM | 11.57 | 63360 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:15:52 AM | 11.57 | 63420 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:16:52 AM | 11.57 | 63480 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:17:52 AM | 11.57 | 63540 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:18:52 AM | 11.57 | 63600 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:19:52 AM | 11.57 | 63660 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:20:52 AM | 11.57 | 63720 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:21:52 AM | 11.57 | 63780 | 1.34 | 0.59 | 41 |
| 8/24/2021 | 4:22:52 AM | 11.58 | 63840 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:23:52 AM | 11.58 | 63900 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:24:52 AM | 11.58 | 63960 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:25:52 AM | 11.58 | 64020 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:26:52 AM | 11.58 | 64080 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:27:52 AM | 11.58 | 64140 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:28:52 AM | 11.58 | 64200 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:29:52 AM | 11.58 | 64260 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:30:52 AM | 11.58 | 64320 | 1.33 | 0.59 | 41 |
| 8/24/2021 | 4:31:52 AM | 11.58 | 64380 | 1.33 | 0.58 | 42 |
| 8/24/2021 | 4:32:52 AM | 11.58 | 64440 | 1.33 | 0.58 | 42 |
| 8/24/2021 | 4:33:52 AM | 11.58 | 64500 | 1.33 | 0.58 | 42 |
| 8/24/2021 | 4:34:52 AM | 11.58 | 64560 | 1.33 | 0.58 | 42 |
| 8/24/2021 | 4:35:52 AM | 11.59 | 64620 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:36:52 AM | 11.59 | 64680 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:37:52 AM | 11.59 | 64740 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:38:52 AM | 11.59 | 64800 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:39:52 AM | 11.59 | 64860 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:40:52 AM | 11.59 | 64920 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:41:52 AM | 11.59 | 64980 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:42:52 AM | 11.59 | 65040 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:43:52 AM | 11.59 | 65100 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:44:52 AM | 11.59 | 65160 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:45:52 AM | 11.59 | 65220 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:46:52 AM | 11.59 | 65280 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:47:52 AM | 11.59 | 65340 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:48:52 AM | 11.59 | 65400 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:49:52 AM | 11.59 | 65460 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:50:52 AM | 11.59 | 65520 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:51:52 AM | 11.59 | 65580 | 1.32 | 0.58 | 42 |
| 8/24/2021 | 4:52:52 AM | 11.60 | 65640 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 4:53:52 AM | 11.60 | 65700 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 4:54:52 AM | 11.60 | 65760 | 1.31 | 0.58 | 42 |

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|-----------|------------|-------|-------|------|------|----|
| 8/24/2021 | 4:55:52 AM | 11.60 | 65820 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 4:56:52 AM | 11.60 | 65880 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 4:57:52 AM | 11.60 | 65940 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 4:58:52 AM | 11.60 | 66000 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 4:59:52 AM | 11.60 | 66060 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 5:00:52 AM | 11.60 | 66120 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 5:01:52 AM | 11.60 | 66180 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 5:02:52 AM | 11.60 | 66240 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 5:03:52 AM | 11.60 | 66300 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 5:04:52 AM | 11.60 | 66360 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 5:05:52 AM | 11.60 | 66420 | 1.31 | 0.58 | 42 |
| 8/24/2021 | 5:06:52 AM | 11.61 | 66480 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:07:52 AM | 11.61 | 66540 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:08:52 AM | 11.61 | 66600 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:09:52 AM | 11.61 | 66660 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:10:52 AM | 11.61 | 66720 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:11:52 AM | 11.61 | 66780 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:12:52 AM | 11.61 | 66840 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:13:52 AM | 11.61 | 66900 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:14:52 AM | 11.61 | 66960 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:15:52 AM | 11.61 | 67020 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:16:52 AM | 11.61 | 67080 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:17:52 AM | 11.61 | 67140 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:18:52 AM | 11.61 | 67200 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:19:52 AM | 11.61 | 67260 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:20:52 AM | 11.61 | 67320 | 1.30 | 0.57 | 43 |
| 8/24/2021 | 5:21:52 AM | 11.62 | 67380 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:22:52 AM | 11.62 | 67440 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:23:52 AM | 11.62 | 67500 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:24:52 AM | 11.62 | 67560 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:25:52 AM | 11.62 | 67620 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:26:52 AM | 11.62 | 67680 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:27:52 AM | 11.62 | 67740 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:28:52 AM | 11.62 | 67800 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:29:52 AM | 11.62 | 67860 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:30:52 AM | 11.62 | 67920 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:31:52 AM | 11.62 | 67980 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:32:52 AM | 11.62 | 68040 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:33:52 AM | 11.62 | 68100 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:34:52 AM | 11.62 | 68160 | 1.29 | 0.57 | 43 |
| 8/24/2021 | 5:35:52 AM | 11.63 | 68220 | 1.28 | 0.57 | 43 |
| 8/24/2021 | 5:36:52 AM | 11.63 | 68280 | 1.28 | 0.57 | 43 |
| 8/24/2021 | 5:37:52 AM | 11.63 | 68340 | 1.28 | 0.57 | 43 |
| 8/24/2021 | 5:38:52 AM | 11.63 | 68400 | 1.28 | 0.57 | 43 |
| 8/24/2021 | 5:39:52 AM | 11.63 | 68460 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:40:52 AM | 11.63 | 68520 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:41:52 AM | 11.63 | 68580 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:42:52 AM | 11.63 | 68640 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:43:52 AM | 11.63 | 68700 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:44:52 AM | 11.63 | 68760 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:45:52 AM | 11.63 | 68820 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:46:52 AM | 11.63 | 68880 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:47:52 AM | 11.63 | 68940 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:48:52 AM | 11.63 | 69000 | 1.28 | 0.56 | 44 |
| 8/24/2021 | 5:49:52 AM | 11.64 | 69060 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:50:52 AM | 11.64 | 69120 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:51:52 AM | 11.64 | 69180 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:52:52 AM | 11.64 | 69240 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:53:52 AM | 11.64 | 69300 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:54:52 AM | 11.64 | 69360 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:55:52 AM | 11.64 | 69420 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:56:52 AM | 11.64 | 69480 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:57:52 AM | 11.64 | 69540 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:58:52 AM | 11.64 | 69600 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 5:59:52 AM | 11.64 | 69660 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 6:00:52 AM | 11.64 | 69720 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 6:01:52 AM | 11.64 | 69780 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 6:02:52 AM | 11.64 | 69840 | 1.27 | 0.56 | 44 |
| 8/24/2021 | 6:03:52 AM | 11.65 | 69900 | 1.26 | 0.56 | 44 |
| 8/24/2021 | 6:04:52 AM | 11.65 | 69960 | 1.26 | 0.56 | 44 |
| 8/24/2021 | 6:05:52 AM | 11.65 | 70020 | 1.26 | 0.56 | 44 |
| 8/24/2021 | 6:06:52 AM | 11.65 | 70080 | 1.26 | 0.56 | 44 |
| 8/24/2021 | 6:07:52 AM | 11.65 | 70140 | 1.26 | 0.56 | 44 |
| 8/24/2021 | 6:08:52 AM | 11.65 | 70200 | 1.26 | 0.56 | 44 |
| 8/24/2021 | 6:09:52 AM | 11.65 | 70260 | 1.26 | 0.56 | 44 |
| 8/24/2021 | 6:10:52 AM | 11.65 | 70320 | 1.26 | 0.56 | 44 |
| 8/24/2021 | 6:11:52 AM | 11.65 | 70380 | 1.26 | 0.55 | 45 |
| 8/24/2021 | 6:12:52 AM | 11.65 | 70440 | 1.26 | 0.55 | 45 |
| 8/24/2021 | 6:13:52 AM | 11.65 | 70500 | 1.26 | 0.55 | 45 |

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|-----------|------------|-------|-------|------|------|----|
| 8/24/2021 | 6:14:52 AM | 11.65 | 70560 | 1.26 | 0.55 | 45 |
| 8/24/2021 | 6:15:52 AM | 11.65 | 70620 | 1.26 | 0.55 | 45 |
| 8/24/2021 | 6:16:52 AM | 11.65 | 70680 | 1.26 | 0.55 | 45 |
| 8/24/2021 | 6:17:52 AM | 11.66 | 70740 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:18:52 AM | 11.66 | 70800 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:19:52 AM | 11.66 | 70860 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:20:52 AM | 11.66 | 70920 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:21:52 AM | 11.66 | 70980 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:22:52 AM | 11.66 | 71040 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:23:52 AM | 11.66 | 71100 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:24:52 AM | 11.66 | 71160 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:25:52 AM | 11.66 | 71220 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:26:52 AM | 11.66 | 71280 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:27:52 AM | 11.66 | 71340 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:28:52 AM | 11.66 | 71400 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:29:52 AM | 11.66 | 71460 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:30:52 AM | 11.66 | 71520 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:31:52 AM | 11.66 | 71580 | 1.25 | 0.55 | 45 |
| 8/24/2021 | 6:32:52 AM | 11.67 | 71640 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:33:52 AM | 11.67 | 71700 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:34:52 AM | 11.67 | 71760 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:35:52 AM | 11.67 | 71820 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:36:52 AM | 11.67 | 71880 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:37:52 AM | 11.67 | 71940 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:38:52 AM | 11.67 | 72000 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:39:52 AM | 11.67 | 72060 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:40:52 AM | 11.67 | 72120 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:41:52 AM | 11.67 | 72180 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:42:52 AM | 11.67 | 72240 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:43:52 AM | 11.67 | 72300 | 1.24 | 0.55 | 45 |
| 8/24/2021 | 6:44:52 AM | 11.67 | 72360 | 1.24 | 0.54 | 46 |
| 8/24/2021 | 6:45:52 AM | 11.67 | 72420 | 1.24 | 0.54 | 46 |
| 8/24/2021 | 6:46:52 AM | 11.67 | 72480 | 1.24 | 0.54 | 46 |
| 8/24/2021 | 6:47:52 AM | 11.68 | 72540 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:48:52 AM | 11.68 | 72600 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:49:52 AM | 11.68 | 72660 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:50:52 AM | 11.68 | 72720 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:51:52 AM | 11.68 | 72780 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:52:52 AM | 11.68 | 72840 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:53:52 AM | 11.68 | 72900 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:54:52 AM | 11.68 | 72960 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:55:52 AM | 11.68 | 73020 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:56:52 AM | 11.68 | 73080 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:57:52 AM | 11.68 | 73140 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:58:52 AM | 11.68 | 73200 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 6:59:52 AM | 11.68 | 73260 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 7:00:52 AM | 11.68 | 73320 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 7:01:52 AM | 11.69 | 73380 | 1.23 | 0.54 | 46 |
| 8/24/2021 | 7:02:52 AM | 11.69 | 73440 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:03:52 AM | 11.69 | 73500 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:04:52 AM | 11.69 | 73560 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:05:52 AM | 11.69 | 73620 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:06:52 AM | 11.69 | 73680 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:07:52 AM | 11.69 | 73740 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:08:52 AM | 11.69 | 73800 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:09:52 AM | 11.69 | 73860 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:10:52 AM | 11.69 | 73920 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:11:52 AM | 11.69 | 73980 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:12:52 AM | 11.69 | 74040 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:13:52 AM | 11.69 | 74100 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:14:52 AM | 11.69 | 74160 | 1.22 | 0.54 | 46 |
| 8/24/2021 | 7:15:52 AM | 11.70 | 74220 | 1.21 | 0.54 | 46 |
| 8/24/2021 | 7:16:52 AM | 11.70 | 74280 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:17:52 AM | 11.70 | 74340 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:18:52 AM | 11.70 | 74400 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:19:52 AM | 11.70 | 74460 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:20:52 AM | 11.70 | 74520 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:21:52 AM | 11.70 | 74580 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:22:52 AM | 11.70 | 74640 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:23:52 AM | 11.70 | 74700 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:24:52 AM | 11.70 | 74760 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:25:52 AM | 11.70 | 74820 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:26:52 AM | 11.70 | 74880 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:27:52 AM | 11.70 | 74940 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:28:52 AM | 11.70 | 75000 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:29:52 AM | 11.70 | 75060 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:30:52 AM | 11.70 | 75120 | 1.21 | 0.53 | 47 |
| 8/24/2021 | 7:31:52 AM | 11.71 | 75180 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:32:52 AM | 11.71 | 75240 | 1.20 | 0.53 | 47 |

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|-----------|------------|-------|-------|------|------|----|
| 8/24/2021 | 7:33:52 AM | 11.71 | 75300 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:34:52 AM | 11.71 | 75360 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:35:52 AM | 11.71 | 75420 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:36:52 AM | 11.71 | 75480 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:37:52 AM | 11.71 | 75540 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:38:52 AM | 11.71 | 75600 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:39:52 AM | 11.71 | 75660 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:40:52 AM | 11.71 | 75720 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:41:52 AM | 11.71 | 75780 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:42:52 AM | 11.71 | 75840 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:43:52 AM | 11.71 | 75900 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:44:52 AM | 11.72 | 75960 | 1.20 | 0.53 | 47 |
| 8/24/2021 | 7:45:52 AM | 11.72 | 76020 | 1.19 | 0.53 | 47 |
| 8/24/2021 | 7:46:52 AM | 11.72 | 76080 | 1.19 | 0.53 | 47 |
| 8/24/2021 | 7:47:52 AM | 11.72 | 76140 | 1.19 | 0.53 | 47 |
| 8/24/2021 | 7:48:52 AM | 11.72 | 76200 | 1.19 | 0.53 | 47 |
| 8/24/2021 | 7:49:52 AM | 11.72 | 76260 | 1.19 | 0.53 | 47 |
| 8/24/2021 | 7:50:52 AM | 11.72 | 76320 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:51:52 AM | 11.72 | 76380 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:52:52 AM | 11.72 | 76440 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:53:52 AM | 11.72 | 76500 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:54:52 AM | 11.72 | 76560 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:55:52 AM | 11.72 | 76620 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:56:52 AM | 11.72 | 76680 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:57:52 AM | 11.72 | 76740 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:58:52 AM | 11.73 | 76800 | 1.19 | 0.52 | 48 |
| 8/24/2021 | 7:59:52 AM | 11.73 | 76860 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:00:52 AM | 11.73 | 76920 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:01:52 AM | 11.73 | 76980 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:02:52 AM | 11.73 | 77040 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:03:52 AM | 11.73 | 77100 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:04:52 AM | 11.73 | 77160 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:05:52 AM | 11.73 | 77220 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:06:52 AM | 11.73 | 77280 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:07:52 AM | 11.73 | 77340 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:08:52 AM | 11.73 | 77400 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:09:52 AM | 11.73 | 77460 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:10:52 AM | 11.73 | 77520 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:11:52 AM | 11.73 | 77580 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:12:52 AM | 11.73 | 77640 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:13:52 AM | 11.73 | 77700 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:14:52 AM | 11.73 | 77760 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:15:52 AM | 11.73 | 77820 | 1.18 | 0.52 | 48 |
| 8/24/2021 | 8:16:52 AM | 11.74 | 77880 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:17:52 AM | 11.74 | 77940 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:18:52 AM | 11.74 | 78000 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:19:52 AM | 11.74 | 78060 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:20:52 AM | 11.74 | 78120 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:21:52 AM | 11.74 | 78180 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:22:52 AM | 11.74 | 78240 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:23:52 AM | 11.74 | 78300 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:24:52 AM | 11.74 | 78360 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:25:52 AM | 11.74 | 78420 | 1.17 | 0.52 | 48 |
| 8/24/2021 | 8:26:52 AM | 11.74 | 78480 | 1.17 | 0.51 | 49 |
| 8/24/2021 | 8:27:52 AM | 11.74 | 78540 | 1.17 | 0.51 | 49 |
| 8/24/2021 | 8:28:52 AM | 11.74 | 78600 | 1.17 | 0.51 | 49 |
| 8/24/2021 | 8:29:52 AM | 11.74 | 78660 | 1.17 | 0.51 | 49 |
| 8/24/2021 | 8:30:52 AM | 11.74 | 78720 | 1.17 | 0.51 | 49 |
| 8/24/2021 | 8:31:52 AM | 11.75 | 78780 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:32:52 AM | 11.75 | 78840 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:33:52 AM | 11.75 | 78900 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:34:52 AM | 11.75 | 78960 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:35:52 AM | 11.75 | 79020 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:36:52 AM | 11.75 | 79080 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:37:52 AM | 11.75 | 79140 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:38:52 AM | 11.75 | 79200 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:39:52 AM | 11.75 | 79260 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:40:52 AM | 11.75 | 79320 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:41:52 AM | 11.75 | 79380 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:42:52 AM | 11.75 | 79440 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:43:52 AM | 11.75 | 79500 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:44:52 AM | 11.75 | 79560 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:45:52 AM | 11.75 | 79620 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:46:52 AM | 11.75 | 79680 | 1.16 | 0.51 | 49 |
| 8/24/2021 | 8:47:52 AM | 11.76 | 79740 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:48:52 AM | 11.76 | 79800 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:49:52 AM | 11.76 | 79860 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:50:52 AM | 11.76 | 79920 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:51:52 AM | 11.76 | 79980 | 1.15 | 0.51 | 49 |

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|-----------|-------------|-------|-------|------|------|----|
| 8/24/2021 | 8:52:52 AM | 11.76 | 80040 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:53:52 AM | 11.76 | 80100 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:54:52 AM | 11.76 | 80160 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:55:52 AM | 11.76 | 80220 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:56:52 AM | 11.76 | 80280 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:57:52 AM | 11.76 | 80340 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:58:52 AM | 11.76 | 80400 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 8:59:52 AM | 11.76 | 80460 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 9:00:52 AM | 11.76 | 80520 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 9:01:52 AM | 11.76 | 80580 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 9:02:52 AM | 11.76 | 80640 | 1.15 | 0.51 | 49 |
| 8/24/2021 | 9:03:52 AM | 11.76 | 80700 | 1.15 | 0.50 | 50 |
| 8/24/2021 | 9:04:52 AM | 11.76 | 80760 | 1.15 | 0.50 | 50 |
| 8/24/2021 | 9:05:52 AM | 11.76 | 80820 | 1.15 | 0.50 | 50 |
| 8/24/2021 | 9:06:52 AM | 11.77 | 80880 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:07:52 AM | 11.77 | 80940 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:08:52 AM | 11.77 | 81000 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:09:52 AM | 11.77 | 81060 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:10:52 AM | 11.77 | 81120 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:11:52 AM | 11.77 | 81180 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:12:52 AM | 11.77 | 81240 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:13:52 AM | 11.77 | 81300 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:14:52 AM | 11.77 | 81360 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:15:52 AM | 11.77 | 81420 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:16:52 AM | 11.77 | 81480 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:17:52 AM | 11.77 | 81540 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:18:52 AM | 11.77 | 81600 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:19:52 AM | 11.77 | 81660 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:20:52 AM | 11.77 | 81720 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:21:52 AM | 11.77 | 81780 | 1.14 | 0.50 | 50 |
| 8/24/2021 | 9:22:52 AM | 11.78 | 81840 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:23:52 AM | 11.78 | 81900 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:24:52 AM | 11.78 | 81960 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:25:52 AM | 11.78 | 82020 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:26:52 AM | 11.78 | 82080 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:27:52 AM | 11.78 | 82140 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:28:52 AM | 11.78 | 82200 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:29:52 AM | 11.78 | 82260 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:30:52 AM | 11.78 | 82320 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:31:52 AM | 11.78 | 82380 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:32:52 AM | 11.78 | 82440 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:33:52 AM | 11.78 | 82500 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:34:52 AM | 11.78 | 82560 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:35:52 AM | 11.78 | 82620 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:36:52 AM | 11.78 | 82680 | 1.13 | 0.50 | 50 |
| 8/24/2021 | 9:37:52 AM | 11.79 | 82740 | 1.12 | 0.50 | 50 |
| 8/24/2021 | 9:38:52 AM | 11.79 | 82800 | 1.12 | 0.50 | 50 |
| 8/24/2021 | 9:39:52 AM | 11.79 | 82860 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:40:52 AM | 11.79 | 82920 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:41:52 AM | 11.79 | 82980 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:42:52 AM | 11.79 | 83040 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:43:52 AM | 11.79 | 83100 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:44:52 AM | 11.79 | 83160 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:45:52 AM | 11.79 | 83220 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:46:52 AM | 11.79 | 83280 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:47:52 AM | 11.79 | 83340 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:48:52 AM | 11.79 | 83400 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:49:52 AM | 11.79 | 83460 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:50:52 AM | 11.79 | 83520 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:51:52 AM | 11.79 | 83580 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:52:52 AM | 11.79 | 83640 | 1.12 | 0.49 | 51 |
| 8/24/2021 | 9:53:52 AM | 11.80 | 83700 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 9:54:52 AM | 11.80 | 83760 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 9:55:52 AM | 11.80 | 83820 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 9:56:52 AM | 11.80 | 83880 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 9:57:52 AM | 11.80 | 83940 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 9:58:52 AM | 11.80 | 84000 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 9:59:52 AM | 11.80 | 84060 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:00:52 AM | 11.80 | 84120 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:01:52 AM | 11.80 | 84180 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:02:52 AM | 11.80 | 84240 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:03:52 AM | 11.80 | 84300 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:04:52 AM | 11.80 | 84360 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:05:52 AM | 11.80 | 84420 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:06:52 AM | 11.80 | 84480 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:07:52 AM | 11.80 | 84540 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:08:52 AM | 11.80 | 84600 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:09:52 AM | 11.80 | 84660 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:10:52 AM | 11.80 | 84720 | 1.11 | 0.49 | 51 |

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|-----------|-------------|-------|-------|------|------|----|
| 8/24/2021 | 10:11:52 AM | 11.80 | 84780 | 1.11 | 0.49 | 51 |
| 8/24/2021 | 10:12:52 AM | 11.81 | 84840 | 1.10 | 0.49 | 51 |
| 8/24/2021 | 10:13:52 AM | 11.81 | 84900 | 1.10 | 0.49 | 51 |
| 8/24/2021 | 10:14:52 AM | 11.81 | 84960 | 1.10 | 0.49 | 51 |
| 8/24/2021 | 10:15:52 AM | 11.81 | 85020 | 1.10 | 0.49 | 51 |
| 8/24/2021 | 10:16:52 AM | 11.81 | 85080 | 1.10 | 0.49 | 51 |
| 8/24/2021 | 10:17:52 AM | 11.81 | 85140 | 1.10 | 0.49 | 51 |
| 8/24/2021 | 10:18:52 AM | 11.81 | 85200 | 1.10 | 0.49 | 51 |
| 8/24/2021 | 10:19:52 AM | 11.81 | 85260 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:20:52 AM | 11.81 | 85320 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:21:52 AM | 11.81 | 85380 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:22:52 AM | 11.81 | 85440 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:23:52 AM | 11.81 | 85500 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:24:52 AM | 11.81 | 85560 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:25:52 AM | 11.81 | 85620 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:26:52 AM | 11.81 | 85680 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:27:52 AM | 11.81 | 85740 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:28:52 AM | 11.81 | 85800 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:29:52 AM | 11.82 | 85860 | 1.10 | 0.48 | 52 |
| 8/24/2021 | 10:30:52 AM | 11.82 | 85920 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:31:52 AM | 11.82 | 85980 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:32:52 AM | 11.82 | 86040 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:33:52 AM | 11.82 | 86100 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:34:52 AM | 11.82 | 86160 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:35:52 AM | 11.82 | 86220 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:36:52 AM | 11.82 | 86280 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:37:52 AM | 11.82 | 86340 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:38:52 AM | 11.82 | 86400 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:39:52 AM | 11.82 | 86460 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:40:52 AM | 11.82 | 86520 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:41:52 AM | 11.82 | 86580 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:42:52 AM | 11.82 | 86640 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:43:52 AM | 11.82 | 86700 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:44:52 AM | 11.82 | 86760 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:45:52 AM | 11.82 | 86820 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:46:52 AM | 11.82 | 86880 | 1.09 | 0.48 | 52 |
| 8/24/2021 | 10:47:52 AM | 11.83 | 86940 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:48:52 AM | 11.83 | 87000 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:49:52 AM | 11.83 | 87060 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:50:52 AM | 11.83 | 87120 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:51:52 AM | 11.83 | 87180 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:52:52 AM | 11.83 | 87240 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:53:52 AM | 11.83 | 87300 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:54:52 AM | 11.83 | 87360 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:55:52 AM | 11.83 | 87420 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:56:52 AM | 11.83 | 87480 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:57:52 AM | 11.83 | 87540 | 1.08 | 0.48 | 52 |
| 8/24/2021 | 10:58:52 AM | 11.83 | 87600 | 1.08 | 0.47 | 53 |
| 8/24/2021 | 10:59:52 AM | 11.83 | 87660 | 1.08 | 0.47 | 53 |
| 8/24/2021 | 11:00:52 AM | 11.83 | 87720 | 1.08 | 0.47 | 53 |
| 8/24/2021 | 11:01:52 AM | 11.83 | 87780 | 1.08 | 0.47 | 53 |
| 8/24/2021 | 11:02:52 AM | 11.83 | 87840 | 1.08 | 0.47 | 53 |
| 8/24/2021 | 11:03:52 AM | 11.83 | 87900 | 1.08 | 0.47 | 53 |
| 8/24/2021 | 11:04:52 AM | 11.84 | 87960 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:05:52 AM | 11.84 | 88020 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:06:52 AM | 11.84 | 88080 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:07:52 AM | 11.84 | 88140 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:08:52 AM | 11.84 | 88200 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:09:52 AM | 11.84 | 88260 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:10:52 AM | 11.84 | 88320 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:11:52 AM | 11.84 | 88380 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:12:52 AM | 11.84 | 88440 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:13:52 AM | 11.84 | 88500 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:14:52 AM | 11.84 | 88560 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:15:52 AM | 11.84 | 88620 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:16:52 AM | 11.84 | 88680 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:17:52 AM | 11.84 | 88740 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:18:52 AM | 11.84 | 88800 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:19:52 AM | 11.84 | 88860 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:20:52 AM | 11.84 | 88920 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:21:52 AM | 11.84 | 88980 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:22:52 AM | 11.84 | 89040 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:23:52 AM | 11.84 | 89100 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:24:52 AM | 11.84 | 89160 | 1.07 | 0.47 | 53 |
| 8/24/2021 | 11:25:52 AM | 11.85 | 89220 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:26:52 AM | 11.85 | 89280 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:27:52 AM | 11.85 | 89340 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:28:52 AM | 11.85 | 89400 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:29:52 AM | 11.85 | 89460 | 1.06 | 0.47 | 53 |

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|-----------|-------------|-------|-------|------|------|----|
| 8/24/2021 | 11:30:52 AM | 11.85 | 89520 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:31:52 AM | 11.85 | 89580 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:32:52 AM | 11.85 | 89640 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:33:52 AM | 11.85 | 89700 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:34:52 AM | 11.85 | 89760 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:35:52 AM | 11.85 | 89820 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:36:52 AM | 11.85 | 89880 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:37:52 AM | 11.85 | 89940 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:38:52 AM | 11.85 | 90000 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:39:52 AM | 11.85 | 90060 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:40:52 AM | 11.85 | 90120 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:41:52 AM | 11.85 | 90180 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:42:52 AM | 11.85 | 90240 | 1.06 | 0.47 | 53 |
| 8/24/2021 | 11:43:52 AM | 11.85 | 90300 | 1.06 | 0.46 | 54 |
| 8/24/2021 | 11:44:52 AM | 11.86 | 90360 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:45:52 AM | 11.86 | 90420 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:46:52 AM | 11.86 | 90480 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:47:52 AM | 11.86 | 90540 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:48:52 AM | 11.86 | 90600 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:49:52 AM | 11.86 | 90660 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:50:52 AM | 11.86 | 90720 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:51:52 AM | 11.86 | 90780 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:52:52 AM | 11.86 | 90840 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:53:52 AM | 11.86 | 90900 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:54:52 AM | 11.86 | 90960 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:55:52 AM | 11.86 | 91020 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:56:52 AM | 11.86 | 91080 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:57:52 AM | 11.86 | 91140 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:58:52 AM | 11.86 | 91200 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 11:59:52 AM | 11.86 | 91260 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 12:00:52 PM | 11.86 | 91320 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 12:01:52 PM | 11.86 | 91380 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 12:02:52 PM | 11.86 | 91440 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 12:03:52 PM | 11.86 | 91500 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 12:04:52 PM | 11.86 | 91560 | 1.05 | 0.46 | 54 |
| 8/24/2021 | 12:05:52 PM | 11.87 | 91620 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:06:52 PM | 11.87 | 91680 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:07:52 PM | 11.87 | 91740 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:08:52 PM | 11.87 | 91800 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:09:52 PM | 11.87 | 91860 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:10:52 PM | 11.87 | 91920 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:11:52 PM | 11.87 | 91980 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:12:52 PM | 11.87 | 92040 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:13:52 PM | 11.87 | 92100 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:14:52 PM | 11.87 | 92160 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:15:52 PM | 11.87 | 92220 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:16:52 PM | 11.87 | 92280 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:17:52 PM | 11.87 | 92340 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:18:52 PM | 11.87 | 92400 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:19:52 PM | 11.87 | 92460 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:20:52 PM | 11.87 | 92520 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:21:52 PM | 11.87 | 92580 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:22:52 PM | 11.87 | 92640 | 1.04 | 0.46 | 54 |
| 8/24/2021 | 12:23:52 PM | 11.88 | 92700 | 1.03 | 0.46 | 54 |
| 8/24/2021 | 12:24:52 PM | 11.88 | 92760 | 1.03 | 0.46 | 54 |
| 8/24/2021 | 12:25:52 PM | 11.88 | 92820 | 1.03 | 0.46 | 54 |
| 8/24/2021 | 12:26:52 PM | 11.88 | 92880 | 1.03 | 0.46 | 54 |
| 8/24/2021 | 12:27:52 PM | 11.88 | 92940 | 1.03 | 0.46 | 54 |
| 8/24/2021 | 12:28:52 PM | 11.88 | 93000 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:29:52 PM | 11.88 | 93060 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:30:52 PM | 11.88 | 93120 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:31:52 PM | 11.88 | 93180 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:32:52 PM | 11.88 | 93240 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:33:52 PM | 11.88 | 93300 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:34:52 PM | 11.88 | 93360 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:35:52 PM | 11.88 | 93420 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:36:52 PM | 11.88 | 93480 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:37:52 PM | 11.88 | 93540 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:38:52 PM | 11.88 | 93600 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:39:52 PM | 11.88 | 93660 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:40:52 PM | 11.88 | 93720 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:41:52 PM | 11.88 | 93780 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:42:52 PM | 11.88 | 93840 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:43:52 PM | 11.89 | 93900 | 1.03 | 0.45 | 55 |
| 8/24/2021 | 12:44:52 PM | 11.89 | 93960 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:45:52 PM | 11.89 | 94020 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:46:52 PM | 11.89 | 94080 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:47:52 PM | 11.89 | 94140 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:48:52 PM | 11.89 | 94200 | 1.02 | 0.45 | 55 |

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|-----------|-------------|-------|-------|------|------|----|
| 8/24/2021 | 12:49:52 PM | 11.89 | 94260 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:50:52 PM | 11.89 | 94320 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:51:52 PM | 11.89 | 94380 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:52:52 PM | 11.89 | 94440 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:53:52 PM | 11.89 | 94500 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:54:52 PM | 11.89 | 94560 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:55:52 PM | 11.89 | 94620 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:56:52 PM | 11.89 | 94680 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:57:52 PM | 11.89 | 94740 | 1.02 | 0.45 | 55 |
| 8/24/2021 | 12:58:52 PM | 11.90 | 94800 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 12:59:52 PM | 11.90 | 94860 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 1:00:52 PM | 11.90 | 94920 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 1:01:52 PM | 11.90 | 94980 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 1:02:52 PM | 11.90 | 95040 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 1:03:52 PM | 11.90 | 95100 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 1:04:52 PM | 11.90 | 95160 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 1:05:52 PM | 11.90 | 95220 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 1:06:52 PM | 11.90 | 95280 | 1.01 | 0.45 | 55 |
| 8/24/2021 | 1:07:52 PM | 11.90 | 95340 | 1.01 | 0.44 | 56 |
| 8/24/2021 | 1:08:52 PM | 11.90 | 95400 | 1.01 | 0.44 | 56 |
| 8/24/2021 | 1:09:52 PM | 11.90 | 95460 | 1.01 | 0.44 | 56 |
| 8/24/2021 | 1:10:52 PM | 11.90 | 95520 | 1.01 | 0.44 | 56 |
| 8/24/2021 | 1:11:52 PM | 11.90 | 95580 | 1.01 | 0.44 | 56 |
| 8/24/2021 | 1:12:52 PM | 11.90 | 95640 | 1.01 | 0.44 | 56 |
| 8/24/2021 | 1:13:52 PM | 11.90 | 95700 | 1.01 | 0.44 | 56 |
| 8/24/2021 | 1:14:52 PM | 11.90 | 95760 | 1.01 | 0.44 | 56 |
| 8/24/2021 | 1:15:52 PM | 11.91 | 95820 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:16:52 PM | 11.91 | 95880 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:17:52 PM | 11.91 | 95940 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:18:52 PM | 11.91 | 96000 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:19:52 PM | 11.91 | 96060 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:20:52 PM | 11.91 | 96120 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:21:52 PM | 11.91 | 96180 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:22:52 PM | 11.91 | 96240 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:23:52 PM | 11.91 | 96300 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:24:52 PM | 11.91 | 96360 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:25:52 PM | 11.91 | 96420 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:26:52 PM | 11.91 | 96480 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:27:52 PM | 11.91 | 96540 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:28:52 PM | 11.91 | 96600 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:29:52 PM | 11.91 | 96660 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:30:52 PM | 11.91 | 96720 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:31:52 PM | 11.92 | 96780 | 1.00 | 0.44 | 56 |
| 8/24/2021 | 1:32:52 PM | 11.92 | 96840 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:33:52 PM | 11.92 | 96900 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:34:52 PM | 11.92 | 96960 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:35:52 PM | 11.92 | 97020 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:36:52 PM | 11.92 | 97080 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:37:52 PM | 11.92 | 97140 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:38:52 PM | 11.92 | 97200 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:39:52 PM | 11.92 | 97260 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:40:52 PM | 11.92 | 97320 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:41:52 PM | 11.92 | 97380 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:42:52 PM | 11.92 | 97440 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:43:52 PM | 11.92 | 97500 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:44:52 PM | 11.92 | 97560 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:45:52 PM | 11.92 | 97620 | 0.99 | 0.44 | 56 |
| 8/24/2021 | 1:46:52 PM | 11.92 | 97680 | 0.99 | 0.43 | 57 |
| 8/24/2021 | 1:47:52 PM | 11.92 | 97740 | 0.99 | 0.43 | 57 |
| 8/24/2021 | 1:48:52 PM | 11.92 | 97800 | 0.99 | 0.43 | 57 |
| 8/24/2021 | 1:49:52 PM | 11.93 | 97860 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:50:52 PM | 11.93 | 97920 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:51:52 PM | 11.93 | 97980 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:52:52 PM | 11.93 | 98040 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:53:52 PM | 11.93 | 98100 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:54:52 PM | 11.93 | 98160 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:55:52 PM | 11.93 | 98220 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:56:52 PM | 11.93 | 98280 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:57:52 PM | 11.93 | 98340 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:58:52 PM | 11.93 | 98400 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 1:59:52 PM | 11.93 | 98460 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 2:00:52 PM | 11.93 | 98520 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 2:01:52 PM | 11.93 | 98580 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 2:02:52 PM | 11.93 | 98640 | 0.98 | 0.43 | 57 |
| 8/24/2021 | 2:03:52 PM | 11.94 | 98700 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:04:52 PM | 11.94 | 98760 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:05:52 PM | 11.94 | 98820 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:06:52 PM | 11.94 | 98880 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:07:52 PM | 11.94 | 98940 | 0.97 | 0.43 | 57 |

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|-----------|------------|-------|--------|------|------|----|
| 8/24/2021 | 2:08:52 PM | 11.94 | 99000 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:09:52 PM | 11.94 | 99060 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:10:52 PM | 11.94 | 99120 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:11:52 PM | 11.94 | 99180 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:12:52 PM | 11.94 | 99240 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:13:52 PM | 11.94 | 99300 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:14:52 PM | 11.94 | 99360 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:15:52 PM | 11.94 | 99420 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:16:52 PM | 11.94 | 99480 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:17:52 PM | 11.94 | 99540 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:18:52 PM | 11.94 | 99600 | 0.97 | 0.43 | 57 |
| 8/24/2021 | 2:19:52 PM | 11.95 | 99660 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:20:52 PM | 11.95 | 99720 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:21:52 PM | 11.95 | 99780 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:22:52 PM | 11.95 | 99840 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:23:52 PM | 11.95 | 99900 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:24:52 PM | 11.95 | 99960 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:25:52 PM | 11.95 | 100020 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:26:52 PM | 11.95 | 100080 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:27:52 PM | 11.95 | 100140 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:28:52 PM | 11.95 | 100200 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:29:52 PM | 11.95 | 100260 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:30:52 PM | 11.95 | 100320 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:31:52 PM | 11.95 | 100380 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:32:52 PM | 11.95 | 100440 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:33:52 PM | 11.95 | 100500 | 0.96 | 0.42 | 58 |
| 8/24/2021 | 2:34:52 PM | 11.96 | 100560 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:35:52 PM | 11.96 | 100620 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:36:52 PM | 11.96 | 100680 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:37:52 PM | 11.96 | 100740 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:38:52 PM | 11.96 | 100800 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:39:52 PM | 11.96 | 100860 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:40:52 PM | 11.96 | 100920 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:41:52 PM | 11.96 | 100980 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:42:52 PM | 11.96 | 101040 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:43:52 PM | 11.96 | 101100 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:44:52 PM | 11.96 | 101160 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:45:52 PM | 11.96 | 101220 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:46:52 PM | 11.96 | 101280 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:47:52 PM | 11.96 | 101340 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:48:52 PM | 11.96 | 101400 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:49:52 PM | 11.96 | 101460 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:50:52 PM | 11.96 | 101520 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:51:52 PM | 11.96 | 101580 | 0.95 | 0.42 | 58 |
| 8/24/2021 | 2:52:52 PM | 11.97 | 101640 | 0.94 | 0.42 | 58 |
| 8/24/2021 | 2:53:52 PM | 11.97 | 101700 | 0.94 | 0.42 | 58 |
| 8/24/2021 | 2:54:52 PM | 11.97 | 101760 | 0.94 | 0.42 | 58 |
| 8/24/2021 | 2:55:52 PM | 11.97 | 101820 | 0.94 | 0.42 | 58 |
| 8/24/2021 | 2:56:52 PM | 11.97 | 101880 | 0.94 | 0.42 | 58 |
| 8/24/2021 | 2:57:52 PM | 11.97 | 101940 | 0.94 | 0.42 | 58 |
| 8/24/2021 | 2:58:52 PM | 11.97 | 102000 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 2:59:52 PM | 11.97 | 102060 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:00:52 PM | 11.97 | 102120 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:01:52 PM | 11.97 | 102180 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:02:52 PM | 11.97 | 102240 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:03:52 PM | 11.97 | 102300 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:04:52 PM | 11.97 | 102360 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:05:52 PM | 11.97 | 102420 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:06:52 PM | 11.97 | 102480 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:07:52 PM | 11.97 | 102540 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:08:52 PM | 11.97 | 102600 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:09:52 PM | 11.97 | 102660 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:10:52 PM | 11.97 | 102720 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:11:52 PM | 11.97 | 102780 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:12:52 PM | 11.97 | 102840 | 0.94 | 0.41 | 59 |
| 8/24/2021 | 3:13:52 PM | 11.98 | 102900 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:14:52 PM | 11.98 | 102960 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:15:52 PM | 11.98 | 103020 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:16:52 PM | 11.98 | 103080 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:17:52 PM | 11.98 | 103140 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:18:52 PM | 11.98 | 103200 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:19:52 PM | 11.98 | 103260 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:20:52 PM | 11.98 | 103320 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:21:52 PM | 11.98 | 103380 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:22:52 PM | 11.98 | 103440 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:23:52 PM | 11.98 | 103500 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:24:52 PM | 11.98 | 103560 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:25:52 PM | 11.98 | 103620 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:26:52 PM | 11.98 | 103680 | 0.93 | 0.41 | 59 |

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|-----------|------------|-------|--------|------|------|----|
| 8/24/2021 | 3:27:52 PM | 11.98 | 103740 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:28:52 PM | 11.98 | 103800 | 0.93 | 0.41 | 59 |
| 8/24/2021 | 3:29:52 PM | 11.99 | 103860 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:30:52 PM | 11.99 | 103920 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:31:52 PM | 11.99 | 103980 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:32:52 PM | 11.99 | 104040 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:33:52 PM | 11.99 | 104100 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:34:52 PM | 11.99 | 104160 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:35:52 PM | 11.99 | 104220 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:36:52 PM | 11.99 | 104280 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:37:52 PM | 11.99 | 104340 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:38:52 PM | 11.99 | 104400 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:39:52 PM | 11.99 | 104460 | 0.92 | 0.41 | 59 |
| 8/24/2021 | 3:40:52 PM | 11.99 | 104520 | 0.92 | 0.40 | 60 |
| 8/24/2021 | 3:41:52 PM | 11.99 | 104580 | 0.92 | 0.40 | 60 |
| 8/24/2021 | 3:42:52 PM | 11.99 | 104640 | 0.92 | 0.40 | 60 |
| 8/24/2021 | 3:43:52 PM | 11.99 | 104700 | 0.92 | 0.40 | 60 |
| 8/24/2021 | 3:44:52 PM | 11.99 | 104760 | 0.92 | 0.40 | 60 |
| 8/24/2021 | 3:45:52 PM | 11.99 | 104820 | 0.92 | 0.40 | 60 |
| 8/24/2021 | 3:46:52 PM | 12.00 | 104880 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:47:52 PM | 12.00 | 104940 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:48:52 PM | 12.00 | 105000 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:49:52 PM | 12.00 | 105060 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:50:52 PM | 12.00 | 105120 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:51:52 PM | 12.00 | 105180 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:52:52 PM | 12.00 | 105240 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:53:52 PM | 12.00 | 105300 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:54:52 PM | 12.00 | 105360 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:55:52 PM | 12.00 | 105420 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:56:52 PM | 12.00 | 105480 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:57:52 PM | 12.00 | 105540 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 3:58:52 PM | 12.00 | 105600 | 0.91 | 0.40 | 60 |
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| 8/24/2021 | 4:00:52 PM | 12.00 | 105720 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 4:01:52 PM | 12.00 | 105780 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 4:02:52 PM | 12.00 | 105840 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 4:03:52 PM | 12.00 | 105900 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 4:04:52 PM | 12.00 | 105960 | 0.91 | 0.40 | 60 |
| 8/24/2021 | 4:05:52 PM | 12.01 | 106020 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:06:52 PM | 12.01 | 106080 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:07:52 PM | 12.01 | 106140 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:08:52 PM | 12.01 | 106200 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:09:52 PM | 12.01 | 106260 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:10:52 PM | 12.01 | 106320 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:11:52 PM | 12.01 | 106380 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:12:52 PM | 12.01 | 106440 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:13:52 PM | 12.01 | 106500 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:14:52 PM | 12.01 | 106560 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:15:52 PM | 12.01 | 106620 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:16:52 PM | 12.01 | 106680 | 0.90 | 0.40 | 60 |
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| 8/24/2021 | 4:18:52 PM | 12.01 | 106800 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:19:52 PM | 12.01 | 106860 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:20:52 PM | 12.01 | 106920 | 0.90 | 0.40 | 60 |
| 8/24/2021 | 4:21:52 PM | 12.01 | 106980 | 0.90 | 0.39 | 61 |
| 8/24/2021 | 4:22:52 PM | 12.01 | 107040 | 0.90 | 0.39 | 61 |
| 8/24/2021 | 4:23:52 PM | 12.02 | 107100 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:24:52 PM | 12.02 | 107160 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:25:52 PM | 12.02 | 107220 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:26:52 PM | 12.02 | 107280 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:27:52 PM | 12.02 | 107340 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:28:52 PM | 12.02 | 107400 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:29:52 PM | 12.02 | 107460 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:30:52 PM | 12.02 | 107520 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:31:52 PM | 12.02 | 107580 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:32:52 PM | 12.02 | 107640 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:33:52 PM | 12.02 | 107700 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:34:52 PM | 12.02 | 107760 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:35:52 PM | 12.02 | 107820 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:36:52 PM | 12.02 | 107880 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:37:52 PM | 12.02 | 107940 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:38:52 PM | 12.02 | 108000 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:39:52 PM | 12.02 | 108060 | 0.89 | 0.39 | 61 |
| 8/24/2021 | 4:40:52 PM | 12.03 | 108120 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:41:52 PM | 12.03 | 108180 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:42:52 PM | 12.03 | 108240 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:43:52 PM | 12.03 | 108300 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:44:52 PM | 12.03 | 108360 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:45:52 PM | 12.03 | 108420 | 0.88 | 0.39 | 61 |

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|-----------|------------|-------|--------|------|------|----|
| 8/24/2021 | 4:46:52 PM | 12.03 | 108480 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:47:52 PM | 12.03 | 108540 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:48:52 PM | 12.03 | 108600 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:49:52 PM | 12.03 | 108660 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:50:52 PM | 12.03 | 108720 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:51:52 PM | 12.03 | 108780 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:52:52 PM | 12.03 | 108840 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:53:52 PM | 12.03 | 108900 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:54:52 PM | 12.03 | 108960 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:55:52 PM | 12.03 | 109020 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:56:52 PM | 12.03 | 109080 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:57:52 PM | 12.03 | 109140 | 0.88 | 0.39 | 61 |
| 8/24/2021 | 4:58:52 PM | 12.04 | 109200 | 0.87 | 0.39 | 61 |
| 8/24/2021 | 4:59:52 PM | 12.04 | 109260 | 0.87 | 0.39 | 61 |
| 8/24/2021 | 5:00:52 PM | 12.04 | 109320 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:01:52 PM | 12.04 | 109380 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:02:52 PM | 12.04 | 109440 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:03:52 PM | 12.04 | 109500 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:04:52 PM | 12.04 | 109560 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:05:52 PM | 12.04 | 109620 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:06:52 PM | 12.04 | 109680 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:07:52 PM | 12.04 | 109740 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:08:52 PM | 12.04 | 109800 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:09:52 PM | 12.04 | 109860 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:10:52 PM | 12.04 | 109920 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:11:52 PM | 12.04 | 109980 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:12:52 PM | 12.04 | 110040 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:13:52 PM | 12.04 | 110100 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:14:52 PM | 12.04 | 110160 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:15:52 PM | 12.04 | 110220 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:16:52 PM | 12.04 | 110280 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:17:52 PM | 12.04 | 110340 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:18:52 PM | 12.04 | 110400 | 0.87 | 0.38 | 62 |
| 8/24/2021 | 5:19:52 PM | 12.05 | 110460 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:20:52 PM | 12.05 | 110520 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:21:52 PM | 12.05 | 110580 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:22:52 PM | 12.05 | 110640 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:23:52 PM | 12.05 | 110700 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:24:52 PM | 12.05 | 110760 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:25:52 PM | 12.05 | 110820 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:26:52 PM | 12.05 | 110880 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:27:52 PM | 12.05 | 110940 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:28:52 PM | 12.05 | 111000 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:29:52 PM | 12.05 | 111060 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:30:52 PM | 12.05 | 111120 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:31:52 PM | 12.05 | 111180 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:32:52 PM | 12.05 | 111240 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:33:52 PM | 12.05 | 111300 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:34:52 PM | 12.05 | 111360 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:35:52 PM | 12.05 | 111420 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:36:52 PM | 12.05 | 111480 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:37:52 PM | 12.05 | 111540 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:38:52 PM | 12.05 | 111600 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:39:52 PM | 12.05 | 111660 | 0.86 | 0.38 | 62 |
| 8/24/2021 | 5:40:52 PM | 12.06 | 111720 | 0.85 | 0.38 | 62 |
| 8/24/2021 | 5:41:52 PM | 12.06 | 111780 | 0.85 | 0.38 | 62 |
| 8/24/2021 | 5:42:52 PM | 12.06 | 111840 | 0.85 | 0.38 | 62 |
| 8/24/2021 | 5:43:52 PM | 12.06 | 111900 | 0.85 | 0.38 | 62 |
| 8/24/2021 | 5:44:52 PM | 12.06 | 111960 | 0.85 | 0.38 | 62 |
| 8/24/2021 | 5:45:52 PM | 12.06 | 112020 | 0.85 | 0.38 | 62 |
| 8/24/2021 | 5:46:52 PM | 12.06 | 112080 | 0.85 | 0.38 | 62 |
| 8/24/2021 | 5:47:52 PM | 12.06 | 112140 | 0.85 | 0.38 | 62 |
| 8/24/2021 | 5:48:52 PM | 12.06 | 112200 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:49:52 PM | 12.06 | 112260 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:50:52 PM | 12.06 | 112320 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:51:52 PM | 12.06 | 112380 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:52:52 PM | 12.06 | 112440 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:53:52 PM | 12.06 | 112500 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:54:52 PM | 12.06 | 112560 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:55:52 PM | 12.06 | 112620 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:56:52 PM | 12.06 | 112680 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:57:52 PM | 12.06 | 112740 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:58:52 PM | 12.07 | 112800 | 0.85 | 0.37 | 63 |
| 8/24/2021 | 5:59:52 PM | 12.07 | 112860 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:00:52 PM | 12.07 | 112920 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:01:52 PM | 12.07 | 112980 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:02:52 PM | 12.07 | 113040 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:03:52 PM | 12.07 | 113100 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:04:52 PM | 12.07 | 113160 | 0.84 | 0.37 | 63 |

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|-----------|------------|-------|--------|------|------|----|
| 8/24/2021 | 6:05:52 PM | 12.07 | 113220 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:06:52 PM | 12.07 | 113280 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:07:52 PM | 12.07 | 113340 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:08:52 PM | 12.07 | 113400 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:09:52 PM | 12.07 | 113460 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:10:52 PM | 12.07 | 113520 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:11:52 PM | 12.07 | 113580 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:12:52 PM | 12.07 | 113640 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:13:52 PM | 12.07 | 113700 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:14:52 PM | 12.07 | 113760 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:15:52 PM | 12.07 | 113820 | 0.84 | 0.37 | 63 |
| 8/24/2021 | 6:16:52 PM | 12.08 | 113880 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:17:52 PM | 12.08 | 113940 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:18:52 PM | 12.08 | 114000 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:19:52 PM | 12.08 | 114060 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:20:52 PM | 12.08 | 114120 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:21:52 PM | 12.08 | 114180 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:22:52 PM | 12.08 | 114240 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:23:52 PM | 12.08 | 114300 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:24:52 PM | 12.08 | 114360 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:25:52 PM | 12.08 | 114420 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:26:52 PM | 12.08 | 114480 | 0.83 | 0.37 | 63 |
| 8/24/2021 | 6:27:52 PM | 12.08 | 114540 | 0.83 | 0.36 | 64 |
| 8/24/2021 | 6:28:52 PM | 12.08 | 114600 | 0.83 | 0.36 | 64 |
| 8/24/2021 | 6:29:52 PM | 12.08 | 114660 | 0.83 | 0.36 | 64 |
| 8/24/2021 | 6:30:52 PM | 12.08 | 114720 | 0.83 | 0.36 | 64 |
| 8/24/2021 | 6:31:52 PM | 12.08 | 114780 | 0.83 | 0.36 | 64 |
| 8/24/2021 | 6:32:52 PM | 12.08 | 114840 | 0.83 | 0.36 | 64 |
| 8/24/2021 | 6:33:52 PM | 12.09 | 114900 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:34:52 PM | 12.09 | 114960 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:35:52 PM | 12.09 | 115020 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:36:52 PM | 12.09 | 115080 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:37:52 PM | 12.09 | 115140 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:38:52 PM | 12.09 | 115200 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:39:52 PM | 12.09 | 115260 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:40:52 PM | 12.09 | 115320 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:41:52 PM | 12.09 | 115380 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:42:52 PM | 12.09 | 115440 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:43:52 PM | 12.09 | 115500 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:44:52 PM | 12.09 | 115560 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:45:52 PM | 12.09 | 115620 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:46:52 PM | 12.09 | 115680 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:47:52 PM | 12.09 | 115740 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:48:52 PM | 12.09 | 115800 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:49:52 PM | 12.09 | 115860 | 0.82 | 0.36 | 64 |
| 8/24/2021 | 6:50:52 PM | 12.10 | 115920 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:51:52 PM | 12.10 | 115980 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:52:52 PM | 12.10 | 116040 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:53:52 PM | 12.10 | 116100 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:54:52 PM | 12.10 | 116160 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:55:52 PM | 12.10 | 116220 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:56:52 PM | 12.10 | 116280 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:57:52 PM | 12.10 | 116340 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:58:52 PM | 12.10 | 116400 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 6:59:52 PM | 12.10 | 116460 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 7:00:52 PM | 12.10 | 116520 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 7:01:52 PM | 12.10 | 116580 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 7:02:52 PM | 12.10 | 116640 | 0.81 | 0.36 | 64 |
| 8/24/2021 | 7:03:52 PM | 12.10 | 116700 | 0.81 | 0.35 | 65 |
| 8/24/2021 | 7:04:52 PM | 12.11 | 116760 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:05:52 PM | 12.11 | 116820 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:06:52 PM | 12.11 | 116880 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:07:52 PM | 12.11 | 116940 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:08:52 PM | 12.11 | 117000 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:09:52 PM | 12.11 | 117060 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:10:52 PM | 12.11 | 117120 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:11:52 PM | 12.11 | 117180 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:12:52 PM | 12.11 | 117240 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:13:52 PM | 12.11 | 117300 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:14:52 PM | 12.11 | 117360 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:15:52 PM | 12.11 | 117420 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:16:52 PM | 12.11 | 117480 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:17:52 PM | 12.11 | 117540 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:18:52 PM | 12.11 | 117600 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:19:52 PM | 12.11 | 117660 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:20:52 PM | 12.11 | 117720 | 0.80 | 0.35 | 65 |
| 8/24/2021 | 7:21:52 PM | 12.12 | 117780 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:22:52 PM | 12.12 | 117840 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:23:52 PM | 12.12 | 117900 | 0.79 | 0.35 | 65 |

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|-----------|------------|-------|--------|------|------|----|
| 8/24/2021 | 7:24:52 PM | 12.12 | 117960 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:25:52 PM | 12.12 | 118020 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:26:52 PM | 12.12 | 118080 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:27:52 PM | 12.12 | 118140 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:28:52 PM | 12.12 | 118200 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:29:52 PM | 12.12 | 118260 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:30:52 PM | 12.12 | 118320 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:31:52 PM | 12.12 | 118380 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:32:52 PM | 12.12 | 118440 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:33:52 PM | 12.12 | 118500 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:34:52 PM | 12.12 | 118560 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:35:52 PM | 12.12 | 118620 | 0.79 | 0.35 | 65 |
| 8/24/2021 | 7:36:52 PM | 12.13 | 118680 | 0.78 | 0.35 | 65 |
| 8/24/2021 | 7:37:52 PM | 12.13 | 118740 | 0.78 | 0.35 | 65 |
| 8/24/2021 | 7:38:52 PM | 12.13 | 118800 | 0.78 | 0.35 | 65 |
| 8/24/2021 | 7:39:52 PM | 12.13 | 118860 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:40:52 PM | 12.13 | 118920 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:41:52 PM | 12.13 | 118980 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:42:52 PM | 12.13 | 119040 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:43:52 PM | 12.13 | 119100 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:44:52 PM | 12.13 | 119160 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:45:52 PM | 12.13 | 119220 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:46:52 PM | 12.13 | 119280 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:47:52 PM | 12.13 | 119340 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:48:52 PM | 12.13 | 119400 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:49:52 PM | 12.13 | 119460 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:50:52 PM | 12.13 | 119520 | 0.78 | 0.34 | 66 |
| 8/24/2021 | 7:51:52 PM | 12.14 | 119580 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 7:52:52 PM | 12.14 | 119640 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 7:53:52 PM | 12.14 | 119700 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 7:54:52 PM | 12.14 | 119760 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 7:55:52 PM | 12.14 | 119820 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 7:56:52 PM | 12.14 | 119880 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 7:57:52 PM | 12.14 | 119940 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 7:58:52 PM | 12.14 | 120000 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 7:59:52 PM | 12.14 | 120060 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 8:00:52 PM | 12.14 | 120120 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 8:01:52 PM | 12.14 | 120180 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 8:02:52 PM | 12.14 | 120240 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 8:03:52 PM | 12.14 | 120300 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 8:04:52 PM | 12.14 | 120360 | 0.77 | 0.34 | 66 |
| 8/24/2021 | 8:05:52 PM | 12.15 | 120420 | 0.76 | 0.34 | 66 |
| 8/24/2021 | 8:06:52 PM | 12.15 | 120480 | 0.76 | 0.34 | 66 |
| 8/24/2021 | 8:07:52 PM | 12.15 | 120540 | 0.76 | 0.34 | 66 |
| 8/24/2021 | 8:08:52 PM | 12.15 | 120600 | 0.76 | 0.34 | 66 |
| 8/24/2021 | 8:09:52 PM | 12.15 | 120660 | 0.76 | 0.34 | 66 |
| 8/24/2021 | 8:10:52 PM | 12.15 | 120720 | 0.76 | 0.34 | 66 |
| 8/24/2021 | 8:11:52 PM | 12.15 | 120780 | 0.76 | 0.34 | 66 |
| 8/24/2021 | 8:12:52 PM | 12.15 | 120840 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:13:52 PM | 12.15 | 120900 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:14:52 PM | 12.15 | 120960 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:15:52 PM | 12.15 | 121020 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:16:52 PM | 12.15 | 121080 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:17:52 PM | 12.15 | 121140 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:18:52 PM | 12.15 | 121200 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:19:52 PM | 12.15 | 121260 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:20:52 PM | 12.15 | 121320 | 0.76 | 0.33 | 67 |
| 8/24/2021 | 8:21:52 PM | 12.16 | 121380 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:22:52 PM | 12.16 | 121440 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:23:52 PM | 12.16 | 121500 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:24:52 PM | 12.16 | 121560 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:25:52 PM | 12.16 | 121620 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:26:52 PM | 12.16 | 121680 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:27:52 PM | 12.16 | 121740 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:28:52 PM | 12.16 | 121800 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:29:52 PM | 12.16 | 121860 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:30:52 PM | 12.16 | 121920 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:31:52 PM | 12.16 | 121980 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:32:52 PM | 12.16 | 122040 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:33:52 PM | 12.16 | 122100 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:34:52 PM | 12.16 | 122160 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:35:52 PM | 12.16 | 122220 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:36:52 PM | 12.16 | 122280 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:37:52 PM | 12.16 | 122340 | 0.75 | 0.33 | 67 |
| 8/24/2021 | 8:38:52 PM | 12.17 | 122400 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:39:52 PM | 12.17 | 122460 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:40:52 PM | 12.17 | 122520 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:41:52 PM | 12.17 | 122580 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:42:52 PM | 12.17 | 122640 | 0.74 | 0.33 | 67 |

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|-----------|-------------|-------|--------|------|------|----|
| 8/24/2021 | 8:43:52 PM | 12.17 | 122700 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:44:52 PM | 12.17 | 122760 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:45:52 PM | 12.17 | 122820 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:46:52 PM | 12.17 | 122880 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:47:52 PM | 12.17 | 122940 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:48:52 PM | 12.17 | 123000 | 0.74 | 0.33 | 67 |
| 8/24/2021 | 8:49:52 PM | 12.17 | 123060 | 0.74 | 0.32 | 68 |
| 8/24/2021 | 8:50:52 PM | 12.17 | 123120 | 0.74 | 0.32 | 68 |
| 8/24/2021 | 8:51:52 PM | 12.17 | 123180 | 0.74 | 0.32 | 68 |
| 8/24/2021 | 8:52:52 PM | 12.17 | 123240 | 0.74 | 0.32 | 68 |
| 8/24/2021 | 8:53:52 PM | 12.17 | 123300 | 0.74 | 0.32 | 68 |
| 8/24/2021 | 8:54:52 PM | 12.18 | 123360 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 8:55:52 PM | 12.18 | 123420 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 8:56:52 PM | 12.18 | 123480 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 8:57:52 PM | 12.18 | 123540 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 8:58:52 PM | 12.18 | 123600 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 8:59:52 PM | 12.18 | 123660 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:00:52 PM | 12.18 | 123720 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:01:52 PM | 12.18 | 123780 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:02:52 PM | 12.18 | 123840 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:03:52 PM | 12.18 | 123900 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:04:52 PM | 12.18 | 123960 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:05:52 PM | 12.18 | 124020 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:06:52 PM | 12.18 | 124080 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:07:52 PM | 12.18 | 124140 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:08:52 PM | 12.18 | 124200 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:09:52 PM | 12.18 | 124260 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:10:52 PM | 12.18 | 124320 | 0.73 | 0.32 | 68 |
| 8/24/2021 | 9:11:52 PM | 12.19 | 124380 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:12:52 PM | 12.19 | 124440 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:13:52 PM | 12.19 | 124500 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:14:52 PM | 12.19 | 124560 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:15:52 PM | 12.19 | 124620 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:16:52 PM | 12.19 | 124680 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:17:52 PM | 12.19 | 124740 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:18:52 PM | 12.19 | 124800 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:19:52 PM | 12.19 | 124860 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:20:52 PM | 12.19 | 124920 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:21:52 PM | 12.19 | 124980 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:22:52 PM | 12.19 | 125040 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:23:52 PM | 12.19 | 125100 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:24:52 PM | 12.19 | 125160 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:25:52 PM | 12.19 | 125220 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:26:52 PM | 12.19 | 125280 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:27:52 PM | 12.19 | 125340 | 0.72 | 0.32 | 68 |
| 8/24/2021 | 9:28:52 PM | 12.20 | 125400 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:29:52 PM | 12.20 | 125460 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:30:52 PM | 12.20 | 125520 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:31:52 PM | 12.20 | 125580 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:32:52 PM | 12.20 | 125640 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:33:52 PM | 12.20 | 125700 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:34:52 PM | 12.20 | 125760 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:35:52 PM | 12.20 | 125820 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:36:52 PM | 12.20 | 125880 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:37:52 PM | 12.20 | 125940 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:38:52 PM | 12.20 | 126000 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:39:52 PM | 12.20 | 126060 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:40:52 PM | 12.20 | 126120 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:41:52 PM | 12.20 | 126180 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:42:52 PM | 12.20 | 126240 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:43:52 PM | 12.20 | 126300 | 0.71 | 0.31 | 69 |
| 8/24/2021 | 9:44:52 PM | 12.21 | 126360 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:45:52 PM | 12.21 | 126420 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:46:52 PM | 12.21 | 126480 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:47:52 PM | 12.21 | 126540 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:48:52 PM | 12.21 | 126600 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:49:52 PM | 12.21 | 126660 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:50:52 PM | 12.21 | 126720 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:51:52 PM | 12.21 | 126780 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:52:52 PM | 12.21 | 126840 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:53:52 PM | 12.21 | 126900 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:54:52 PM | 12.21 | 126960 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:55:52 PM | 12.21 | 127020 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:56:52 PM | 12.21 | 127080 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:57:52 PM | 12.21 | 127140 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:58:52 PM | 12.21 | 127200 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 9:59:52 PM | 12.21 | 127260 | 0.70 | 0.31 | 69 |
| 8/24/2021 | 10:00:52 PM | 12.22 | 127320 | 0.69 | 0.31 | 69 |
| 8/24/2021 | 10:01:52 PM | 12.22 | 127380 | 0.69 | 0.31 | 69 |

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|-----------|-------------|-------|--------|------|------|----|
| 8/25/2021 | 12:40:52 AM | 12.30 | 136920 | 0.61 | 0.27 | 73 |
| 8/25/2021 | 12:41:52 AM | 12.30 | 136980 | 0.61 | 0.27 | 73 |
| 8/25/2021 | 12:42:52 AM | 12.30 | 137040 | 0.61 | 0.27 | 73 |
| 8/25/2021 | 12:43:52 AM | 12.31 | 137100 | 0.61 | 0.27 | 73 |
| 8/25/2021 | 12:44:52 AM | 12.31 | 137160 | 0.60 | 0.27 | 73 |
| 8/25/2021 | 12:45:52 AM | 12.31 | 137220 | 0.60 | 0.27 | 73 |
| 8/25/2021 | 12:46:52 AM | 12.31 | 137280 | 0.60 | 0.27 | 73 |
| 8/25/2021 | 12:47:52 AM | 12.31 | 137340 | 0.60 | 0.27 | 73 |
| 8/25/2021 | 12:48:52 AM | 12.31 | 137400 | 0.60 | 0.27 | 73 |
| 8/25/2021 | 12:49:52 AM | 12.31 | 137460 | 0.60 | 0.27 | 73 |
| 8/25/2021 | 12:50:52 AM | 12.31 | 137520 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:51:52 AM | 12.31 | 137580 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:52:52 AM | 12.31 | 137640 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:53:52 AM | 12.31 | 137700 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:54:52 AM | 12.31 | 137760 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:55:52 AM | 12.31 | 137820 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:56:52 AM | 12.31 | 137880 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:57:52 AM | 12.31 | 137940 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:58:52 AM | 12.31 | 138000 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 12:59:52 AM | 12.31 | 138060 | 0.60 | 0.26 | 74 |
| 8/25/2021 | 1:00:52 AM | 12.32 | 138120 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:01:52 AM | 12.32 | 138180 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:02:52 AM | 12.32 | 138240 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:03:52 AM | 12.32 | 138300 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:04:52 AM | 12.32 | 138360 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:05:52 AM | 12.32 | 138420 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:06:52 AM | 12.32 | 138480 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:07:52 AM | 12.32 | 138540 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:08:52 AM | 12.32 | 138600 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:09:52 AM | 12.32 | 138660 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:10:52 AM | 12.32 | 138720 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:11:52 AM | 12.32 | 138780 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:12:52 AM | 12.32 | 138840 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:13:52 AM | 12.32 | 138900 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:14:52 AM | 12.33 | 138960 | 0.59 | 0.26 | 74 |
| 8/25/2021 | 1:15:52 AM | 12.33 | 139020 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:16:52 AM | 12.33 | 139080 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:17:52 AM | 12.33 | 139140 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:18:52 AM | 12.33 | 139200 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:19:52 AM | 12.33 | 139260 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:20:52 AM | 12.33 | 139320 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:21:52 AM | 12.33 | 139380 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:22:52 AM | 12.33 | 139440 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:23:52 AM | 12.33 | 139500 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:24:52 AM | 12.33 | 139560 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:25:52 AM | 12.33 | 139620 | 0.58 | 0.26 | 74 |
| 8/25/2021 | 1:26:52 AM | 12.33 | 139680 | 0.58 | 0.25 | 75 |
| 8/25/2021 | 1:27:52 AM | 12.33 | 139740 | 0.58 | 0.25 | 75 |
| 8/25/2021 | 1:28:52 AM | 12.33 | 139800 | 0.58 | 0.25 | 75 |
| 8/25/2021 | 1:29:52 AM | 12.33 | 139860 | 0.58 | 0.25 | 75 |
| 8/25/2021 | 1:30:52 AM | 12.33 | 139920 | 0.58 | 0.25 | 75 |
| 8/25/2021 | 1:31:52 AM | 12.33 | 139980 | 0.58 | 0.25 | 75 |
| 8/25/2021 | 1:32:52 AM | 12.34 | 140040 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:33:52 AM | 12.34 | 140100 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:34:52 AM | 12.34 | 140160 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:35:52 AM | 12.34 | 140220 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:36:52 AM | 12.34 | 140280 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:37:52 AM | 12.34 | 140340 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:38:52 AM | 12.34 | 140400 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:39:52 AM | 12.34 | 140460 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:40:52 AM | 12.34 | 140520 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:41:52 AM | 12.34 | 140580 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:42:52 AM | 12.34 | 140640 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:43:52 AM | 12.34 | 140700 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:44:52 AM | 12.34 | 140760 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:45:52 AM | 12.34 | 140820 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:46:52 AM | 12.34 | 140880 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:47:52 AM | 12.34 | 140940 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:48:52 AM | 12.34 | 141000 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:49:52 AM | 12.34 | 141060 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:50:52 AM | 12.34 | 141120 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:51:52 AM | 12.34 | 141180 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:52:52 AM | 12.34 | 141240 | 0.57 | 0.25 | 75 |
| 8/25/2021 | 1:53:52 AM | 12.35 | 141300 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 1:54:52 AM | 12.35 | 141360 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 1:55:52 AM | 12.35 | 141420 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 1:56:52 AM | 12.35 | 141480 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 1:57:52 AM | 12.35 | 141540 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 1:58:52 AM | 12.35 | 141600 | 0.56 | 0.25 | 75 |

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|-----------|------------|-------|--------|------|------|----|
| 8/25/2021 | 1:59:52 AM | 12.35 | 141660 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:00:52 AM | 12.35 | 141720 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:01:52 AM | 12.35 | 141780 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:02:52 AM | 12.35 | 141840 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:03:52 AM | 12.35 | 141900 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:04:52 AM | 12.35 | 141960 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:05:52 AM | 12.35 | 142020 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:06:52 AM | 12.35 | 142080 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:07:52 AM | 12.35 | 142140 | 0.56 | 0.25 | 75 |
| 8/25/2021 | 2:08:52 AM | 12.35 | 142200 | 0.56 | 0.24 | 76 |
| 8/25/2021 | 2:09:52 AM | 12.36 | 142260 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:10:52 AM | 12.36 | 142320 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:11:52 AM | 12.36 | 142380 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:12:52 AM | 12.36 | 142440 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:13:52 AM | 12.36 | 142500 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:14:52 AM | 12.36 | 142560 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:15:52 AM | 12.36 | 142620 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:16:52 AM | 12.36 | 142680 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:17:52 AM | 12.36 | 142740 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:18:52 AM | 12.36 | 142800 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:19:52 AM | 12.36 | 142860 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:20:52 AM | 12.36 | 142920 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:21:52 AM | 12.36 | 142980 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:22:52 AM | 12.36 | 143040 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:23:52 AM | 12.36 | 143100 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:24:52 AM | 12.36 | 143160 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:25:52 AM | 12.36 | 143220 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:26:52 AM | 12.36 | 143280 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:27:52 AM | 12.36 | 143340 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:28:52 AM | 12.36 | 143400 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:29:52 AM | 12.37 | 143460 | 0.55 | 0.24 | 76 |
| 8/25/2021 | 2:30:52 AM | 12.37 | 143520 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:31:52 AM | 12.37 | 143580 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:32:52 AM | 12.37 | 143640 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:33:52 AM | 12.37 | 143700 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:34:52 AM | 12.37 | 143760 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:35:52 AM | 12.37 | 143820 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:36:52 AM | 12.37 | 143880 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:37:52 AM | 12.37 | 143940 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:38:52 AM | 12.37 | 144000 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:39:52 AM | 12.37 | 144060 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:40:52 AM | 12.37 | 144120 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:41:52 AM | 12.37 | 144180 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:42:52 AM | 12.37 | 144240 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:43:52 AM | 12.37 | 144300 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:44:52 AM | 12.37 | 144360 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:45:52 AM | 12.37 | 144420 | 0.54 | 0.24 | 76 |
| 8/25/2021 | 2:46:52 AM | 12.38 | 144480 | 0.53 | 0.24 | 76 |
| 8/25/2021 | 2:47:52 AM | 12.38 | 144540 | 0.53 | 0.24 | 76 |
| 8/25/2021 | 2:48:52 AM | 12.38 | 144600 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:49:52 AM | 12.38 | 144660 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:50:52 AM | 12.38 | 144720 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:51:52 AM | 12.38 | 144780 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:52:52 AM | 12.38 | 144840 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:53:52 AM | 12.38 | 144900 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:54:52 AM | 12.38 | 144960 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:55:52 AM | 12.38 | 145020 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:56:52 AM | 12.38 | 145080 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:57:52 AM | 12.38 | 145140 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:58:52 AM | 12.38 | 145200 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 2:59:52 AM | 12.38 | 145260 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 3:00:52 AM | 12.38 | 145320 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 3:01:52 AM | 12.38 | 145380 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 3:02:52 AM | 12.38 | 145440 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 3:03:52 AM | 12.38 | 145500 | 0.53 | 0.23 | 77 |
| 8/25/2021 | 3:04:52 AM | 12.39 | 145560 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:05:52 AM | 12.39 | 145620 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:06:52 AM | 12.39 | 145680 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:07:52 AM | 12.39 | 145740 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:08:52 AM | 12.39 | 145800 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:09:52 AM | 12.39 | 145860 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:10:52 AM | 12.39 | 145920 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:11:52 AM | 12.39 | 145980 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:12:52 AM | 12.39 | 146040 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:13:52 AM | 12.39 | 146100 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:14:52 AM | 12.39 | 146160 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:15:52 AM | 12.39 | 146220 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:16:52 AM | 12.39 | 146280 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:17:52 AM | 12.39 | 146340 | 0.52 | 0.23 | 77 |

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|-----------|------------|-------|--------|------|------|----|
| 8/25/2021 | 3:18:52 AM | 12.39 | 146400 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:19:52 AM | 12.40 | 146460 | 0.52 | 0.23 | 77 |
| 8/25/2021 | 3:20:52 AM | 12.40 | 146520 | 0.51 | 0.23 | 77 |
| 8/25/2021 | 3:21:52 AM | 12.40 | 146580 | 0.51 | 0.23 | 77 |
| 8/25/2021 | 3:22:52 AM | 12.40 | 146640 | 0.51 | 0.23 | 77 |
| 8/25/2021 | 3:23:52 AM | 12.40 | 146700 | 0.51 | 0.23 | 77 |
| 8/25/2021 | 3:24:52 AM | 12.40 | 146760 | 0.51 | 0.23 | 77 |
| 8/25/2021 | 3:25:52 AM | 12.40 | 146820 | 0.51 | 0.23 | 77 |
| 8/25/2021 | 3:26:52 AM | 12.40 | 146880 | 0.51 | 0.23 | 77 |
| 8/25/2021 | 3:27:52 AM | 12.40 | 146940 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:28:52 AM | 12.40 | 147000 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:29:52 AM | 12.40 | 147060 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:30:52 AM | 12.40 | 147120 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:31:52 AM | 12.40 | 147180 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:32:52 AM | 12.40 | 147240 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:33:52 AM | 12.40 | 147300 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:34:52 AM | 12.40 | 147360 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:35:52 AM | 12.40 | 147420 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:36:52 AM | 12.40 | 147480 | 0.51 | 0.22 | 78 |
| 8/25/2021 | 3:37:52 AM | 12.41 | 147540 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:38:52 AM | 12.41 | 147600 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:39:52 AM | 12.41 | 147660 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:40:52 AM | 12.41 | 147720 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:41:52 AM | 12.41 | 147780 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:42:52 AM | 12.41 | 147840 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:43:52 AM | 12.41 | 147900 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:44:52 AM | 12.41 | 147960 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:45:52 AM | 12.41 | 148020 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:46:52 AM | 12.41 | 148080 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:47:52 AM | 12.41 | 148140 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:48:52 AM | 12.41 | 148200 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:49:52 AM | 12.41 | 148260 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:50:52 AM | 12.41 | 148320 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:51:52 AM | 12.41 | 148380 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:52:52 AM | 12.41 | 148440 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:53:52 AM | 12.41 | 148500 | 0.50 | 0.22 | 78 |
| 8/25/2021 | 3:54:52 AM | 12.42 | 148560 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 3:55:52 AM | 12.42 | 148620 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 3:56:52 AM | 12.42 | 148680 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 3:57:52 AM | 12.42 | 148740 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 3:58:52 AM | 12.42 | 148800 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 3:59:52 AM | 12.42 | 148860 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 4:00:52 AM | 12.42 | 148920 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 4:01:52 AM | 12.42 | 148980 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 4:02:52 AM | 12.42 | 149040 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 4:03:52 AM | 12.42 | 149100 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 4:04:52 AM | 12.42 | 149160 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 4:05:52 AM | 12.42 | 149220 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 4:06:52 AM | 12.42 | 149280 | 0.49 | 0.22 | 78 |
| 8/25/2021 | 4:07:52 AM | 12.42 | 149340 | 0.49 | 0.21 | 79 |
| 8/25/2021 | 4:08:52 AM | 12.42 | 149400 | 0.49 | 0.21 | 79 |
| 8/25/2021 | 4:09:52 AM | 12.42 | 149460 | 0.49 | 0.21 | 79 |
| 8/25/2021 | 4:10:52 AM | 12.42 | 149520 | 0.49 | 0.21 | 79 |
| 8/25/2021 | 4:11:52 AM | 12.42 | 149580 | 0.49 | 0.21 | 79 |
| 8/25/2021 | 4:12:52 AM | 12.43 | 149640 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:13:52 AM | 12.43 | 149700 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:14:52 AM | 12.43 | 149760 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:15:52 AM | 12.43 | 149820 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:16:52 AM | 12.43 | 149880 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:17:52 AM | 12.43 | 149940 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:18:52 AM | 12.43 | 150000 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:19:52 AM | 12.43 | 150060 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:20:52 AM | 12.43 | 150120 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:21:52 AM | 12.43 | 150180 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:22:52 AM | 12.43 | 150240 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:23:52 AM | 12.43 | 150300 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:24:52 AM | 12.43 | 150360 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:25:52 AM | 12.43 | 150420 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:26:52 AM | 12.43 | 150480 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:27:52 AM | 12.43 | 150540 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:28:52 AM | 12.43 | 150600 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:29:52 AM | 12.43 | 150660 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:30:52 AM | 12.44 | 150720 | 0.48 | 0.21 | 79 |
| 8/25/2021 | 4:31:52 AM | 12.44 | 150780 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:32:52 AM | 12.44 | 150840 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:33:52 AM | 12.44 | 150900 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:34:52 AM | 12.44 | 150960 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:35:52 AM | 12.44 | 151020 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:36:52 AM | 12.44 | 151080 | 0.47 | 0.21 | 79 |

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|-----------|------------|-------|--------|------|------|----|
| 8/25/2021 | 4:37:52 AM | 12.44 | 151140 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:38:52 AM | 12.44 | 151200 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:39:52 AM | 12.44 | 151260 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:40:52 AM | 12.44 | 151320 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:41:52 AM | 12.44 | 151380 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:42:52 AM | 12.44 | 151440 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:43:52 AM | 12.44 | 151500 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:44:52 AM | 12.44 | 151560 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:45:52 AM | 12.44 | 151620 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:46:52 AM | 12.44 | 151680 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:47:52 AM | 12.44 | 151740 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:48:52 AM | 12.44 | 151800 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:49:52 AM | 12.44 | 151860 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:50:52 AM | 12.44 | 151920 | 0.47 | 0.21 | 79 |
| 8/25/2021 | 4:51:52 AM | 12.45 | 151980 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 4:52:52 AM | 12.45 | 152040 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 4:53:52 AM | 12.45 | 152100 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 4:54:52 AM | 12.45 | 152160 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 4:55:52 AM | 12.45 | 152220 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 4:56:52 AM | 12.45 | 152280 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 4:57:52 AM | 12.45 | 152340 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 4:58:52 AM | 12.45 | 152400 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 4:59:52 AM | 12.45 | 152460 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 5:00:52 AM | 12.45 | 152520 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 5:01:52 AM | 12.45 | 152580 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 5:02:52 AM | 12.45 | 152640 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 5:03:52 AM | 12.45 | 152700 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 5:04:52 AM | 12.45 | 152760 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 5:05:52 AM | 12.45 | 152820 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 5:06:52 AM | 12.45 | 152880 | 0.46 | 0.20 | 80 |
| 8/25/2021 | 5:07:52 AM | 12.46 | 152940 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:08:52 AM | 12.46 | 153000 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:09:52 AM | 12.46 | 153060 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:10:52 AM | 12.46 | 153120 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:11:52 AM | 12.46 | 153180 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:12:52 AM | 12.46 | 153240 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:13:52 AM | 12.46 | 153300 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:14:52 AM | 12.46 | 153360 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:15:52 AM | 12.46 | 153420 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:16:52 AM | 12.46 | 153480 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:17:52 AM | 12.46 | 153540 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:18:52 AM | 12.46 | 153600 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:19:52 AM | 12.46 | 153660 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:20:52 AM | 12.46 | 153720 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:21:52 AM | 12.46 | 153780 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:22:52 AM | 12.46 | 153840 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:23:52 AM | 12.46 | 153900 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:24:52 AM | 12.46 | 153960 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:25:52 AM | 12.46 | 154020 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:26:52 AM | 12.46 | 154080 | 0.45 | 0.20 | 80 |
| 8/25/2021 | 5:27:52 AM | 12.47 | 154140 | 0.44 | 0.20 | 80 |
| 8/25/2021 | 5:28:52 AM | 12.47 | 154200 | 0.44 | 0.20 | 80 |
| 8/25/2021 | 5:29:52 AM | 12.47 | 154260 | 0.44 | 0.20 | 80 |
| 8/25/2021 | 5:30:52 AM | 12.47 | 154320 | 0.44 | 0.20 | 80 |
| 8/25/2021 | 5:31:52 AM | 12.47 | 154380 | 0.44 | 0.20 | 80 |
| 8/25/2021 | 5:32:52 AM | 12.47 | 154440 | 0.44 | 0.20 | 80 |
| 8/25/2021 | 5:33:52 AM | 12.47 | 154500 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:34:52 AM | 12.47 | 154560 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:35:52 AM | 12.47 | 154620 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:36:52 AM | 12.47 | 154680 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:37:52 AM | 12.47 | 154740 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:38:52 AM | 12.47 | 154800 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:39:52 AM | 12.47 | 154860 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:40:52 AM | 12.47 | 154920 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:41:52 AM | 12.47 | 154980 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:42:52 AM | 12.47 | 155040 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:43:52 AM | 12.47 | 155100 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:44:52 AM | 12.47 | 155160 | 0.44 | 0.19 | 81 |
| 8/25/2021 | 5:45:52 AM | 12.48 | 155220 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:46:52 AM | 12.48 | 155280 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:47:52 AM | 12.48 | 155340 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:48:52 AM | 12.48 | 155400 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:49:52 AM | 12.48 | 155460 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:50:52 AM | 12.48 | 155520 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:51:52 AM | 12.48 | 155580 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:52:52 AM | 12.48 | 155640 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:53:52 AM | 12.48 | 155700 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:54:52 AM | 12.48 | 155760 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:55:52 AM | 12.48 | 155820 | 0.43 | 0.19 | 81 |

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|-----------|------------|-------|--------|------|------|----|
| 8/25/2021 | 5:56:52 AM | 12.48 | 155880 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:57:52 AM | 12.48 | 155940 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:58:52 AM | 12.48 | 156000 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 5:59:52 AM | 12.48 | 156060 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 6:00:52 AM | 12.48 | 156120 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 6:01:52 AM | 12.49 | 156180 | 0.43 | 0.19 | 81 |
| 8/25/2021 | 6:02:52 AM | 12.49 | 156240 | 0.42 | 0.19 | 81 |
| 8/25/2021 | 6:03:52 AM | 12.49 | 156300 | 0.42 | 0.19 | 81 |
| 8/25/2021 | 6:04:52 AM | 12.49 | 156360 | 0.42 | 0.19 | 81 |
| 8/25/2021 | 6:05:52 AM | 12.49 | 156420 | 0.42 | 0.19 | 81 |
| 8/25/2021 | 6:06:52 AM | 12.49 | 156480 | 0.42 | 0.19 | 81 |
| 8/25/2021 | 6:07:52 AM | 12.49 | 156540 | 0.42 | 0.19 | 81 |
| 8/25/2021 | 6:08:52 AM | 12.49 | 156600 | 0.42 | 0.19 | 81 |
| 8/25/2021 | 6:09:52 AM | 12.49 | 156660 | 0.42 | 0.19 | 81 |
| 8/25/2021 | 6:10:52 AM | 12.49 | 156720 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:11:52 AM | 12.49 | 156780 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:12:52 AM | 12.49 | 156840 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:13:52 AM | 12.49 | 156900 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:14:52 AM | 12.49 | 156960 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:15:52 AM | 12.49 | 157020 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:16:52 AM | 12.49 | 157080 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:17:52 AM | 12.49 | 157140 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:18:52 AM | 12.49 | 157200 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:19:52 AM | 12.49 | 157260 | 0.42 | 0.18 | 82 |
| 8/25/2021 | 6:20:52 AM | 12.50 | 157320 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:21:52 AM | 12.50 | 157380 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:22:52 AM | 12.50 | 157440 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:23:52 AM | 12.50 | 157500 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:24:52 AM | 12.50 | 157560 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:25:52 AM | 12.50 | 157620 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:26:52 AM | 12.50 | 157680 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:27:52 AM | 12.50 | 157740 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:28:52 AM | 12.50 | 157800 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:29:52 AM | 12.50 | 157860 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:30:52 AM | 12.50 | 157920 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:31:52 AM | 12.50 | 157980 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:32:52 AM | 12.50 | 158040 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:33:52 AM | 12.50 | 158100 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:34:52 AM | 12.50 | 158160 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:35:52 AM | 12.50 | 158220 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:36:52 AM | 12.50 | 158280 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:37:52 AM | 12.50 | 158340 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:38:52 AM | 12.50 | 158400 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:39:52 AM | 12.50 | 158460 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:40:52 AM | 12.50 | 158520 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:41:52 AM | 12.50 | 158580 | 0.41 | 0.18 | 82 |
| 8/25/2021 | 6:42:52 AM | 12.51 | 158640 | 0.40 | 0.18 | 82 |
| 8/25/2021 | 6:43:52 AM | 12.51 | 158700 | 0.40 | 0.18 | 82 |
| 8/25/2021 | 6:44:52 AM | 12.51 | 158760 | 0.40 | 0.18 | 82 |
| 8/25/2021 | 6:45:52 AM | 12.51 | 158820 | 0.40 | 0.18 | 82 |
| 8/25/2021 | 6:46:52 AM | 12.51 | 158880 | 0.40 | 0.18 | 82 |
| 8/25/2021 | 6:47:52 AM | 12.51 | 158940 | 0.40 | 0.18 | 82 |
| 8/25/2021 | 6:48:52 AM | 12.51 | 159000 | 0.40 | 0.18 | 82 |
| 8/25/2021 | 6:49:52 AM | 12.51 | 159060 | 0.40 | 0.18 | 82 |
| 8/25/2021 | 6:50:52 AM | 12.51 | 159120 | 0.40 | 0.17 | 83 |
| 8/25/2021 | 6:51:52 AM | 12.51 | 159180 | 0.40 | 0.17 | 83 |
| 8/25/2021 | 6:52:52 AM | 12.51 | 159240 | 0.40 | 0.17 | 83 |
| 8/25/2021 | 6:53:52 AM | 12.51 | 159300 | 0.40 | 0.17 | 83 |
| 8/25/2021 | 6:54:52 AM | 12.51 | 159360 | 0.40 | 0.17 | 83 |
| 8/25/2021 | 6:55:52 AM | 12.52 | 159420 | 0.40 | 0.17 | 83 |
| 8/25/2021 | 6:56:52 AM | 12.52 | 159480 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 6:57:52 AM | 12.52 | 159540 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 6:58:52 AM | 12.52 | 159600 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 6:59:52 AM | 12.52 | 159660 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:00:52 AM | 12.52 | 159720 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:01:52 AM | 12.52 | 159780 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:02:52 AM | 12.52 | 159840 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:03:52 AM | 12.52 | 159900 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:04:52 AM | 12.52 | 159960 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:05:52 AM | 12.52 | 160020 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:06:52 AM | 12.52 | 160080 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:07:52 AM | 12.52 | 160140 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:08:52 AM | 12.52 | 160200 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:09:52 AM | 12.52 | 160260 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:10:52 AM | 12.52 | 160320 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:11:52 AM | 12.52 | 160380 | 0.39 | 0.17 | 83 |
| 8/25/2021 | 7:12:52 AM | 12.53 | 160440 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:13:52 AM | 12.53 | 160500 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:14:52 AM | 12.53 | 160560 | 0.38 | 0.17 | 83 |

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|-----------|------------|-------|--------|------|------|----|
| 8/25/2021 | 7:15:52 AM | 12.53 | 160620 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:16:52 AM | 12.53 | 160680 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:17:52 AM | 12.53 | 160740 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:18:52 AM | 12.53 | 160800 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:19:52 AM | 12.53 | 160860 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:20:52 AM | 12.53 | 160920 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:21:52 AM | 12.53 | 160980 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:22:52 AM | 12.53 | 161040 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:23:52 AM | 12.53 | 161100 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:24:52 AM | 12.53 | 161160 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:25:52 AM | 12.53 | 161220 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:26:52 AM | 12.53 | 161280 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:27:52 AM | 12.53 | 161340 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:28:52 AM | 12.53 | 161400 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:29:52 AM | 12.54 | 161460 | 0.38 | 0.17 | 83 |
| 8/25/2021 | 7:30:52 AM | 12.54 | 161520 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:31:52 AM | 12.54 | 161580 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:32:52 AM | 12.54 | 161640 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:33:52 AM | 12.54 | 161700 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:34:52 AM | 12.54 | 161760 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:35:52 AM | 12.54 | 161820 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:36:52 AM | 12.54 | 161880 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:37:52 AM | 12.54 | 161940 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:38:52 AM | 12.54 | 162000 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:39:52 AM | 12.54 | 162060 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:40:52 AM | 12.54 | 162120 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:41:52 AM | 12.54 | 162180 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:42:52 AM | 12.54 | 162240 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:43:52 AM | 12.54 | 162300 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:44:52 AM | 12.54 | 162360 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:45:52 AM | 12.54 | 162420 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:46:52 AM | 12.54 | 162480 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:47:52 AM | 12.54 | 162540 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:48:52 AM | 12.54 | 162600 | 0.37 | 0.16 | 84 |
| 8/25/2021 | 7:49:52 AM | 12.55 | 162660 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:50:52 AM | 12.55 | 162720 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:51:52 AM | 12.55 | 162780 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:52:52 AM | 12.55 | 162840 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:53:52 AM | 12.55 | 162900 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:54:52 AM | 12.55 | 162960 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:55:52 AM | 12.55 | 163020 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:56:52 AM | 12.55 | 163080 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:57:52 AM | 12.55 | 163140 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:58:52 AM | 12.55 | 163200 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 7:59:52 AM | 12.55 | 163260 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:00:52 AM | 12.55 | 163320 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:01:52 AM | 12.55 | 163380 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:02:52 AM | 12.55 | 163440 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:03:52 AM | 12.55 | 163500 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:04:52 AM | 12.55 | 163560 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:05:52 AM | 12.55 | 163620 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:06:52 AM | 12.55 | 163680 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:07:52 AM | 12.55 | 163740 | 0.36 | 0.16 | 84 |
| 8/25/2021 | 8:08:52 AM | 12.56 | 163800 | 0.35 | 0.16 | 84 |
| 8/25/2021 | 8:09:52 AM | 12.56 | 163860 | 0.35 | 0.16 | 84 |
| 8/25/2021 | 8:10:52 AM | 12.56 | 163920 | 0.35 | 0.16 | 84 |
| 8/25/2021 | 8:11:52 AM | 12.56 | 163980 | 0.35 | 0.16 | 84 |
| 8/25/2021 | 8:12:52 AM | 12.56 | 164040 | 0.35 | 0.16 | 84 |
| 8/25/2021 | 8:13:52 AM | 12.56 | 164100 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:14:52 AM | 12.56 | 164160 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:15:52 AM | 12.56 | 164220 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:16:52 AM | 12.56 | 164280 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:17:52 AM | 12.56 | 164340 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:18:52 AM | 12.56 | 164400 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:19:52 AM | 12.56 | 164460 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:20:52 AM | 12.56 | 164520 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:21:52 AM | 12.56 | 164580 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:22:52 AM | 12.56 | 164640 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:23:52 AM | 12.56 | 164700 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:24:52 AM | 12.56 | 164760 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:25:52 AM | 12.56 | 164820 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:26:52 AM | 12.56 | 164880 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:27:52 AM | 12.57 | 164940 | 0.35 | 0.15 | 85 |
| 8/25/2021 | 8:28:52 AM | 12.57 | 165000 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:29:52 AM | 12.57 | 165060 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:30:52 AM | 12.57 | 165120 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:31:52 AM | 12.57 | 165180 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:32:52 AM | 12.57 | 165240 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:33:52 AM | 12.57 | 165300 | 0.34 | 0.15 | 85 |

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|-----------|------------|-------|--------|------|------|----|
| 8/25/2021 | 8:34:52 AM | 12.57 | 165360 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:35:52 AM | 12.57 | 165420 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:36:52 AM | 12.57 | 165480 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:37:52 AM | 12.57 | 165540 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:38:52 AM | 12.57 | 165600 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:39:52 AM | 12.57 | 165660 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:40:52 AM | 12.57 | 165720 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:41:52 AM | 12.57 | 165780 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:42:52 AM | 12.57 | 165840 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:43:52 AM | 12.57 | 165900 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:44:52 AM | 12.57 | 165960 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:45:52 AM | 12.57 | 166020 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:46:52 AM | 12.57 | 166080 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:47:52 AM | 12.57 | 166140 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:48:52 AM | 12.58 | 166200 | 0.34 | 0.15 | 85 |
| 8/25/2021 | 8:49:52 AM | 12.58 | 166260 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:50:52 AM | 12.58 | 166320 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:51:52 AM | 12.58 | 166380 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:52:52 AM | 12.58 | 166440 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:53:52 AM | 12.58 | 166500 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:54:52 AM | 12.58 | 166560 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:55:52 AM | 12.58 | 166620 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:56:52 AM | 12.58 | 166680 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:57:52 AM | 12.58 | 166740 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:58:52 AM | 12.58 | 166800 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 8:59:52 AM | 12.58 | 166860 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 9:00:52 AM | 12.58 | 166920 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 9:01:52 AM | 12.58 | 166980 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 9:02:52 AM | 12.58 | 167040 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 9:03:52 AM | 12.58 | 167100 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 9:04:52 AM | 12.58 | 167160 | 0.33 | 0.15 | 85 |
| 8/25/2021 | 9:05:52 AM | 12.58 | 167220 | 0.33 | 0.14 | 86 |
| 8/25/2021 | 9:06:52 AM | 12.58 | 167280 | 0.33 | 0.14 | 86 |
| 8/25/2021 | 9:07:52 AM | 12.58 | 167340 | 0.33 | 0.14 | 86 |
| 8/25/2021 | 9:08:52 AM | 12.58 | 167400 | 0.33 | 0.14 | 86 |
| 8/25/2021 | 9:09:52 AM | 12.58 | 167460 | 0.33 | 0.14 | 86 |
| 8/25/2021 | 9:10:52 AM | 12.58 | 167520 | 0.33 | 0.14 | 86 |
| 8/25/2021 | 9:11:52 AM | 12.58 | 167580 | 0.33 | 0.14 | 86 |
| 8/25/2021 | 9:12:52 AM | 12.58 | 167640 | 0.33 | 0.14 | 86 |
| 8/25/2021 | 9:13:52 AM | 12.59 | 167700 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:14:52 AM | 12.59 | 167760 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:15:52 AM | 12.59 | 167820 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:16:52 AM | 12.59 | 167880 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:17:52 AM | 12.59 | 167940 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:18:52 AM | 12.59 | 168000 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:19:52 AM | 12.59 | 168060 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:20:52 AM | 12.59 | 168120 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:21:52 AM | 12.59 | 168180 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:22:52 AM | 12.59 | 168240 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:23:52 AM | 12.59 | 168300 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:24:52 AM | 12.59 | 168360 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:25:52 AM | 12.59 | 168420 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:26:52 AM | 12.59 | 168480 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:27:52 AM | 12.59 | 168540 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:28:52 AM | 12.59 | 168600 | 0.32 | 0.14 | 86 |
| 8/25/2021 | 9:29:52 AM | 12.60 | 168660 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:30:52 AM | 12.60 | 168720 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:31:52 AM | 12.60 | 168780 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:32:52 AM | 12.60 | 168840 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:33:52 AM | 12.60 | 168900 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:34:52 AM | 12.60 | 168960 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:35:52 AM | 12.60 | 169020 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:36:52 AM | 12.60 | 169080 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:37:52 AM | 12.60 | 169140 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:38:52 AM | 12.60 | 169200 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:39:52 AM | 12.60 | 169260 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:40:52 AM | 12.60 | 169320 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:41:52 AM | 12.60 | 169380 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:42:52 AM | 12.60 | 169440 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:43:52 AM | 12.60 | 169500 | 0.31 | 0.14 | 86 |
| 8/25/2021 | 9:44:52 AM | 12.60 | 169560 | 0.31 | 0.13 | 87 |
| 8/25/2021 | 9:45:52 AM | 12.60 | 169620 | 0.31 | 0.13 | 87 |
| 8/25/2021 | 9:46:52 AM | 12.61 | 169680 | 0.31 | 0.13 | 87 |
| 8/25/2021 | 9:47:52 AM | 12.61 | 169740 | 0.30 | 0.13 | 87 |
| 8/25/2021 | 9:48:52 AM | 12.61 | 169800 | 0.30 | 0.13 | 87 |
| 8/25/2021 | 9:49:52 AM | 12.61 | 169860 | 0.30 | 0.13 | 87 |
| 8/25/2021 | 9:50:52 AM | 12.61 | 169920 | 0.30 | 0.13 | 87 |
| 8/25/2021 | 9:51:52 AM | 12.61 | 169980 | 0.30 | 0.13 | 87 |
| 8/25/2021 | 9:52:52 AM | 12.61 | 170040 | 0.30 | 0.13 | 87 |

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|-----------|-------------|-------|--------|------|------|----|
| 8/25/2021 | 12:31:52 PM | 12.68 | 179580 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:32:52 PM | 12.68 | 179640 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:33:52 PM | 12.68 | 179700 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:34:52 PM | 12.68 | 179760 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:35:52 PM | 12.68 | 179820 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:36:52 PM | 12.68 | 179880 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:37:52 PM | 12.68 | 179940 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:38:52 PM | 12.68 | 180000 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:39:52 PM | 12.68 | 180060 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:40:52 PM | 12.68 | 180120 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:41:52 PM | 12.68 | 180180 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:42:52 PM | 12.68 | 180240 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:43:52 PM | 12.68 | 180300 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:44:52 PM | 12.68 | 180360 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:45:52 PM | 12.68 | 180420 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:46:52 PM | 12.68 | 180480 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:47:52 PM | 12.68 | 180540 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:48:52 PM | 12.69 | 180600 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:49:52 PM | 12.69 | 180660 | 0.23 | 0.10 | 90 |
| 8/25/2021 | 12:50:52 PM | 12.69 | 180720 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:51:52 PM | 12.69 | 180780 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:52:52 PM | 12.69 | 180840 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:53:52 PM | 12.69 | 180900 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:54:52 PM | 12.69 | 180960 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:55:52 PM | 12.69 | 181020 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:56:52 PM | 12.69 | 181080 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:57:52 PM | 12.69 | 181140 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:58:52 PM | 12.69 | 181200 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 12:59:52 PM | 12.69 | 181260 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:00:52 PM | 12.69 | 181320 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:01:52 PM | 12.69 | 181380 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:02:52 PM | 12.69 | 181440 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:03:52 PM | 12.69 | 181500 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:04:52 PM | 12.69 | 181560 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:05:52 PM | 12.69 | 181620 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:06:52 PM | 12.69 | 181680 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:07:52 PM | 12.69 | 181740 | 0.22 | 0.10 | 90 |
| 8/25/2021 | 1:08:52 PM | 12.69 | 181800 | 0.22 | 0.09 | 91 |
| 8/25/2021 | 1:09:52 PM | 12.69 | 181860 | 0.22 | 0.09 | 91 |
| 8/25/2021 | 1:10:52 PM | 12.70 | 181920 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:11:52 PM | 12.70 | 181980 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:12:52 PM | 12.70 | 182040 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:13:52 PM | 12.70 | 182100 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:14:52 PM | 12.70 | 182160 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:15:52 PM | 12.70 | 182220 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:16:52 PM | 12.70 | 182280 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:17:52 PM | 12.70 | 182340 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:18:52 PM | 12.70 | 182400 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:19:52 PM | 12.70 | 182460 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:20:52 PM | 12.70 | 182520 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:21:52 PM | 12.70 | 182580 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:22:52 PM | 12.70 | 182640 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:23:52 PM | 12.70 | 182700 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:24:52 PM | 12.70 | 182760 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:25:52 PM | 12.70 | 182820 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:26:52 PM | 12.70 | 182880 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:27:52 PM | 12.70 | 182940 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:28:52 PM | 12.70 | 183000 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:29:52 PM | 12.70 | 183060 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:30:52 PM | 12.70 | 183120 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:31:52 PM | 12.70 | 183180 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:32:52 PM | 12.70 | 183240 | 0.21 | 0.09 | 91 |
| 8/25/2021 | 1:33:52 PM | 12.71 | 183300 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:34:52 PM | 12.71 | 183360 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:35:52 PM | 12.71 | 183420 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:36:52 PM | 12.71 | 183480 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:37:52 PM | 12.71 | 183540 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:38:52 PM | 12.71 | 183600 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:39:52 PM | 12.71 | 183660 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:40:52 PM | 12.71 | 183720 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:41:52 PM | 12.71 | 183780 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:42:52 PM | 12.71 | 183840 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:43:52 PM | 12.71 | 183900 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:44:52 PM | 12.71 | 183960 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:45:52 PM | 12.71 | 184020 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:46:52 PM | 12.71 | 184080 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:47:52 PM | 12.71 | 184140 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:48:52 PM | 12.71 | 184200 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:49:52 PM | 12.71 | 184260 | 0.20 | 0.09 | 91 |

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|-----------|------------|-------|--------|------|------|----|
| 8/25/2021 | 1:50:52 PM | 12.71 | 184320 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:51:52 PM | 12.71 | 184380 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:52:52 PM | 12.71 | 184440 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:53:52 PM | 12.71 | 184500 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:54:52 PM | 12.71 | 184560 | 0.20 | 0.09 | 91 |
| 8/25/2021 | 1:55:52 PM | 12.72 | 184620 | 0.19 | 0.09 | 91 |
| 8/25/2021 | 1:56:52 PM | 12.72 | 184680 | 0.19 | 0.09 | 91 |
| 8/25/2021 | 1:57:52 PM | 12.72 | 184740 | 0.19 | 0.09 | 91 |
| 8/25/2021 | 1:58:52 PM | 12.72 | 184800 | 0.19 | 0.09 | 91 |
| 8/25/2021 | 1:59:52 PM | 12.72 | 184860 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:00:52 PM | 12.72 | 184920 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:01:52 PM | 12.72 | 184980 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:02:52 PM | 12.72 | 185040 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:03:52 PM | 12.72 | 185100 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:04:52 PM | 12.72 | 185160 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:05:52 PM | 12.72 | 185220 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:06:52 PM | 12.72 | 185280 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:07:52 PM | 12.72 | 185340 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:08:52 PM | 12.72 | 185400 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:09:52 PM | 12.72 | 185460 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:10:52 PM | 12.72 | 185520 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:11:52 PM | 12.72 | 185580 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:12:52 PM | 12.72 | 185640 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:13:52 PM | 12.72 | 185700 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:14:52 PM | 12.72 | 185760 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:15:52 PM | 12.72 | 185820 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:16:52 PM | 12.72 | 185880 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:17:52 PM | 12.72 | 185940 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:18:52 PM | 12.72 | 186000 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:19:52 PM | 12.72 | 186060 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:20:52 PM | 12.72 | 186120 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:21:52 PM | 12.72 | 186180 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:22:52 PM | 12.72 | 186240 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:23:52 PM | 12.73 | 186300 | 0.19 | 0.08 | 92 |
| 8/25/2021 | 2:24:52 PM | 12.73 | 186360 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:25:52 PM | 12.73 | 186420 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:26:52 PM | 12.73 | 186480 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:27:52 PM | 12.73 | 186540 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:28:52 PM | 12.73 | 186600 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:29:52 PM | 12.73 | 186660 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:30:52 PM | 12.73 | 186720 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:31:52 PM | 12.73 | 186780 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:32:52 PM | 12.73 | 186840 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:33:52 PM | 12.73 | 186900 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:34:52 PM | 12.73 | 186960 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:35:52 PM | 12.73 | 187020 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:36:52 PM | 12.73 | 187080 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:37:52 PM | 12.73 | 187140 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:38:52 PM | 12.73 | 187200 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:39:52 PM | 12.73 | 187260 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:40:52 PM | 12.73 | 187320 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:41:52 PM | 12.73 | 187380 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:42:52 PM | 12.73 | 187440 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:43:52 PM | 12.73 | 187500 | 0.18 | 0.08 | 92 |
| 8/25/2021 | 2:44:52 PM | 12.74 | 187560 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:45:52 PM | 12.74 | 187620 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:46:52 PM | 12.74 | 187680 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:47:52 PM | 12.74 | 187740 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:48:52 PM | 12.74 | 187800 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:49:52 PM | 12.74 | 187860 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:50:52 PM | 12.74 | 187920 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:51:52 PM | 12.74 | 187980 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:52:52 PM | 12.74 | 188040 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:53:52 PM | 12.74 | 188100 | 0.17 | 0.08 | 92 |
| 8/25/2021 | 2:54:52 PM | 12.74 | 188160 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 2:55:52 PM | 12.74 | 188220 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 2:56:52 PM | 12.74 | 188280 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 2:57:52 PM | 12.74 | 188340 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 2:58:52 PM | 12.74 | 188400 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 2:59:52 PM | 12.74 | 188460 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 3:00:52 PM | 12.74 | 188520 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 3:01:52 PM | 12.74 | 188580 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 3:02:52 PM | 12.74 | 188640 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 3:03:52 PM | 12.74 | 188700 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 3:04:52 PM | 12.74 | 188760 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 3:05:52 PM | 12.74 | 188820 | 0.17 | 0.07 | 93 |
| 8/25/2021 | 3:06:52 PM | 12.75 | 188880 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:07:52 PM | 12.75 | 188940 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:08:52 PM | 12.75 | 189000 | 0.16 | 0.07 | 93 |

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|-----------|------------|-------|--------|------|------|----|
| 8/25/2021 | 3:09:52 PM | 12.75 | 189060 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:10:52 PM | 12.75 | 189120 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:11:52 PM | 12.75 | 189180 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:12:52 PM | 12.75 | 189240 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:13:52 PM | 12.75 | 189300 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:14:52 PM | 12.75 | 189360 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:15:52 PM | 12.75 | 189420 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:16:52 PM | 12.75 | 189480 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:17:52 PM | 12.75 | 189540 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:18:52 PM | 12.75 | 189600 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:19:52 PM | 12.75 | 189660 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:20:52 PM | 12.75 | 189720 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:21:52 PM | 12.75 | 189780 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:22:52 PM | 12.75 | 189840 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:23:52 PM | 12.75 | 189900 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:24:52 PM | 12.75 | 189960 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:25:52 PM | 12.75 | 190020 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:26:52 PM | 12.75 | 190080 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:27:52 PM | 12.75 | 190140 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:28:52 PM | 12.75 | 190200 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:29:52 PM | 12.75 | 190260 | 0.16 | 0.07 | 93 |
| 8/25/2021 | 3:30:52 PM | 12.76 | 190320 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:31:52 PM | 12.76 | 190380 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:32:52 PM | 12.76 | 190440 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:33:52 PM | 12.76 | 190500 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:34:52 PM | 12.76 | 190560 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:35:52 PM | 12.76 | 190620 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:36:52 PM | 12.76 | 190680 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:37:52 PM | 12.76 | 190740 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:38:52 PM | 12.76 | 190800 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:39:52 PM | 12.76 | 190860 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:40:52 PM | 12.76 | 190920 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:41:52 PM | 12.76 | 190980 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:42:52 PM | 12.76 | 191040 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:43:52 PM | 12.76 | 191100 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:44:52 PM | 12.76 | 191160 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:45:52 PM | 12.76 | 191220 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:46:52 PM | 12.76 | 191280 | 0.15 | 0.07 | 93 |
| 8/25/2021 | 3:47:52 PM | 12.76 | 191340 | 0.15 | 0.06 | 94 |
| 8/25/2021 | 3:48:52 PM | 12.76 | 191400 | 0.15 | 0.06 | 94 |
| 8/25/2021 | 3:49:52 PM | 12.76 | 191460 | 0.15 | 0.06 | 94 |
| 8/25/2021 | 3:50:52 PM | 12.76 | 191520 | 0.15 | 0.06 | 94 |
| 8/25/2021 | 3:51:52 PM | 12.76 | 191580 | 0.15 | 0.06 | 94 |
| 8/25/2021 | 3:52:52 PM | 12.76 | 191640 | 0.15 | 0.06 | 94 |

Rising Head Test - MW21-03
Hvorslev Method (1951)
315 Miwàte Private, West Chaudière Island, Ottawa, Ontario
OTT-00250193-P0

