# Phase II Environmental Site Assessment

## BMO Properties
## 117, 125 South Chestnut Avenue and 412 Howard Street
## Green Bay, Wisconsin


Tyler Hischke
Staff Geologist

Jeffrey R. Brand
Engineer in Training

Lynelle P. Caine
Senior Project Manager


July 16, 2019
Project No.: 193706891

Stantec

# Table of Contents

# 1.0 EXECUTIVE SUMMARY

During May and June 2019, Stantec Consulting Services Inc. (Stantec) completed a Phase II Environmental Site Assessment (ESA) on behalf of the City of Green Bay (the City) for three adjacent parcels located at 117 and 125 South Chestnut Avenue and 412 Howard Street, Green Bay, Wisconsin (hereinafter referred as "the Property" or "the Site"). The Property is currently owned by BMO Harris Bank NA (BMO) and sale of the Property is pending. The purpose of the Phase II ESA was to evaluate if recognized environmental conditions (RECs) identified during Tetra Tech's April 2019 Phase I ESA negatively affected soil and groundwater quality on the Property.

During the Phase II ESA, nine soil borings were advanced at the Site with temporary groundwater monitoring wells constructed in four of the borings. Two sub-slab vapor monitoring points were also installed within the Site building at 117 South Chestnut Avenue. Soil and groundwater samples were collected from the boreholes and temporary wells, and vapor samples were collected from the sub-slab vapor monitoring points. Approximately 0.5 to 2 feet of sandy gravel underlain by as much as 14 feet of medium to coarse sand and silty/sandy clay was identified at the Site. Interspersed silty black fill with trace amounts of slag was identified in four borings from the surface to approximately six feet below ground surface (bgs) and likely represents historic urban fill.

Laboratory analysis of soil samples from the Site detected multiple polynuclear aromatic hydrocarbons (PAHs), silver, and tetrachloroethene (PCE) exceeding the NR720 residual contaminant levels (RCLs) for groundwater protection and/or non-industrial direct contact. Based on the sampling results, it appears the PAH and silver detections are likely related to historic urban fill since contaminant concentrations generally decrease when native soils are encountered. PCE detections on the Site are likely related to a former drycleaner which historically operated on the Property identified in Tetra Tech's Phase I ESA.

Laboratory analysis of groundwater samples collected from the Site detected multiple RCRA metals and PCE exceeding their respective NR140 Preventative Action Limits (PALs). Multiple PAHs and vinyl chloride were also detected exceeding their respective NR140 Enforcement Standards (ESs).

Sub-slab soil vapor analysis was performed on samples collected from VP1 and VP2 installed within the Property building. Tetrachloroethene (PCE) was detected in both samples but below the target for sub-slab air concentrations. No other VOCs were detected above target limits for sub-slab air concentrations.

Chapter 292.11 Wisconsin Statutes requires that anyone who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance notify the Wisconsin Department of Natural Resources (WDNR)immediately of any discharge. Stantec recommends that a copy of this report be submitted to the Property owner to allow them to evaluate their responsibilities in relation to these findings and maintain compliance with state statutes. Once submitted to the WDNR, further discussions could then be conducted to determine what additional work is necessary at the Site including possible additional soil, groundwater, and/or vapor sampling.

# 2.0 BACKGROUND INFORMATION

The Property is composed of three adjacent parcels totaling approximately 0.61 acres located within the City as summarized below.

| Address | Parcel ID # | Owner | Size (acres) | Zoning |
|---|---|---|---|---|
| 117 South Chestnut Avenue | 3-100 | BMO Harris Bank NA | 0.136 | D1 – Downtown One |
| 125 South Chestnut Avenue | 3-101 | BMO Harris Bank NA | 0.415 | D1 – Downtown One |
| 412 Howard Street | 3-325 | BMO Harris Bank NA | 0.056 | D1 – Downtown One |

The Property lies within Private Claim 1 W (USGS, 2018). The Property is currently vacant with two buildings present. The location of the Property is illustrated on Figure 1. A map illustrating the Property layout and approximate boundaries is provided on Figure 2.

During April 2019, Tetra Tech completed a Phase I ESA of the Property (Tetra Tech, 2019). According to the Phase I ESA report, prior to BMO's ownership, multiple small commercial businesses operated on the Property from the 1890s to 1986. These businesses included an automotive mechanic, dry cleaner, bank, and post office.

Results of the Phase I ESA identified the following RECs associated with the Property:

- The historical use of the Property as a dry cleaner over 30 years;
- The historical use of the Property as a commercial auto shop;
- The suspected presence of UST based on site reconnaissance; and
- The potential for soil and groundwater contamination from historic service stations and USTs on adjacent parcels.

To further evaluate the RECs listed above, Stantec was retained by the City to complete a Phase II ESA at the Property, the results of which are summarized below.

# 3.0 DESCRIPTION OF INVESTIGATION

## 3.1 SOIL BORINGS

On May 28, 2019, Geiss Soil and Samples, LLC (Geiss) of Merrill, Wisconsin advanced eight soil borings (B100 through B800) on the Property using a truck-mounted Geoprobe®. Stantec personnel collected soil samples continuously at each boring location from the ground surface to a maximum depth of 14 feet bgs. On June 6, 2019, Stantec field staff advanced one soil boring (B900) using a hand auger. Soil boring locations are illustrated on Figure 2. Boring logs are included in Appendix A.

Each two-foot soil sampling interval was divided into two aliquots; one used for field screening purposes and one used to supply materials for potential submittal to the laboratory for chemical analysis. The laboratory aliquot for each soil sample was immediately placed into laboratory provided containers, sealed, and placed in a cooler with ice. The other portion of each sample was placed into plastic Ziploc® bags and used to field screen for the presence of VOCs using a photoionization detector (PID) equipped with an 11.7 electronvolt (eV) lamp. All non-disposable soil sampling equipment was washed with a detergent solution and double-rinsed with potable water before and after each soil sample was collected to prevent sample cross-contamination. The PID data for samples collected from each borehole are presented on Table 1, as well as included on the geologic logs presented in Appendix A.

A minimum of one soil sample was collected from each boring and submitted for laboratory analysis of RCRA metals, VOCs, PAHs and/or PCBs.

All soil borings not completed as temporary wells were immediately abandoned upon completion of sampling by filling the boreholes with bentonite. Borehole abandonment forms are included in Appendix B.

## 3.2 TEMPORARY WELL INSTALLATION AND GROUNDWATER SAMPLING

As part of the field work activities, Geiss installed four temporary wells in soil borings B100, B600, B700, and B800 designated as TW100, TW600, TW700, and TW800, respectively. The temporary wells were constructed using 1-inch inner diameter (ID), schedule 40 polyvinyl chloride (PVC) casing with 10-foot lengths of factory-slotted PVC screen (0.010-inch slot) that were positioned to intersect the water table. After installation was complete, each temporary well was developed using a peristaltic pump by purging approximately three well volumes, or until the water removed was clear of sediment. The temporary well locations are shown on Figure 2.

On May 30, 2019, Stantec personnel collected groundwater samples from TW100, TW600, and TW700. The PVC casing of TW800 was apparently damaged during well installation, therefore samples were not collected from this well. As part of the groundwater sample collection process, observations were specifically made for the presence of unusual odors, oil droplets, or a petroleum sheen, which could indicate the presence on the water table of a floating layer of Light Non-Aqueous Phase Liquids (LNAPLs). No evidence of unusual odors or LNAPL were observed by Stantec personnel in any of the temporary wells installed on the Site.

Groundwater samples were collected using a peristaltic pump and poured directly into pre-cleaned sample bottles provided by Test America's (TA) Chicago, Illinois area laboratory. The bottles were prepared with pre-measured chemical preservatives by the analytical laboratory (i.e., hydrochloric acid for VOC samples). Samples submitted for inorganic analyses were field filtered prior to preservation.

The sample bottles were packed into a cooler with ice immediately after collection and delivered under chain-of-custody procedures to TA for analysis of a combination of the following: VOCs, RCRA metals, PAHs, and/or PCBs.

## 3.3 SUB-SLAB VAPOR SAMPLING

On June 5, 2019, Stantec personnel installed two permanent sub-slab soil vapor monitoring points (VP1 and VP2), within the Site building to assess potential vapor migration into the building structure. The sample locations are illustrated on Figure 2. The sub-slab vapor points were constructed using a 5/8-inch diameter VaporPin®. A 5/8-inch diameter drill bit was used to penetrate the concrete floor and allow for installation of the VaporPin®. The VaporPin® is constructed with a stainless-steel sealable hose barb to allow for sample collection.

In cooperation with the United States Environmental Protection Agency (U.S. EPA), the Wisconsin Department of Natural Resources (WDNR) created a guidance document that outlines a method for quality control to ensure that vapor/air samples are representative. Prior to collecting vapor samples for laboratory analysis, Stantec conducted quality control measures following this guidance as described below.

A helium shroud test is used to determine if the soil vapor point seal is preventing outside air from entering the soil vapor point. This process includes the following steps:

1. A shroud is placed over the soil vapor point and helium gas was introduced at a concentration of at least 20% by volume into the shroud.

2. A vapor sample is drawn from the vapor point and screened for helium using a Dielectric MGD-2002 Multi-Gas Leak Locator. Helium concentrations detected within the sub-slab sample port exceeding 5% of the helium shroud concentration indicates a system leak. In this event, the soil vapor point should be resealed and retested.

Stantec successfully completed helium shroud tests at each soil vapor point. The helium concentration under the shroud was 64% and 66% in VP1 and VP2, respectively. The helium concentration collected from the sample port at each location was 0%. Both soil vapor points passed on the initial test.

After successfully completing quality control measures, Stantec collected soil vapor samples from VP1 and VP2 using 6-liter Summa canisters equipped with a 30-minute air flow controller provided and certified by TestAmerica. The soil vapor samples were shipped to Eurofins TestAmerica in Burlington, Vermont (Wisconsin State Program certified, identification number 999580010) under chain-of-custody protocol to be analyzed for VOCs using U.S. EPA Method TO-15. Upon completion of sample collection from VP1 and VP2, the vapor points were fitted with caps which allowed them to remain in place flush with the concrete floor surface.

# 4.0 APPLICABLE CLEAN-UP CRITERIA

Procedures for establishing soil clean-up standards applicable to sites in Wisconsin with documented soil contamination are specified in NR720. Significant revisions to NR720 were implemented in 2013, with an effective date of November 1, 2013.

Soil clean-up standards depend in part on current land use and zoning. Based on the current and planned future use of the Property for residential or other non-industrial land uses, the more restrictive non-industrial classification is being used to assess clean-up criteria for the Property.

RCLs are numerical soil clean-up standards that are calculated for a minimum of two exposure pathways – direct contact by humans with exposed soil and leaching of contaminants from soil into groundwater. The clean-up standard is the lower of the RCLs calculated for several exposure pathways. A variety of methods may be used to calculate RCLs, subject to WDNR approval. The approach used for the Site was to use an RCL spreadsheet developed by the WDNR's Remediation and Redevelopment Program staff for use by consultants. The spreadsheet (WDNR, 2018) is updated periodically by WDNR staff and utilizes toxicity information maintained on the U.S. EPA Regional Screening Level (RSL) website: https://www.epa.gov/risk/regional-screening-levels-rsls. As toxicity data are updated periodically for different types of contaminants, the WDNR RCL spreadsheet is similarly updated. The version used to determine RCLs for this Site is the December 2018 update. Applicable RCL concentrations are summarized in Tables 2a, 2b, 2c, and 2d.

As part of the revisions to NR720, the WDNR adopted use of Background Threshold Values (BTVs) for select metals in soil whose occurrence may be attributable in whole or in part to natural occurrence in Wisconsin soil. BTVs are "non-outlier trace element maximum levels in Wisconsin surface soils" as determined through a state-wide study (Stensvold, 2012). BTVs were established for 16 metals including aluminum, arsenic, barium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, strontium, vanadium, and zinc. Probably the most significant BTV is the value of 8.0 milligrams per kilogram (mg/kg) established for arsenic. This value is significant because the RCLs calculated for the direct contact and groundwater pathways are significantly lower than this value, which in the past resulted in sites with relatively low levels of naturally occurring arsenic significantly exceeding the clean-up levels. If measured levels of arsenic or the 15 other metals for which BTVs have been established are below the BTVs, these levels can be attributed to natural occurrence without the need to perform a WDNR-approved site-specific study to determine background levels.

For samples with detections below standards, the hazard quotient, cancer risk, and risk result are calculated for each sample using the WDNR's RCL calculation spreadsheet. For an individual sample to pass, all the following three criteria must be met: (a) the number of constituents for which there are individual exceedances must equal "0;" (b) the hazard quotient must be ≤ 1.0; (c) the cumulative cancer risk must be ≤1.0E-06. Criteria for which the individual samples fail, the spreadsheet notes that, "This site sampling location will need either further clean-up to lower contaminant levels or the construction of a cap/cover to address the direct-contact pathway."

Public health-related groundwater quality standards are set forth by NR140. Standards are listed for substances of public health concern (defined as substances having carcinogenic, mutagenic, or teratogenic properties or interactive effects) and substances of public welfare concern (defined as having a negative aesthetic value, but with little threat to human health). Two levels of standards are listed; the PAL and the ES. The ES represents a concentration above which action generally must be taken to improve the quality of groundwater. The PAL represents a lower concentration (usually 10 to 20 percent of the ES) above which groundwater quality should be monitored. PAL and ES concentrations are summarized in Tables 3a, 3b, and 3c.

Stantec compared the sub-slab vapor analytical results to calculated screening levels for sub-slab vapor to indoor air in accordance with the guidelines presented in the WDNR guidance entitled "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" dated December 2010 and updated January 2018 (WDNR, PUB-RR-800). The WDNR assigned indoor air vapor action levels (VAL) and vapor risk screening levels (VRSL) based on the U.S EPA Air Screening Levels. The U.S EPA provided updated regional screening level tables in November 2018. These November 2018 screening levels have been utilized for this evaluation. Applicable VRSLs for contaminants detected during sub-slab soil vapor sampling at the Property are included on Table 4.

# 5.0 RESULTS OF INVESTIGATION

## 5.1 SUBSURFACE CONDITIONS

Subsurface strata encountered at the Site generally consists of approximately 0.5 to 2 feet of sandy gravel underlain by as much as 14 feet of medium to coarse sand and silty/sandy clay. Interspersed silty black fill with trace amounts of slag was identified in four borings from the surface to approximately six feet bgs and likely represents historic urban fill. Groundwater was measured in the temporary wells at depths ranging from 2.5 to 6 feet bgs.

## 5.2 FIELD SCREENING RESULTS

Field screening of the soil samples detected primarily low PID readings and ranged from less than one to greater than 300 instrument units (IU). Unidentified chemical odors were noted in samples collected from six of the boring locations on the Property. The results of the PID screening are presented on Table 1 and included in the soil boring logs presented in Appendix A.

## 5.3 SOIL SAMPLING LABORATORY ANALYTICAL RESULTS

Soil laboratory analytical reports and chain-of-custody forms are presented in Appendix D. Soil laboratory results are summarized in Tables 2a through 2d and discussed below.

***RCRA Metals*** – Laboratory analysis of soil samples detected silver concentrations exceeding the NR720 RCL for the protection of groundwater in borings B100, B200, B500, B700, and B800. No other RCRA metals were detected above regulatory limits.

***PAHs*** – Benzo(a)pyrene, benzo(b)fluoranthene, and chrysene were detected in soil exceeding the groundwater protection RCL in soil borings B100 and B700. Laboratory analysis also detected multiple PAH concentrations exceeding their non-industrial direct contact RCLs in multiple borings including:

- Benzo(a)anthracene in B100
- Benzo(a)pyrene in B100 and B700
- Benzo(b)fluoranthene in B100
- Dibenzo(a,h)anthracene in B100

No other PAHs were detected above the regulatory limits within any of the soil borings completed at the Property.

***VOCs*** – PCE was detected in B100, B300, and B400 exceeding the RCL for groundwater protection. Multiple other VOCs were detected above laboratory limits of detections (LODs), however, none exceeded regulatory limits.

***PCBs*** – No PCBs were detected above the laboratory LODs in any sample collected from the Property.

## 5.4 GROUNDWATER ANALYTICAL RESULTS

Groundwater laboratory analytical reports and chain-of-custody forms are presented in Appendix D. Groundwater laboratory results are summarized in Tables 3a through 3c and discussed below.

***RCRA Metals*** – Arsenic in TW600, along with chromium and selenium detected in TW700 exceeding their respective NR140 PALs were the only RCRA metals detected above regulatory limits.

***PAHs*** – Benzo(a)pyrene, benzo(b)fluoranthene, and chrysene were detected in TW100 at concentrations exceeding their respective NR140 ESs. No other PAHs were reported above regulatory limits in any of the groundwater samples collected from the temporary monitoring wells.

***VOCs*** – PCE was detected in TW100 exceeding the NR140 PAL. Vinyl chloride was reported in TW600 at concentrations above the ES; however, this detection of vinyl chloride was “J-flagged” by the laboratory, indicating that the concentration detected is between the LOD and the limit of quantification. No other VOCs were detected in concentrations exceeding established regulatory limits.

## 5.5 SUB-SLAB SOIL VAPOR ANALYTICAL RESULTS

Sub-slab soil vapor laboratory analytical reports and chain-of custody forms are presented in Appendix D. Sub-slab vapor laboratory results are summarized in Table 4 and discussed below.

***VOCs*** – Several VOCs were detected above laboratory LODs in both sub-slab vapor samples. PCE and several other VOCs were detected in VP-1 and VP-2, however, none of the concentrations exceeded the target sub-slab VRSLs.

# 6.0 CONCLUSIONS AND RECOMMENDATIONS

During the Phase II ESA, nine soil borings were advanced at the Site with temporary groundwater monitoring wells constructed in four of the borings. Two sub-slab vapor monitoring points were installed within the Site building. Soil and groundwater samples were collected from the boreholes and temporary wells, and soil vapor samples were collected from the vapor monitoring points. Approximately 0.5 to 2 feet of sandy gravel is underlain by as much as 14 feet of medium to coarse sand and silty/sandy clay. Interspersed silty black fill with trace amounts of slag was identified in four borings from the surface up to approximately six feet bgs and likely represents historic urban fill.

Laboratory analysis of soil samples from the Site detected multiple PAHs, silver, and PCE exceeding the NR720 RCLs for groundwater protection and/or non-industrial direct contact. Based on the sampling results, it appears the PAH and silver detections are likely related to historic urban fill since contaminant concentrations generally decrease when native soils are encountered. PCE detections on the Site are likely related to a former drycleaner which historically operated on the Property identified in Tetra Tech's Phase I ESA.

Laboratory analysis of groundwater samples collected from the Site detected multiple RCRA metals and PCE exceeding their respective NR140 PALs. Multiple PAHs and vinyl chloride were also detected exceeding their respective NR140 ESs.

Sub-slab soil vapor analysis was performed on samples collected from VP-1 and VP-2 installed within the Site building. PCE and other VOCs were detected in the vapor samples, however, at concentrations below the target sub-slab VRSLs.

Stantec recommends that a copy of this report be submitted to the WDNR by the Property owner to allow them to evaluate their responsibilities in relation to these findings and maintain compliance with state statutes. Chapter 292.11 Wisconsin Statutes requires that anyone who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance notify the WDNR immediately of any discharge. Further discussions could then be conducted with the WDNR to determine what additional work is necessary at the Site including possible additional soil, groundwater, and/or vapor sampling.

# 7.0 DISCLAIMER AND LIMITATIONS

The Phase II ESA was performed in accordance with generally accepted practices of the profession for performing similar studies at the same time and in the same geographical area. Stantec observed that degree of care and skill generally exercised by the profession under similar circumstances and conditions. No other warranty is expressed or implied.

Stantec observations, findings, and opinions must not be considered as scientific certainties, but only an opinion based on our professional judgment concerning the significance of the data gathered during the investigation. Specifically, Stantec does not and cannot represent that the Site contains no hazardous or toxic materials or other latent condition beyond that observed by Stantec.

Stantec does not warrant that this submittal represents an exhaustive study of all possible environmental concerns at the project area. The items investigated as part of this study represent likely sources of environmental concerns at the project area and are consequently believed to adequately address the public at risk now.

# 8.0 REFERENCES

Tetra Tech, Inc., “Phase I Environmental Site Assessment: 117, 119 and 125 South Chestnut Avenue and 412 Howard Street, Green Bay, Wisconsin,” April 2019.

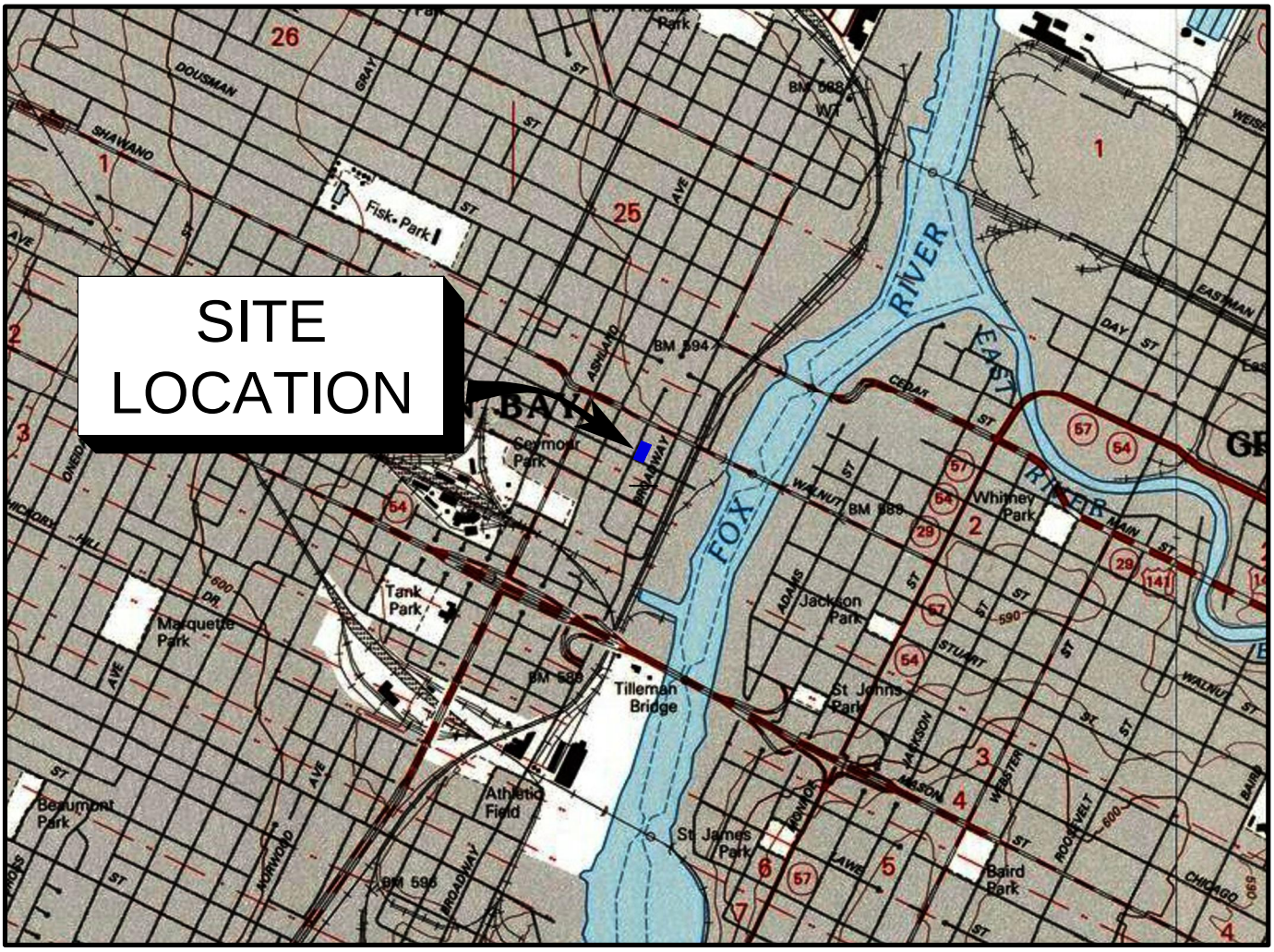
Stensvold, K.A., 2012, “Distribution and variation of Arsenic in Wisconsin surface soils, with data on other trace elements” - U.S. Geological Survey Scientific Investigations Report 2011–5202.

United States Geologic Survey 7.5 Minute Topographic Map of Green Bay West, WI Quadrangle, 1992.

Wisconsin Department of Natural Resources (WDNR), “Soil Cleanup Standards,” Chapter NR720 Wisconsin Administrative Code, November 2013.

Wisconsin Department of Natural Resources (WDNR), “RR Program’s RCL Spreadsheet Update”, DNR-RR-052c, December 2018.

# FIGURES




SCALE IN FEET

1" = 2000'

0 1000 2000 3000 4000 5000 6000 7000 8000

N

CONTOUR INTERVAL 10 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

BASE MAP SOURCE: USGS 7.5 MINUTE QUADRANGLE, GREEN BAY WEST, WISCONSIN, 1992 (NATIONAL GEOGRAPHIC HOLDINGS, INC.)

Stantec

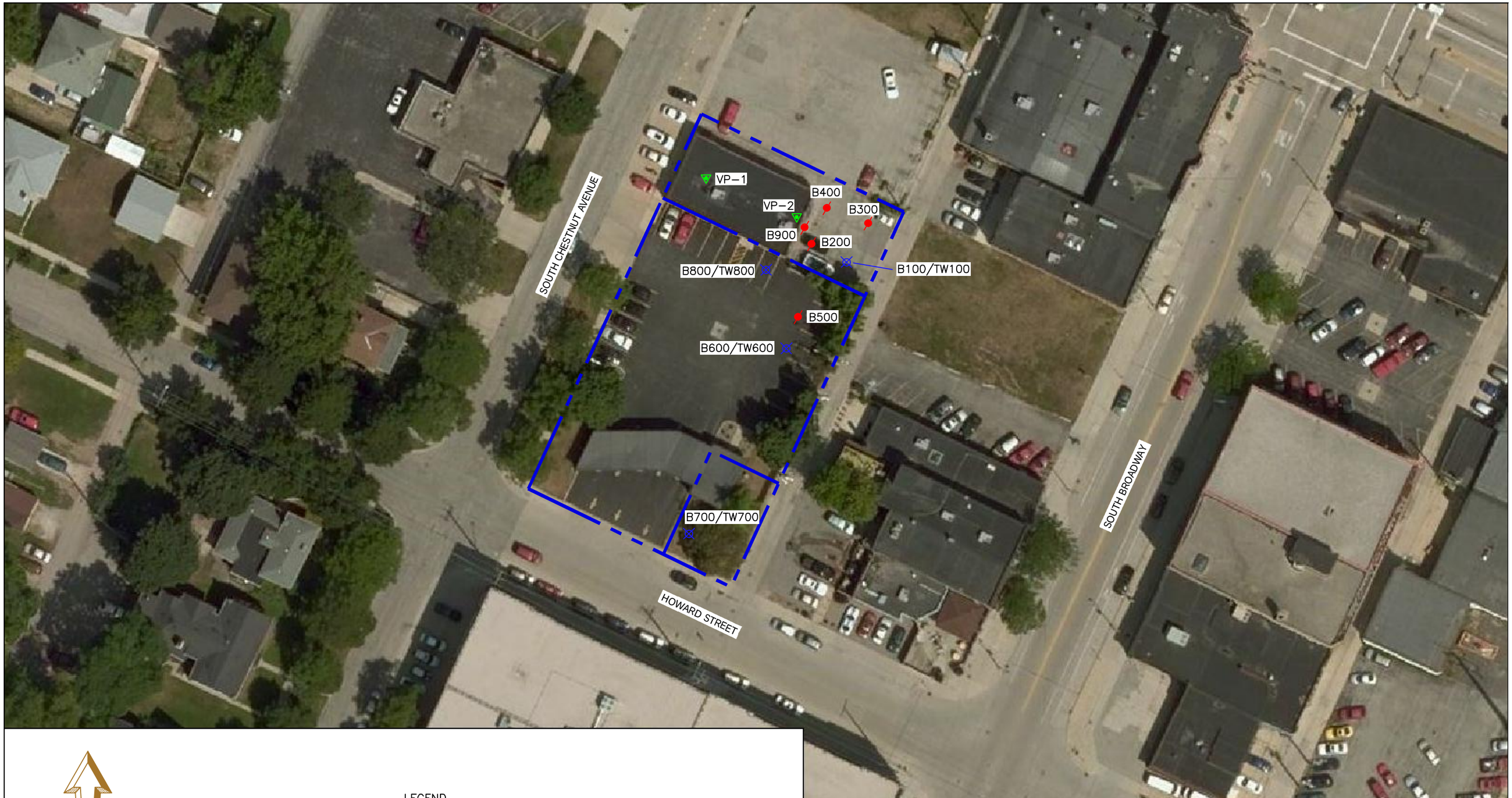
1165 Scheuring Road, De Pere, Wisconsin 54115
Phone: 920-592-8400 Fax: 920-592-84844



# SITE LOCATION MAP

BMO PROPERTIES
117, 125 SOUTH CHESTNUT AVENUE
412 HOWARD STREET
GREEN BAY, WISCONSIN

| DATE: 06/20/19 | DRAWN BY: JRB | PROJECT MANAGER: LPC | PROJECT NUMBER: 193706891 | FIGURE 1 |
|---|---|---|---|---|




N

SCALE IN FEET

25 0 25 50

LEGEND

APPROXIMATE PROPERTY LINE

B200 SOIL BORING LOCATION

B100/TW100 SOIL BORING AND TEMPORARY MONITORING WELL LOCATION

VP–1 VAPOR MONITORING POINT

Stantec

1165 Scheuring Road, Green Bay, Wisconsin 54115
Phone: 920-592-8400 Fax: 920-592-8444



# SITE LAYOUT WITH SOIL BORING, VAPOR POINT, AND TEMPORARY MONITORING WELL LOCATIONS

BMO PROPERTIES
117, 125 SOUTH CHESTNUT AVENUE
412 HOWARD STREET
GREEN BAY, WISCONSIN

| DATE: 06/20/19 | DRAWN BY: JRB | PROJECT MANAGER: LPC | PROJECT NUMBER: 193706891 | FIGURE 2 |
|---|---|---|---|---|

# TABLES

## Table 1 - Soil Field Screening Results, BMO Properties, Green Bay, Wisconsin

| Boring Number | Sample Number | Sample Depth (fbg) | Sample Odor | Sample Description | Date Collected | PID Headspace Analysis | |
|---|---|---|---|---|---|---|---|
| | | | | | | Time Collected/Analyzed | PID Response (IUI) |
| B100 | B1 (0-2) | 0-2 | None | Sand w/ Gravel | 5/28/2019 | 0835 / 0850 | 2.1 |
| | *B1 (2-4) | 2-4 | None | Sandy Silt | 5/28/2019 | 0835 / 0850 | 1.8 |
| | B1 (4-6) | 4-6 | Slight | Silty Clay | 5/28/2019 | 0840 / 0855 | 1.8 |
| | B1 (6-8) | 6-8 | None | Silty Clay | 5/28/2019 | 0840 / 0855 | 19.7 |
| | B1 (8-10) | 8-10 | None | Sand | 5/28/2019 | 0845 / 0900 | 28.7 |
| | B1 (10-12) | 10-12 | None | Silty Clay | 5/28/2019 | 0845 / 0900 | 17.0 |
| | B1 (12-14) | 12-14 | None | Silty Clay | 5/28/2019 | 0850 / 0905 | 5.1 |
| B200 | B2 (0-2) | 0-2 | None | Sand w/ Gravel | 5/28/2019 | 0900 / 0915 | 2.1 |
| | B2 (2-4) | 2-4 | None | Silty Clay | 5/28/2019 | 0900 / 0915 | 2.7 |
| | *B2 (4-6) | 4-6 | Strong | Silty Clay | 5/28/2019 | 0910 / 0925 | 197.4 |
| | B2 (6-8) | 6-8 | None | Silty Clay | 5/28/2019 | 0910 / 0925 | 105.6 |
| | B2 (8-10) | 8-10 | None | Sand | 5/28/2019 | 0915 / 0930 | 5.5 |
| | B2 (10-12) | 10-12 | None | Silty Clay w/ Sand | 5/28/2019 | 0915 / 0930 | 17.1 |
| | B2 (12-14) | 12-14 | None | Silty Clay | 5/28/2019 | 0919 / 0935 | 4.7 |
| B300 | B3 (0-2) | 0-2 | None | Sand w/ Gravel | 5/28/2019 | 0929 / 0952 | 2.8 |
| | *B3 (2-4) | 2-4 | None | Sand w/ Gravel | 5/28/2019 | 0929 / 0952 | 16.4 |
| | B3 (4-6) | 4-6 | None | Silty Sand w/ Gravel | 5/28/2019 | 0935 / 0952 | 2.2 |
| B400 | B4 (0-2) | 0-2 | None | Sand w/ Gravel | 5/28/2019 | 1015 / 1030 | 2.4 |
| | *B4 (2-4) | 2-4 | None | Silty Sand w/ Trace Gravel & Slag | 5/28/2019 | 1015 / 1030 | 2.2 |
| | B4 (4-6) | 4-6 | None | Silty Sand | 5/28/2019 | 1020 / 1030 | 1.5 |
| B400b | B4 (0-2) | 0-2 | None | Sand w/ Gravel | 5/28/2019 | 1045 / 1100 | 1.5 |
| | B4 (2-4) | 2-4 | None | Silty Clay w/ Sand & Gravel | 5/28/2019 | 1045 / 1100 | 1.8 |
| | B4 (4-6) | 4-6 | None | Silty Clay | 5/28/2019 | 1047 / 1102 | 1.4 |
| | B4 (6-8) | 6-8 | None | Silty Clay | 5/28/2019 | 1047 / 1102 | 52.8 |
| | B4 (8-10) | 8-10 | None | Sand w/ Gravel | 5/28/2019 | 1050 / 1105 | 8.3 |
| | B4 (10-12) | 10-12 | None | Silty Clay | 5/28/2019 | 1050 / 1105 | 100+ |
| B500 | B5 (0-2) | 0-2 | None | Sand | 5/28/2019 | 1125 / 1140 | 1.8 |
| | *B5 (2-4) | 2-4 | Strong | Silty Clay w/ Black Fill | 5/28/2019 | 1125 / 1140 | 300+ |
| | B5 (4-6) | 4-6 | Strong | Silty Clay | 5/28/2019 | 1130 / 1145 | 300+ |
| | B5 (6-8) | 6-8 | Strong | Sand w/ Black Fill | 5/28/2019 | 1130 / 1145 | 218 |
| | B5 (8-10) | 8-10 | None | Sand | 5/28/2019 | 1135 /1150 | 29.0 |
| | B5 (10-12) | 10-12 | None | Silty Clay | 5/28/2019 | 1135 / 1150 | 93.8 |
| | B5 (12-14) | 12-14 | None | Silty Clay w/ Sand | 5/28/2019 | 1140 / 1155 | 106.5 |
| B600 | B6 (0-2) | 0-2 | None | Sand w/ Gravel | 5/28/2019 | 1150 / 1205 | 3.5 |
| | *B6 (2-4) | 2-4 | None | Silty Clay | 5/28/2019 | 1150 / 1205 | 4.5 |
| | B6 (4-6) | 4-6 | None | Silty Clay w/ Sand | 5/28/2019 | 1155 / 1210 | 2.0 |
| | B6 (6-8) | 6-8 | Slight | Silty Clay w/ Sand | 5/28/2019 | 1155 / 1210 | 72.5 |
| | B6 (8-10) | 8-10 | None | Silty Sand | 5/28/2019 | 1200 / 1215 | 132 |
| | B6 (10-12) | 10-12 | None | Silty Clay | 5/28/2019 | 1200 / 1215 | 13.4 |
| | B6 (12-14) | 12-14 | None | Sandy Clay | 5/28/2019 | 1205 / 1220 | 50.1 |
| B700 | *B7 (0-2) | 0-2 | None | Sand w/ Gravel | 5/28/2019 | 1237 / 1252 | 26.7 |
| | B7 (2-4) | 2-4 | None | Silty Sand w/ Gravel | 5/28/2019 | 1237 / 1252 | 2.7 |
| | B7 (4-6) | 4-6 | None | Silty Clay | 5/28/2019 | 1240 / 1255 | 2.8 |
| | B7 (6-8) | 6-8 | None | Silty Clay | 5/28/2019 | 1240 / 1255 | 0.9 |
| | B7 (8-10) | 8-10 | None | Silty Clay | 5/28/2019 | 1243 / 1258 | 1.2 |
| | B7 (10-12) | 10-12 | None | Silty Clay | 5/28/2019 | 1243 / 1258 | 0.9 |
| | B7 (12-14) | 12-14 | None | Silty Clay | 5/28/2019 | 1245 / 1300 | 1.3 |
| B800 | B8 (0-2) | 0-2 | None | Sand w/ Gravel | 5/28/2019 | 1310 / 1325 | 7.9 |
| | *B8 (2-4) | 2-4 | Slight | Silty Clay w/ Sand | 5/28/2019 | 1310 / 1325 | 158 |
| | B8 (4-6) | 4-6 | None | Sand w/ Silty Clay | 5/28/2019 | 1315 / 1330 | 180 |
| | B8 (6-8) | 6-8 | None | Silty Clay | 5/28/2019 | 1315 / 1330 | 52.5 |
| | B8 (8-10) | 8-10 | None | Sand | 5/28/2019 | 1320 / 1335 | 22.7 |
| | B8 (10-12) | 10-12 | None | Silty Clay w/ Sand | 5/28/2019 | 1320 / 1335 | 22.0 |
| B900 | B9 (0-2) | 0-2 | None | Sand w/ Gravel | 6/5/2019 | 1253 / 1308 | 1.8 |
| | B9 (2-4) | 2-4 | None | Silty Clay w/ Sand | 6/5/2019 | 1259 / 1314 | 1.2 |
| | B9 (4-6) | 4-6 | None | Silty Clay | 6/5/2019 | 1315 / 1330 | 1.6 |
| | *B9 (6-8) | 6-8 | Strong | Silty Clay | 6/5/2019 | 1327 / 1342 | 300+ |

*Key:*

PID = Photoionization Detector

IUI = Instruments units as isobutylene

* = Submitted for laboratory analysis

fbg = Feet below ground

## Table 2a Soil Sample RCRA Metals Laboratory Results, BMO Properties, Green Bay, Wisconsin

| Sample | | | | | Laboratory Result (mg/kg) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RCRA Metals | | | | | | | |
| Boring Number | Sample Number | Depth (fbg) | Soil Description | Date Collected | Arsenic (total) | Barium | Cadmium | Chromium | Lead (total) | Mercury | Selenium | Silver |
| WDNR RCL for Protection from Direct Contact Risk | | | | Non-Industrial | **8*** [0.677] | 15,300 | 71.1 | NE | 400 | 3.13 | 391 | 391 |
| | | | | Industrial | 8* [3.00] | 100,000 | 985 | NE | 800 | 3.13 | 5,840 | 5,840 |
| WDNR RCL for Protection of Groundwater | | | | | **8*** [0.584] | **364*** [164.8] | **1*** [0.752] | 360,000 | **52*** [27] | 0.208 | 0.52 | 0.849 |
| Background Threshold Value (BTV) | | | | | 8 | 364 | 1 | 44 | 52 | NE | NE | NE |
| B100 | B1 (2-4) | 2-4 | Sandy Silt | 5/28/2019 | 1.7 | 38 | 0.20 J | 8.4 | 32 | 0.037 | < 0.65 | 1.5 |
| B200 | B2 (4-6) | 4-6 | Silty Clay | 5/28/2019 | 3.3 | 96 | 0.16 J | 32 | 8.8 | 0.019 J | < 0.72 | 4.8 |
| B500 | B5 (2-4) | 2-4 | Silty Clay w/ Black Fill | 5/28/2019 | 3.7 | 100 | 0.15 J | 29 | 9.0 | 0.024 | 0.75 J | 4.7 |
| B700 | B7 (0-2) | 0-2 | Sand w/ Gravel | 5/28/2019 | 5.3 | 25 | 0.22 | 11 | 28 | 0.080 | < 0.59 | 1.2 |
| B800 | B8 (2-4) | 2-4 | Sand w/ Gravel | 5/28/2019 | 2.7 | 69 | 0.14 J | 24 | 5.3 | 0.021 | < 0.71 | 3.6 |

*Key:*

RCRA = Resource Conservation and Recovery Act
<x = compound not detected to a detection limit of x
**XXX** = exceeds WDNR Non-Industrial RCL for direct contact risk
**XXX** = exceeds WDNR Industrial RCL for direct contact risk
XXX = exceeds WDNR RCL for protection of groundwater
mg/kg = milligram per kilogram
NE = not established by WAC (Wis. Adm. Code) or WDNR Soil RCL Summary Table
"J" = analyte detected between the limit of detection and limit of quantification
RCL = residual contaminant level
fbg = feet below ground

*Notes:* WDNR soil RCL Summary table (December 2018) used to establish RCLs for groundwater protection and direct contact.
For the purpose of this evaluation under ch. NR 700, background threshold values are being considered as representative of background conditions.
However, constituent concentrations less than background threshold values may represent a potential health risk if concentrations are greater than health-based standards.

## Table 2b Soil Sample Polynuclear Aromatic Hydrocarbon Laboratory Results, BMO Properties, Green Bay, Wisconsin

| | | | | | PAH Compound Laboratory Result (µg/kg) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Boring Number** | **Sample Number** | **Depth (fbg)** | **Soil Description** | **Date Collected** | **Acenaphthene** | **Acenaphthylene** | **Anthracene** | **Benzo(a) anthracene** | **Benzo(a)pyrene** | **Benzo(b) fluoranthene** | **Benzo(g,h,i) perylene** | **Benzo(k) fluoranthene** | **Chrysene** | **Dibenzo(a,h) anthrancene** | **Fluoranthene** | **Fluorene** | **Indeno(1,2,3-cd)pyrene** | **1-Methyl naphthalene** | **2-Methyl naphthalene** | **Naphthalene** | **Phenanthrene** | **Pyrene** |
| WDNR RCL for Protection from Direct Contact Risk | | | | Non-Industrial | 3,590,000 | NE | 17,900,000 | 1,140 | 115 | 1,150 | NE | 11,500 | 115,000 | 115 | 2,290,000 | 2,390,000 | 1,150 | 17,600 | 239,000 | 5,520 | NE | 1,790,000 |
| | | | | Industrial | 45,200,000 | NE | 100,000,000 | 20,800 | 2,110 | 21,100 | NE | 211,000 | 2,110,000 | 2,110 | 30,100,000 | 30,100,000 | 21,100 | 72,700 | 3,010,000 | 24,100 | NE | 22,600,000 |
| WDNR RCL for Protection of Groundwater | | | | | NE | NE | 196,900 | NE | 470 | 478 | NE | NE | 144 | NE | 88,877 | 14,829 | NE | NE | NE | 658 | NE | 54,545 |
| B100 | B1 (2-4) | 2-4 | Sandy Silt | 5/28/2019 | 140 | 15 J | 350 | **1,300** | **1,400** | **2,200** | 620 | 750 | 1,300 | **190** | 2,500 | 120 | 570 | 61 J | 60 J | 66 | 1,400 | 2,300 |
| B200 | B2 (4-6) | 4-6 | Silty Clay | 5/28/2019 | < 7.4 | < 5.4 | < 6.9 | < 5.5 | < 7.9 | < 8.9 | < 13 | < 8.9 | < 11 | < 7.9 | < 7.6 | < 5.8 | < 11 | < 10 | < 7.6 | 28 J | < 5.7 | < 8.2 |
| B500 | B5 (2-4) | 2-4 | Silty Clay w/ Black Fill | 5/28/2019 | < 7.1 | < 5.2 | < 6.6 | 9.1 J | 16 J | 16 J | < 13 | < 12 | < 11 | < 7.6 | 13 J | < 5.6 | < 10 | < 9.7 | < 7.3 | < 6.1 | < 5.5 | 16 J |
| B700 | B7 (0-2) | 0-2 | Sand w/ Gravel | 5/28/2019 | 36 J | 8.8 J | 120 | 480 | **490** | 770 | 300 | 300 | 560 | 80 | 1,400 | 41 | 260 | 10 J | 12 J | 9.0 J | 770 | 1,100 |
| B800 | B8 (2-4) | 2-4 | Sand w/ Gravel | 5/28/2019 | < 7.4 | < 5.4 | < 6.9 | < 5.5 | 9.7 J | < 8.9 | < 13 | < 12 | < 11 | < 8.0 | < 7.6 | < 5.8 | < 11 | < 10 | < 7.6 | < 6.3 | < 5.7 | < 8.2 |

*Key:*

<x = compound not detected to a detection limit of x
**XXX** = exceeds WDNR Non-Industrial RCL for direct contact risk
**XXX** = exceeds WDNR Industrial RCL for direct contact risk
XXX = exceeds WDNR RCL for protection of groundwater
µg/kg = milligram per kilogram
NE = not established by WAC (Wis. Adm. Code) or WDNR Soil RCL Summary Table
"J" = analyte detected between the limit of detection and limit of quantification
RCL = residual contaminant level
fbg = feet below ground

*Notes:* WDNR soil RCL Summary table (December 2018) used to establish RCLs for groundwater protection and direct contact.

# Table 2c Soil Sample Volatile Organic Compound Laboratory Results, BMO Properties, Green Bay, Wisconsin

| Sample | | | | | | Relevant and Significant Volatile Organic Compound Laboratory Result (µg/kg) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Boring Number | Sample Number | Depth (fbg) | Description | PID Response (iui) | Date Collected | 1,2,4-Trimethyl benzene | 1,3,5-Trimethyl benzene | Benzene | Ethylbenzene | Isopropylbenzene | Methyl tert-butyl ether (MTBE) | Methylene chloride | n-Butylbenzene | n-Propylbenzene | Naphthalene | p-Isopropyltoluene | sec-Butylbenzene | Tetrachloroethene (PCE) | Toluene | Total Xylenes |
| WDNR NR 720 Direct Contact RCL | | | | | Non-Industrial | 219,000 | 182,000 | 1,600 | 8,020 | NE | 63,800 | 61,800 | 108,000 | NE | 5,520 | 162,000 | 145,000 | 33,000 | 818,000 | 260,000 |
| | | | | | Industrial | 219,000 | 182,000 | 7,070 | 35,400 | NE | 282,000 | 1,150,000 | 108,000 | NE | 24,100 | 162,000 | 145,000 | 145,000 | 818,000 | 260,000 |
| WDNR NR 720 Groundwater Protection RCL | | | | | | 1378.7 combined | | 5.1 | 1,570 | NE | 27 | 2.6 | NE | NE | 658.2 | NE | NE | 4.5 | 1,107.2 | 3,960 |
| B100 | B1 (2-4) | 2-4 | Sandy Silt | 1.8 | 5/28/2019 | 41 J | < 25 | < 9.5 | < 12 | < 25 | < 26 | < 110 | < 25 | < 27 | 32 J | < 24 | < 26 | 220 | 11 J | 25 J |
| B200 | B2 (4-6) | 4-6 | Silty Clay | 197.4 | 5/28/2019 | < 27 | < 29 | < 11 | < 14 | 160 | < 30 | < 120 | 740 | 330 | 28 J | < 28 | 830 | < 28 | < 11 | < 17 |
| B300 | B3 (2-4) | 2-4 | Silty Clay | 16.4 | 5/28/2019 | < 26 | < 27 | < 11 | < 13 | < 28 | < 28 | < 120 | < 28 | < 30 | < 24 | < 26 | < 29 | 56 J | < 11 | < 16 |
| B400 | B4 (2-4) | 2-4 | Silty Sand w/ Trace Gravel & Slag | 2.2 | 5/28/2019 | < 23 | < 25 | < 9.4 | < 12 | < 25 | < 25 | < 110 | < 25 | < 27 | < 22 | < 23 | < 26 | 110 | < 9.5 | < 14 |
| B500 | B5 (2-4) | 2-4 | Silty Clay w/ Black Fill | 300+ | 5/28/2019 | 300 | < 27 | < 10 | < 13 | < 27 | < 28 | < 110 | < 27 | < 29 | < 24 | 300 | 200 | < 26 | < 10 | < 15 |
| B600 | B6 (2-4) | 2-4 | Silty Clay | 4.5 | 5/28/2019 | < 27 | < 29 | < 11 | < 14 | < 29 | < 30 | < 120 | < 29 | < 31 | < 25 | < 28 | < 30 | < 28 | < 11 | < 17 |
| B700 | B7 (0-2) | 0-2 | Sand w/ Gravel | 26.7 | 5/28/2019 | < 22 | < 24 | < 9.1 | < 11 | < 24 | < 25 | < 100 | < 24 | < 26 | < 21 | < 23 | < 25 | < 23 | < 9.2 | < 14 |
| B800 | B8 (2-4) | 2-4 | Sand w/ Gravel | 158 | 5/28/2019 | < 28 | < 30 | < 12 | < 14 | < 30 | < 31 | < 130 | < 31 | < 33 | < 26 | < 29 | < 31 | < 29 | < 12 | < 17 |
| B900 | B9 (6-8) | 6-8 | Silty Clay | 300+ | 6/5/2019 | <29 | <30 | <12 | <15 | <31 | <32 | <130 | <31 | <33 | <27 | <29 | <32 | <30 | <12 | <18 |

*Key:*

<x = compound not detected to a detection limit of x
**XXX** = exceeds WDNR Non-Industrial RCL for direct contact risk
**XXX** = exceeds WDNR Industrial RCL for direct contact risk
XXX = exceeds WDNR RCL for protection of groundwater
µg/kg = microgram per kilogram
RCL = residual contaminant level
fbg = feet below ground

*Notes:* WDNR soil RCL Summary table (December 2018) used to establish RCLs for groundwater protection and direct contact.

## Table 2d Soil Sample Polychlorinated Biphenyls Laboratory Results, BMO Properties, Green Bay, Wisconsin

| Borehole Number | Sample Number | Date | Depth (fbg) | Soil Description | PID Response (iui) | Relevant and Significant Polychlorinated Biphenyl Laboratory Result (mg/kg) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aroclor - 1016 | Aroclor - 1221 | Aroclor - 1232 | Aroclor - 1242 | Aroclor - 1248 | Aroclor - 1254 | Aroclor - 1260 | Total PCBs |
| WDNR Direct Contact RCL | | | | | Non-Industrial | 4,110 | 213 | 190 | 235 | 236 | 239 | 243 | 234 |
| | | | | | Industrial | 28,000 | 883 | 792 | 972 | 975 | 988 | 1,000 | 967 |
| WDNR RCL for Groundwater Protection | | | | | | NE | NE | NE | NE | NE | NE | NE | 9.4 |
| B200 | B2 (4-6) | 5/28/2019 | 4-6 | Silty Clay | 197.4 | < 7.3 | < 9.1 | < 9.0 | < 6.8 | < 8.1 | < 4.5 | < 10 | < 54.8 |
| B500 | B5 (2-4) | 5/28/2019 | 2-4 | Silty Clay w/ Black Fill | 300+ | < 6.7 | < 8.4 | < 8.3 | < 6.3 | < 7.5 | < 4.1 | < 9.3 | < 50.6 |

*Key:*

<x = compound not detected to a detection limit of x
**XXX** = exceeds WDNR Non-Industrial RCL for direct contact risk
**XXX** = exceeds WDNR Industrial RCL for direct contact risk
XXX = exceeds WDNR RCL for protection of groundwater
RCL = residual contaminant level
mg/kg = milligram per kilogram
NE = not established by Wisconsin Administrative Code (Wis. Adm. Code) or WDNR Soil RCL Summary Table
"J" = analyte detected between limit of detection and limit of quantification
PID = photoionization detector
iui = Instruments Units of Isobutylene
fbg = feet below grade

*Notes:* WDNR soil RCL Summary table (December 2018) used to establish RCLs for groundwater protection and direct contact.

## Table 3a Groundwater Sample RCRA Metals Laboratory Results, BMO Properties, Green Bay, Wisconsin

| Well Number | Date Collected | Laboratory Results (µg/L) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | RCRA Metals | | | | | | | |
| | | Arsenic | Barium | Cadmium | Chromium | Lead | Mercury | Selenium | Silver |
| NR 140 Preventive Action Limit | | 1 | 400 | 0.5 | 10 | 1.5 | 0.2 | 10 | 10 |
| NR 140 Enforcement Standard | | 10 | 2000 | 5 | 100 | 15 | 2 | 50 | 50 |
| TW100 | 5/30/2019 | 0.80 J | 66 | < 0.17 | < 1.1 | 0.28 J | < 0.098 | 1.1 J | < 0.12 |
| TW600 | 5/30/2019 | ***1.5*** | 240 | < 0.17 | < 1.1 | < 0.19 | < 0.098 | < 0.98 | < 0.12 |
| TW700 | 5/30/2019 | 0.96 J | 100 | < 0.17 | ***19*** | 0.81 | < 0.098 | ***11*** | < 0.12 |

*Key:*

| | |
|---|---|
| RCRA | = Resource Conservation and Recovery Act |
| <X | = analyte not detected above method detection limit |
| "J" | = Analyte detected between Limit of Detection and Limit of Quantitation |
| µg/L | = microgram per liter |
| ***X*** | = concentration detected above Chapter NR 140, Wisconsin Administrative Code(NR 140, Wis. Adm. Code) preventive action limit (PAL) |
| **X** | = concentration detected above NR 140, Wis. Adm. Code enforcement standard (ES) |

## Table 3b Groundwater Sample Polynuclear Aromatic Hydrocarbon Laboratory Results, BMO Properties, Green Bay, Wisconsin

| Well Number | Date Collected | Polynuclear Aromatic Hydrocarbons (µg/L) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Acenaphthene | Acenaphthylene | Anthracene | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(g, h, i)perylene | Benzo(k)fluoranthene | Chrysene | Dibenzo(a, h)anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-cd)pyrene | 1-Methyl naphthalene | 2-Methyl naphthalene | Naphthalene | Phenanthrene | Pyrene |
| NR 140 Preventive Action Limit | | NE | NE | 600 | NE | 0.02 | 0.02 | NE | NE | 0.02 | NE | 80 | 80 | NE | NE | NE | 10 | NE | 50 |
| NR 140 Enforcement Standard | | NE | NE | 3,000 | NE | 0.2 | 0.2 | NE | NE | 0.2 | NE | 400 | 400 | NE | NE | NE | 100 | NE | 250 |
| TW100 | 5/30/2019 | < 0.25 | < 0.21 | < 0.27 | 0.24 | ***0.26*** | ***0.34*** | < 0.30 | < 0.051 | ***0.23*** | < 0.041 | < 0.36 | < 0.20 | 0.19 | < 0.24 | < 0.052 | < 0.25 | < 0.24 | < 0.34 |
| TW600 | 5/30/2019 | < 0.25 | < 0.22 | < 0.27 | < 0.046 | < 0.081 | < 0.066 | < 0.31 | < 0.052 | < 0.056 | < 0.041 | < 0.37 | < 0.20 | < 0.061 | < 0.25 | < 0.053 | < 0.25 | < 0.25 | < 0.35 |
| TW700 | 5/30/2019 | < 0.25 | < 0.22 | < 0.27 | < 0.046 | < 0.081 | < 0.066 | < 0.31 | < 0.052 | < 0.056 | < 0.042 | < 0.37 | < 0.20 | < 0.061 | < 0.25 | < 0.053 | < 0.25 | < 0.25 | < 0.35 |

*Key:*

| | |
|---|---|
| <X | = analyte not detected above method detection limit |
| "J" | = Analyte detected between Limit of Detection and Limit of Quantitation |
| µg/L | = micrograms per liter |
| NE | = not established |
| ***X*** | = Concentration detected above Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit (PAL) |
| ***X*** | = Concentration detected above NR 140, Wis. Adm. Code enforcement standard (ES) |

**Table 3c Groundwater Sample Volatile Organic Compound Laboratory Results, BMO Properties, Green Bay, Wisconsin**

| Well Number | Date Collected | Volatile Organic Compounds (µg/L) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Benzene | sec-Butylbenzene | tert-Butylbenzene | cis-1,2-Dichloroethene | Ethylbenzene | Isopropylbenzene | Methylene Chloride | MTBE | Naphthalene | n-Butylbenzene | N-Propylbenzene | Tetrachloroethene (PCE) | Toluene | Trichloroethene (TCE) | Vinyl Chloride | Total Xylenes |
| NR 140 Preventive Action Limit | | 0.5 | NE | NE | 7 | 140 | NE | 0.5 | 12 | 10 | NE | NE | 0.5 | 160 | 0.5 | 0.02 | 400 |
| NR 140 Enforcement Standard | | 5 | NE | NE | 70 | 700 | NE | 5 | 60 | 100 | NE | NE | 5 | 800 | 5 | 0.2 | 2,000 |
| TW100 | 5/30/2019 | < 0.15 | < 0.40 | < 0.40 | < 0.41 | < 0.18 | < 0.39 | < 1.6 | < 0.39 | < 0.34 | < 0.39 | < 0.41 | ***1.8*** | < 0.15 | 0.35 J | < 0.22 | < 0.22 |
| TW600 | 5/30/2019 | 0.22 J | 7.6 | 2 | 0.73 J | < 0.18 | 9.5 | < 1.6 | < 0.39 | 0.47 J | 2.7 | 10 | < 0.37 | < 0.15 | < 0.16 | ***0.63 J*** | < 0.22 |
| TW700 | 5/30/2019 | < 0.15 | < 0.40 | <0.40 | < 0.41 | < 0.18 | < 0.39 | < 1.6 | < 0.39 | < 0.34 | < 0.39 | < 0.41 | < 0.37 | < 0.15 | < 0.16 | < 0.20 | < 0.22 |

*Key:*

| | |
|---|---|
| "J" | = Analyte detected between Limit of Detection and Limit of Quantitation |
| µg/L | = microgram per liter |
| NE | = not established |
| ***X*** | = Concentration detected above Chapter NR 140, Wisconsin Administrative Code (NR 140, Wis. Adm. Code) preventive action limit (PAL) |
| **X** | = Concentration detected above NR 140, Wis. Adm. Code enforcement standard (ES) |

**Table 4: Sub Slab Vapor Laboratory Results, BMO Properties, Green Bay, Wisconsin**

| Sample Location Building Address | Sample Point | Vacuum Testing of Sampling Fittings** (Pass/Fail) | Helium Shroud QA/QC Testing | | Date Sampled | Date Analyzed | Sample Location | Sample Duration (minutes) | Detected Volatile Organic Compounds (micrograms per cubic meter) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Helium Concentration Under Shroud | Helium Concentration in Sample | | | | | 1,2,4-Trichlorobenzene | 1,2,4-Trimethylbenzene | 1,3,5-Trimethylbenzene | 2-Butanone (MEK) | Acetone | Benzene | Carbon disulfide | Carbon tetrachloride | Chloromethane | Cyclohexane | Dichlorodifluoro-methane | Ethylbenzene | Hexane | Isopropyl alcohol | Isopropylbenzene | m-Xylene & p-Xylene | Naphthalene | o-Xylene | Styrene | Tetrachloroethene | Toluene | Trichloroethene | Trichlorofluoro-methane | Xylenes, Total |
| Target Sub-Slab Air Concentration (micrograms per cubic meter) | | | | | | | Residential | | 69.5 | 2,100 | 2,100 | 174,000 | 320,000 | 120 | 73 | 160 | 3,100 | 209,000 | 3,300 | 370 | 24,300 | 6,950 | 13,900 | 3,300 | 28 | 3,300 | 34,800 | 1,400 | 170,000 | 70 | NE | 3,300 |
| | | | | | | | Small Commercial | | 292 | 8,700 | 8,700 | 730,000 | 1,400,000 | 530 | 31,000 | 670 | 13,000 | 876,000 | 15,000 | 1,600 | 102,000 | 29,200 | 58,400 | 440 | 120 | 440 | 146,000 | 6,000 | 730,000 | 290 | NE | 15,000 |
| | | | | | | | Large Commercial/Industrial | | NE | 26,000 | 26,000 | NE | NE | 1,600 | NE | 2,000 | 39,000 | NE | 44,000 | 4,900 | NE | NE | NE | 44,000 | 360 | 44,000 | NE | 18,000 | 2,200,000 | 880 | NE | 44,000 |
| 117 South Chestnut Avenue | VP1 | Pass | 64% | 0% | 06/05/19 | 02/26/19 | ground floor sub-slab | 30 | 0.63 J B | 3.8 | 1.0 J | 3.4 J | 79 | 1.7 | 1.1 J | 0.36 J | 0.98 J | 0.56 J | 72 | 1.3 J | 1.1 J | 4.5 J | 0.27 J | 3.0 J | 1.1 J B | 1.4 J | 0.65 J | 180 | 4.9 | 0.62 J | 1.3 J | 4.4 |
| 117 South Chestnut Avenue | VP2 | Pass | 66% | 0% | 06/05/19 | 02/26/19 | ground floor sub-slab | 30 | < 1.3 | 3.6 J | < 0.47 | 3.3 J | 51 J | 0.60 J | 1.6 J | < 0.35 | < 0.62 | < 0.17 | 220 | 0.90 J | < 0.49 | 4.9 J | < 0.47 | 2.2 J | 1.5 J B | 1.3 J | 1.0 J | 710 | 2.4 J | < 0.81 | < 1.3 | 3.4 J |

Notes:

* = screening levels from USEPA Region 3 Screening Level Table - November 2017 and, if applicable, representing 1 in 100,000 cancer risk

<x = analyte not detected to a detection limit of x

"J" = analyte exceeds the limit of detection but is below the limit of quantification

** = a vacuum of greater than 50 inches of water was applied to the hoses and fittings used to collect each sample. A passing grade was given if no noticable drop in vacuum was observed after at least 1 minute

# APPENDICES

# APPENDIX A – SOIL BORING LOGS

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI
BORING NUMBER: B100
LOGGED BY: TH ~~BW~~

5/20/19

| | | | |
|---|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: ~~5/7/2019~~ | |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 0830 | |
| BORING DEPTH: 14' | GROUND SURFACE: Asphalt | END TIME: | |
| SCREEN INTERVAL: 4-14' | FLUID: Y N TYPE: | COMPLETED AS: TW100 | |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | B100 | Direct Push | 12" | 0835 | 0850 | 2.1 | 3" Asphalt<br>6" sand/gravel fill then<br>Sandy silt<br>Reddish Brown 5 YR 4/3 |
| 2-4 | VOC<br>RCRA<br>PAH | | 12" | 0835 | 0850 | 1.8 | SAA<br>Trace slag |
| 4-6 | | | 24" | 0840 | 0855 | 1.8 | silty clay from<br>low to moderate plasticity<br>chemical odor<br>Reddish Brown 5 YR 4/4 |
| 6-8 | | | 24" | 0840 | 0855 | 19.7 | SAA<br>moistens w/ depth |
| 8-10 | | | 24" | 0845 | 0900 | 26.7 | SAA<br>med to coarse Sand 8-9'<br>w/ trace gravel<br>SAT @ 8' |
| 10-12 | | | 24" | 0845 | 0900 | 17.0 | SAA |
| 12-14 | | | 24" | 0850 | 0905 | 5.1 | SAA<br>very plastic clay<br>trace sand + silt<br>EOB @ 14' |
| 14-16 | | | | | | | |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI
BORING NUMBER: B200
LOGGED BY: TH ~~EJW~~

| | | |
|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: 5/28/19 ~~5/7/2019~~ |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 0855 |
| BORING DEPTH: 14' | GROUND SURFACE: Asphalt | END TIME: |
| SCREEN INTERVAL: — | FLUID: Y N TYPE: | COMPLETED AS: B200 |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | B200 | Direct Push | 6" | 0900 | 0915 | 2.1 | 4" Asphalt<br>Sand + gravel fill<br>silty clay red/brown 5YR 4/4 |
| 2-4 | | | 6" | 0900 | 0915 | 2.7 | SAA<br>then ~1" black fill |
| 4-6 | VOC<br>PAH<br>RCRA/PCB | | 24" | 0916 | 0925<br>~~997~~ | 197.4 | silty clay stiff chemical odor<br>low plasticity<br>red/brown 5 YR 5/3 |
| 6-8 | | | 24" | 0910 | 0925 | 105.6 | SAA<br>sandy clay @ 7' very plastic<br>moist |
| 8-10 | | | 24" | 0915 | 0930 | 5.5 | SAA @ 8'<br>silty sand 8'-9'<br>Then red/brown silty clay<br>very plastic |
| 10-12 | | | 24" | 0915 | 0930 | 17.1 | SAA silty clay w/ some sand<br>oxidation nil |
| 12-14 | | | 24" | 0919 | 0935 | 4.7 | SAA<br>EOB @ 14 ft bgs |
| 14-16 | | | | | | | |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI
BORING NUMBER: B300
LOGGED BY: ~~TH~~ ~~EJW~~

| | | | |
|---|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: ~~5/7/2019~~ 5/28/19 |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 0920 |
| BORING DEPTH: 5' | GROUND SURFACE: Asphalt | END TIME: |
| SCREEN INTERVAL: — | FLUID: Y N TYPE: | COMPLETED AS: B300 |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | B300 | Direct Push | 8" | 0929 | 0952 | 2.8 | 4" Asphalt<br>Sand & gravel fill |
| 2-4 | VOC | | 8" | 0929 | 0952 | 16.4 | Sand fill w/ some gravel & concrete chips |
| 4-6 | | | 12" | 0935 | 0952 | 2.2 | refusal @ 5', moved & hit refusal again @ 5'<br>silty sand w/ some small gravel from 4'-5'<br>EOB @ 5' bgs |
| 6-8 | | | | | | | Attempted again, refusal at ~7' - appears to be concrete |
| 8-10 | | | | | | | |
| 10-12 | | | | | | | |
| 12-14 | | | | | | | |
| 14-16 | | | | | | | |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI
BORING NUMBER: BH00
LOGGED BY: TH ~~EJW~~

5/25/19

| | | | |
|---|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: ~~5/7/2019~~ | |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 1010 | |
| BORING DEPTH: 6' | GROUND SURFACE: Asphalt | END TIME: | |
| SCREEN INTERVAL: — | FLUID: Y N TYPE: | COMPLETED AS: BH00 | |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | BH00 | Direct Push | 12" | 1015 | 1030 | 2.4 | 4" Asphalt Sand + gravel fill |
| 2-4 | VOC | | 12" | 1015 | 1030 | 2.2 | silty sand w/ trace small gravel + slag |
| 4-6 | | | 16" | 1020 | 1035 | 1.5 | SAA<br>Refusal @ 6' bgs |
| 6-8 | | | | | | | moved ~4' north<br>EOB @ 6' bgs |
| 8-10 | | | | | | | Attempted once more see log for BH00b. |
| 10-12 | | | | | | | |
| 12-14 | | | | | | | |
| 14-16 | | | | | | | |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI
BORING NUMBER: B400b
LOGGED BY: TH ~~EJW~~

5/23/19

| | | |
|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: ~~5/7/2019~~ |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 1042 |
| BORING DEPTH: 12' | GROUND SURFACE: | END TIME: |
| SCREEN INTERVAL: — | FLUID: Y N TYPE: | COMPLETED AS: B400b |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | | Direct Push | 12" | 1045 | 1100 | 1.5 | 4" Asphalt<br>Sand + gravel fill |
| 2-4 | | | 12" | 1045 | 1100 | 1.8 | SAA<br>Thin silty clay w/ some sand + gravel |
| 4-6 | | | 14" | 1047 | 1102 | 1.4 | Silty clay moderate plasticity moist |
| 6-8 | | | 14" | 1047 | 1102 | 52.8 | silty clay mid to low plasticity wet<br>Sat @ 7' |
| 8-10 | | | 14" | 1050 | 1105 | 8.3 | SAA<br>Sand + gravel (fine) from 8-9' |
| 10-12 | | | 14" | 1050 | 1105 | 100+ | SAA<br>EOB @ 12' |
| 12-14 | | | | | | | |
| 14-16 | | | | | | | |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI
BORING NUMBER: B500
LOGGED BY: JTH EJW

| | | |
|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: 5/7/2019 |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 1115 |
| BORING DEPTH: 14' | GROUND SURFACE: Asphalt | END TIME: |
| SCREEN INTERVAL: — | FLUID: Y N TYPE: | COMPLETED AS: B500 |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | B500 | Direct Push | 12" | 1125 | 1140 | 1.8 | Sand M-C Grained red/brown 5YR 4/4 |
| 2-4 | VOC RCRA PAH/PCB | | 12" | 1125 | 1140 | 7300 | 3" black fill - strong chem odor then silty clay med/low plasticity red/brown 5YR 4/4 |
| 4-6 | | | 24" | 1130 | 1145 | 7300 | Silty clay SAA Sat ~3' bgs |
| 6-8 | | | 24" | 1130 | 1145 | 218 | 2" black layer similar to above then M-C sand very wet chem odor |
| 8-10 | | | 24" | 1135 | 1150 | 29.0 | SAA change to silty clay ~9.5' bgs |
| 10-12 | | | 24" | 1135 | 1150 | 93.8 | Silty clay very wet 5YR 4/4 |
| 12-14 | | | 24" | 1140 | 1155 | 106.5 | SAA sandy/silty clay |
| 14-16 | | | | | | | EOB @ 14' bgs |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI

BORING NUMBER: B600
LOGGED BY: TH ~~EJW~~ 5/28/19

| | | |
|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: ~~5/7/2019~~ |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 1140 |
| BORING DEPTH: 14' | GROUND SURFACE: Asphalt | END TIME: |
| SCREEN INTERVAL: 4-14' | FLUID: Y N TYPE: | COMPLETED AS: TW600 |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | B600 | Direct Push | 12" | 1150 | 1205 | 3.5 | 4" Asphalt<br>Sand + gravel fill |
| 2-4 | VOC | | 12" | 1150 | 1205 | 4.5 | silty clay 5YR 4/3<br>low plasticity<br>Sat @ 2.5' bgs |
| 4-6 | | | 24" | 1155 | 1210 | 2.0 | SAA<br>Trace Sand |
| 6-8 | | | 24" | 1155 | 1210 | 72.5 | Mottled black staining<br>+ slight chem odor |
| 8-10 | | | 20" | 1200 | 1215 | 132 | Silty sand from 8-9'<br>then SAA silty clay |
| 10-12 | | | 20" | 1200 | 1215 | 13.4 | SAA |
| 12-14 | | | 24" | 1205 | 1220 | 50.1 | Sandy clay very wet<br>EOB 14' bgs |
| 14-16 | | | | | | | Screened 4-14' |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI
BORING NUMBER: B700
LOGGED BY: ~~TH~~ ~~EW~~

5/28/19

| | | |
|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: ~~5/7/2019~~ |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 12:15 |
| BORING DEPTH: 14' | GROUND SURFACE: Grass | END TIME: |
| SCREEN INTERVAL: 4-14' | FLUID: Y N TYPE: | COMPLETED AS: TW700 |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | B700<br>VOC<br>PAH/RCRA | Direct<br>Push | 18" | 1237 | 1252 | 26.7 | 6" Topsoil<br>then Sand & gravel fill |
| 2-4 | | | 18" | 1237 | 1252 | 2.7 | silty sand w/ trace gravel to 3.5'<br>then silty clay w/ orange staining |
| 4-6 | | | 24" | 1240 | 1255 | 2.8 | SAA to 5' then silty clay 5YR 4/3<br>Sat ~4' Bgs |
| 6-8 | | | 24" | 1240 | 1255 | 0.9 | SAA |
| 8-10 | | | 18" | 1243 | 1258 | 1.2 | SAA |
| 10-12 | | | 18" | 1243 | 1258 | 0.9 | SAA |
| 12-14 | | | 18" | 1245 | 1300 | 1.3 | SAA<br>EOB @ 14' Bgs |
| 14-16 | | | | | | | Screened 4-14' |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI

BORING NUMBER: B600
LOGGED BY: ~~AM~~ ~~EJW~~

5/2/19

| | | |
|---|---|---|
| ELEVATION: | DRILLER: Geiss Soil and Samples, LLC | DATE: ~~5/7/2019~~ |
| BORING DIAMETER: 2" | EQUIPMENT: Geoprobe | START TIME: 1305 |
| BORING DEPTH: 14' | GROUND SURFACE: Asphalt | END TIME: 1340 |
| SCREEN INTERVAL: 4-14' | FLUID: Y N TYPE: | COMPLETED AS: TW600 |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | B600 | Direct Push | 12" | 1310 | 1325 | 7.9 | 4" Asphalt Coarse sand w/ gravel |
| 2-4 | VOC DAM RCRA | | 12" | 1310 | 1325 | 158 | Silty clay w/ sand 5YR 4/4 Slight petro/chem odor |
| 4-6 | | | 24" | 1315 | 1330 | 180 | Coarse sand to 5' then silty clay |
| 6-8 | | | 24" | 1315 | 1330 | 52.5 | SAA |
| 8-10 | | | 24" | 1320 | 1335 | 22.7 | coarse sand |
| 10-12 | | | 24" | 1320 | 1335 | 22.0 | Sandy/silty clay |
| 12-14 | | | 0" | | | | No recovery EOB @ 14' BGS |
| 14-16 | | | | | | | Screened 4-14 |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# BORING LOG

Stantec

PROJECT NUMBER: BMO Harris Bank Properties
LOCATION: 117 South Chestnut Ave, Green Bay, WI
BORING NUMBER: B900
LOGGED BY: TH ~~EJW~~

| | | |
|---|---|---|
| ELEVATION: | DRILLER: ~~Geiss Soil and Samples, LLC~~ | DATE: 6/5/19 ~~5/7/2019~~ |
| BORING DIAMETER: 2" | EQUIPMENT: ~~Geoprobe~~ HAND AUGER | START TIME: 1245 |
| BORING DEPTH: 8' | GROUND SURFACE: ASPHALT | END TIME: 1340 |
| SCREEN INTERVAL: — | FLUID: Y N TYPE: | COMPLETED AS: B900 |

| DEPTH | SAMPLE | BLOWS | RECOVERY | TT | TA | PID | SOIL DESCRIPTION & COMMENTS |
|---|---|---|---|---|---|---|---|
| 0-2 | B900 | Direct Push | 24" | 1253 | 1308 | 1.8 | 2" Asphalt<br>6" Sand & gravel fill<br>Then silty clay<br>~6" black silt fill |
| 2-4 | | | 24" | 1259 | 1314 | 1.2 | silty clay with sand |
| 4-6 | | | 24" | 1315 | 1330 | 1.6 | silty clay |
| 6-8 | VOC | | 24" | 1327 | 1342 | 300+ | SAA<br>Chemical odor |
| 8-10 | | | | | | | EOB @ 8 ft bgs |
| 10-12 | | | | | | | |
| 12-14 | | | | | | | |
| 14-16 | | | | | | | |
| 16-18 | | | | | | | |
| 18-20 | | | | | | | |

# APPENDIX B – SOIL BOREHOLE ABANDONMENT FORMS

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B200

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) 

**Notice:** Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☒ **Verification Only of Fill and Seal**

**Route to DNR Bureau:**
☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other:

## 1. Well Location Information

| County | WI Unique Well # of Removed Well | Hicap # |
|---|---|---|
| BROWN | | |

| Latitude / Longitude (see instructions) | Format Code | Method Code |
|---|---|---|
| 44.516045 N | ☒ DD ☐ DDM | ☐ GPS008 ☒ SCR002 ☐ OTH001 |
| -88.023109 W | | |

| ¼ / ¼ | ¼ | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # PC 1W | | | N | ☐ E ☐ W |

Well Street Address: 117 S. CHESTNUT AVENUE

| Well City, Village or Town | Well ZIP Code |
|---|---|
| GREEN BAY | 54303 |

| Subdivision Name | Lot # |
|---|---|
| | |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| END OF SAMPLING | |

## 2. Facility / Owner Information

Facility Name: BMO PROPERTIES

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner: BMO HARRIS BANK NA

Present Well Owner: BMO HARRIS BANK NA

Mailing Address of Present Owner: 111 W. MONROE STREET

| City of Present Owner | State | ZIP Code |
|---|---|---|
| CHICAGO | IL | 60603 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 05/28/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): DIRECT PUSH

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| — | — |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| — | — |

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| — | — |

## 4. Pump, Liner, Screen, Casing & Sealing Material

| | | | |
|---|---|---|---|
| Pump and piping removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) perforated? | ☐ Yes | ☐ No | ☒ N/A |
| Screen removed? | ☐ Yes | ☐ No | ☒ N/A |
| Casing left in place? | ☐ Yes | ☐ No | ☒ N/A |
| Was casing cut off below surface? | ☐ Yes | ☐ No | ☒ N/A |
| Did sealing material rise to surface? | ☒ Yes | ☐ No | ☐ N/A |
| Did material settle after 24 hours? | ☐ Yes | ☒ No | ☐ N/A |
| If yes, was hole retopped? | ☐ Yes | ☐ No | ☒ N/A |
| If bentonite chips were used, were they hydrated with water from a known safe source? | ☐ Yes | ☐ No | ☒ N/A |

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain): GRAVITY

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

*For Monitoring Wells and Monitoring Well Boreholes Only:*
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

## 5. Material Used to Fill Well / Drillhole

| From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|
| BENTONITE CHIPS | | | |
| Surface | 14 Ft | 0.305 Ft³ | |
| | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| GEISS SOIL & SAMPLES | | 05/28/2019 |

| Street or Route | Telephone Number |
|---|---|
| W4490 POPE ROAD | (715) 539-3928 |

| City | State | ZIP Code |
|---|---|---|
| MERRILL | WI | 54452 |

Signature of Person Doing Work: (STANTEC FOR GEISS)

Date Signed: 06/04/2019

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B300

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) 

**Notice:** Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☒ **Verification Only of Fill and Seal**

**Route to DNR Bureau:**
☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other:

## 1. Well Location Information

| County | WI Unique Well # of Removed Well | Hicap # |
|---|---|---|
| BROWN | | |

| Latitude / Longitude (see instructions) | Format Code | Method Code |
|---|---|---|
| 44.516045 N | ☒ DD | ☐ GPS008 |
| -88.023109 W | ☐ DDM | ☒ SCR002 |
| | | ☐ OTH001 |

| ¼ / ¼ | ¼ | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # PC 1W | | | N | ☐ E ☐ W |

Well Street Address: 117 S. CHESTNUT AVENUE

| Well City, Village or Town | Well ZIP Code |
|---|---|
| GREEN BAY | 54303 |

| Subdivision Name | Lot # |
|---|---|
| | |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| END OF SAMPLING | |

## 2. Facility / Owner Information

Facility Name: BMO PROPERTIES

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner: BMO HARRIS BANK NA

Present Well Owner: BMO HARRIS BANK NA

Mailing Address of Present Owner: 111 W. MONROE STREET

| City of Present Owner | State | ZIP Code |
|---|---|---|
| CHICAGO | IL | 60603 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 05/28/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): DIRECT PUSH

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| — | — |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| — | — |

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| — | — |

## 4. Pump, Liner, Screen, Casing & Sealing Material

| | | | |
|---|---|---|---|
| Pump and piping removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) perforated? | ☐ Yes | ☐ No | ☒ N/A |
| Screen removed? | ☐ Yes | ☐ No | ☒ N/A |
| Casing left in place? | ☐ Yes | ☐ No | ☒ N/A |
| Was casing cut off below surface? | ☐ Yes | ☐ No | ☒ N/A |
| Did sealing material rise to surface? | ☒ Yes | ☐ No | ☐ N/A |
| Did material settle after 24 hours? | ☐ Yes | ☒ No | ☐ N/A |
| If yes, was hole retopped? | ☐ Yes | ☐ No | ☒ N/A |
| If bentonite chips were used, were they hydrated with water from a known safe source? | ☐ Yes | ☐ No | ☒ N/A |

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain): GRAVITY

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

*For Monitoring Wells and Monitoring Well Boreholes Only:*
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

## 5. Material Used to Fill Well / Drillhole

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| BENTONITE CHIPS | Surface | 5 ft | 0.09 CY | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| GEISS SOIL + SAMPLES | | 05/28/2019 |

| Street or Route | Telephone Number |
|---|---|
| W4490 POPE ROAD | (715) 539-3928 |

| City | State | ZIP Code |
|---|---|---|
| MERRILL | WI | 54452 |

Signature of Person Doing Work: (STANTEC FOR GEISS) Date Signed: 06/04/2019

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B400

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) 

**Notice:** Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☒ **Verification Only of Fill and Seal**

**Route to DNR Bureau:**
☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other:

## 1. Well Location Information

| County | WI Unique Well # of Removed Well | Hicap # |
|---|---|---|
| BROWN | | |

| Latitude / Longitude (see instructions) | Format Code | Method Code |
|---|---|---|
| 44.516045 N<br>-88.023109 W | ☒ DD<br>☐ DDM | ☐ GPS008<br>☒ SCR002<br>☐ OTH001 |

| ¼ / ¼ | ¼ | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # PC 1W | | | N | ☐ E ☐ W |

Well Street Address: 117 S. CHESTNUT AVENUE

| Well City, Village or Town | Well ZIP Code |
|---|---|
| GREEN BAY | 54303 |

| Subdivision Name | Lot # |
|---|---|
| | |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| END OF SAMPLING | |

## 2. Facility / Owner Information

Facility Name: BMO PROPERTIES

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner: BMO HARRIS BANK NA

Present Well Owner: BMO HARRIS BANK NA

Mailing Address of Present Owner: 111 W. MONROE STREET

| City of Present Owner | State | ZIP Code |
|---|---|---|
| CHICAGO | IL | 60603 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 05/28/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): DIRECT PUSH

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| — | — |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| — | — |

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| — | — |

## 4. Pump, Liner, Screen, Casing & Sealing Material

| | | | |
|---|---|---|---|
| Pump and piping removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) perforated? | ☐ Yes | ☐ No | ☒ N/A |
| Screen removed? | ☐ Yes | ☐ No | ☒ N/A |
| Casing left in place? | ☐ Yes | ☐ No | ☒ N/A |
| Was casing cut off below surface? | ☐ Yes | ☐ No | ☒ N/A |
| Did sealing material rise to surface? | ☒ Yes | ☐ No | ☐ N/A |
| Did material settle after 24 hours? | ☐ Yes | ☒ No | ☐ N/A |
| If yes, was hole retopped? | ☐ Yes | ☐ No | ☒ N/A |
| If bentonite chips were used, were they hydrated with water from a known safe source? | ☐ Yes | ☐ No | ☒ N/A |

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain): GRAVITY

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

*For Monitoring Wells and Monitoring Well Boreholes Only:*
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

## 5. Material Used to Fill Well / Drillhole

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| BENTONITE CHIPS | Surface | 6 ft | 0.131 ft³ | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| GEISS SOIL + SAMPLES | | 05/28/2019 |

| Street or Route | Telephone Number |
|---|---|
| W4490 POPE ROAD | (715) 539-3928 |

| City | State | ZIP Code |
|---|---|---|
| MERRILL | WI | 54452 |

Signature of Person Doing Work: (STANTEC FOR GEISS) Date Signed: 06/04/2019

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B4006

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) 

**Notice:** Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☒ **Verification Only of Fill and Seal**

**Route to DNR Bureau:**
☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other:

## 1. Well Location Information

| County | WI Unique Well # of Removed Well | Hicap # |
|---|---|---|
| BROWN | | |

| Latitude / Longitude (see instructions) | Format Code | Method Code |
|---|---|---|
| 44.516045 N | ☒ DD | ☐ GPS008 |
| -88.023109 W | ☐ DDM | ☒ SCR002 |
| | | ☐ OTH001 |

| ¼ / ¼ | ¼ | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # PC 1W | | | N | ☐ E ☐ W |

Well Street Address: 117 S. CHESTNUT AVENUE

| Well City, Village or Town | Well ZIP Code |
|---|---|
| GREEN BAY | 54303 |

| Subdivision Name | Lot # |
|---|---|
| | |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| END OF SAMPLING | |

## 2. Facility / Owner Information

Facility Name: BMO PROPERTIES

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner: BMO HARRIS BANK NA

Present Well Owner: BMO HARRIS BANK NA

Mailing Address of Present Owner: 111 W. MONROE STREET

| City of Present Owner | State | ZIP Code |
|---|---|---|
| CHICAGO | IL | 60603 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 05/28/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): DIRECT PUSH

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| — | — |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| — | — |

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| — | — |

## 4. Pump, Liner, Screen, Casing & Sealing Material

| | | | |
|---|---|---|---|
| Pump and piping removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) perforated? | ☐ Yes | ☐ No | ☒ N/A |
| Screen removed? | ☐ Yes | ☐ No | ☒ N/A |
| Casing left in place? | ☐ Yes | ☐ No | ☒ N/A |
| Was casing cut off below surface? | ☐ Yes | ☐ No | ☒ N/A |
| Did sealing material rise to surface? | ☒ Yes | ☐ No | ☐ N/A |
| Did material settle after 24 hours? | ☐ Yes | ☒ No | ☐ N/A |
| If yes, was hole retopped? | ☐ Yes | ☐ No | ☒ N/A |
| If bentonite chips were used, were they hydrated with water from a known safe source? | ☐ Yes | ☐ No | ☒ N/A |

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain): GRAVITY

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

*For Monitoring Wells and Monitoring Well Boreholes Only:*
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

## 5. Material Used to Fill Well / Drillhole

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or Volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| BENTONITE CHIPS | Surface | 12 Ft | 0.261 Ft³ | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| GEISS SOIL + SAMPLES | | 05/28/2019 |

| Street or Route | Telephone Number |
|---|---|
| W4490 POPE ROAD | (715) 539-3928 |

| City | State | ZIP Code |
|---|---|---|
| MERRILL | WI | 54452 |

Signature of Person Doing Work: (STANTEC FOR GEISS) Date Signed: 06/04/2019

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

B500

# Well / Drillhole / Borehole Filling & Sealing Report

Form 3300-005 (R 4/2015) 

**Notice:** Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and chs. NR 141 and 812, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☒ **Verification Only of Fill and Seal**

**Route to DNR Bureau:**
☐ Drinking Water ☐ Watershed/Wastewater ☒ Remediation/Redevelopment
☐ Waste Management ☐ Other:

## 1. Well Location Information

| County | WI Unique Well # of Removed Well | Hicap # |
|---|---|---|
| BROWN | | |

| Latitude / Longitude (see instructions) | Format Code | Method Code |
|---|---|---|
| 44.516045 N | ☒ DD | ☐ GPS008 |
| -88.023109 W | ☐ DDM | ☒ SCR002 |
| | | ☐ OTH001 |

| ¼ / ¼ | ¼ | Section | Township | Range |
|---|---|---|---|---|
| or Gov't Lot # PC 1W | | | N | ☐ E ☐ W |

Well Street Address: 117 S. CHESTNUT AVENUE

| Well City, Village or Town | Well ZIP Code |
|---|---|
| GREEN BAY | 54303 |

| Subdivision Name | Lot # |
|---|---|
| | |

| Reason for Removal from Service | WI Unique Well # of Replacement Well |
|---|---|
| END OF SAMPLING | |

## 2. Facility / Owner Information

Facility Name: BMO PROPERTIES

Facility ID (FID or PWS):

License/Permit/Monitoring #:

Original Well Owner: BMO HARRIS BANK NA

Present Well Owner: BMO HARRIS BANK NA

Mailing Address of Present Owner: 111 W. MONROE STREET

| City of Present Owner | State | ZIP Code |
|---|---|---|
| CHICAGO | IL | 60603 |

## 3. Filled & Sealed Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Borehole / Drillhole

Original Construction Date (mm/dd/yyyy): 05/28/2019

If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (specify): DIRECT PUSH

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

| Total Well Depth From Ground Surface (ft.) | Casing Diameter (in.) |
|---|---|
| — | — |

| Lower Drillhole Diameter (in.) | Casing Depth (ft.) |
|---|---|
| — | — |

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

| If yes, to what depth (feet)? | Depth to Water (feet) |
|---|---|
| — | — |

## 4. Pump, Liner, Screen, Casing & Sealing Material

| | | | |
|---|---|---|---|
| Pump and piping removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) removed? | ☐ Yes | ☐ No | ☒ N/A |
| Liner(s) perforated? | ☐ Yes | ☐ No | ☒ N/A |
| Screen removed? | ☐ Yes | ☐ No | ☒ N/A |
| Casing left in place? | ☐ Yes | ☐ No | ☒ N/A |
| Was casing cut off below surface? | ☐ Yes | ☐ No | ☒ N/A |
| Did sealing material rise to surface? | ☒ Yes | ☐ No | ☐ N/A |
| Did material settle after 24 hours? | ☐ Yes | ☒ No | ☐ N/A |
| If yes, was hole retopped? | ☐ Yes | ☐ No | ☒ N/A |
| If bentonite chips were used, were they hydrated with water from a known safe source? | ☐ Yes | ☐ No | ☒ N/A |

Required Method of Placing Sealing Material
☐ Conductor Pipe-Gravity ☐ Conductor Pipe-Pumped
☐ Screened & Poured (Bentonite Chips) ☒ Other (Explain): GRAVITY

Sealing Materials
☐ Neat Cement Grout ☐ Concrete
☐ Sand-Cement (Concrete) Grout ☒ Bentonite Chips

*For Monitoring Wells and Monitoring Well Boreholes Only:*
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

## 5. Material Used to Fill Well / Drillhole

| | From (ft.) | To (ft.) | No. Yards, Sacks Sealant or volume (circle one) | Mix Ratio or Mud Weight |
|---|---|---|---|---|
| BENTONITE CHIPS | Surface | 14 ft | 0.305 ft³ | |
| | | | | |
| | | | | |

## 6. Comments

## 7. Supervision of Work

| Name of Person or Firm Doing Filling & Sealing | License # | Date of Filling & Sealing or Verification (mm/dd/yyyy) |
|---|---|---|
| GEISS SOIL + SAMPLES | | 05/28/2019 |

| Street or Route | Telephone Number |
|---|---|
| W4490 POPE ROAD | (715) 539-3928 |

| City | State | ZIP Code |
|---|---|---|
| MERRILL | WI | 54452 |

Signature of Person Doing Work: (STANTEC FOR GEISS) Date Signed: 06/04/2019

**DNR Use Only**

| Date Received | Noted By |
|---|---|
| | |

Comments:

# APPENDIX C – SUB-SLAB SOIL GAS SURVEY LOGS

# Sub-Slab Soil Gas Survey Log

Priveleged and Confidential

**Site Name/ Location:** BMO Properties, Green Bay, WI **Project #:** 193706891

| | | | |
|---|---|---|---|
| Sample ID: | VP-1 | Date: | 6/5/19 |
| Sample Location: | Circuit Breaker Room | Cannister Size: | 6-Liter |
| Co-located Sample: | YES / (NO) | Co-located with: | - |
| Unique Cannister ID: | 5902 | Regulator ID: | 4680 |

| | |
|---|---|
| Leak Testing: | (YES) / NO |
| He Detector: | MGD 2002 |
| He Blanket Concentration: | 63.8% |
| Sample He Concentration: | 0.00 ppm |

| | |
|---|---|
| Volume of air purged: | Hand pump 30 seconds |

| | | | |
|---|---|---|---|
| Vacuum Reading (start): | -27 | Time (start): | 1024 |
| Vacuum Reading (finish): | -3 | Time (finish): | 1055 |

| | | | |
|---|---|---|---|
| Outside Air Temperature (start): | 62° | Exterior Barometric Pressure (start): | 29.71" |
| Outside Air Temperature (Finish): | 60° | Exterior Barometric Pressure (finish): | 29.73" |

| | |
|---|---|
| Weather During Sampling Event: | Cloudy, No precip |

Photos Taken: (Yes) No Direction: SE

Notes: Placed below circuit breaker in storage closet.

Sampler's Name: Evan Weber

Signature: Evan J. Weber

# Sub-Slab Soil Gas Survey Log

Stantec

Priveleged and Confidential

**Site Name/ Location:** BMO Properties, Green Bay, WI **Project #:** 193706891

| | | | |
|---|---|---|---|
| Sample ID: | VP-2 | Date: | 6/5/19 |
| Sample Location: | Potential Fill Pipe area | Cannister Size: | 6 liter |
| Co-located Sample: | YES / (NO) | Co-located with: | — |
| Unique Cannister ID: | 4295 | Regulator ID: | 5829 |

| | |
|---|---|
| Leak Testing: | (YES) / NO |
| He Detector: | MGD-2002 |
| He Blanket Concentration: | 66.3% |
| Sample He Concentration: | 0.00 ppm |

| | |
|---|---|
| Volume of air purged: | 30 seconds w/ hand pump |

| | | | |
|---|---|---|---|
| Vacuum Reading (start): | -28" | Time (start): | 1149 |
| Vacuum Reading (finish): | -3" | Time (finish): | 1221 |

| | | | |
|---|---|---|---|
| Outside Air Temperature (start): | 61° | Exterior Barometric Pressure (start): | 29.75" |
| Outside Air Temperature (Finish): | 62° | Exterior Barometric Pressure (finish): | 29.76" |

| | |
|---|---|
| Weather During Sampling Event: | Cloudy, cool |

Photos Taken: (Yes) No Direction: NE

Notes: Collected east end of building approx 3' from potential fill pipes

Sampler's Name: Evan Weber

Signature: Evan J. Weber

# APPENDIX D – LABORATORY ANALYTICAL REPORTS

eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-164364-1
Client Project/Site: BMO Properties - 193706891

For:
Stantec Consulting Corp.
1165 Scheuring Road
De Pere, Wisconsin 54115

Attn: Tyler Hischke

*Authorized for release by:*
*6/13/2019 12:25:18 PM*

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

# Case Narrative

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

## Job ID: 500-164364-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-164364-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 6/1/2019 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

**GC/MS VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC/MS Semi VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Field Service / Mobile Lab**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

## Client Sample ID: TW100 — Lab Sample ID: 500-164364-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 1.8 | | 1.0 | 0.37 | ug/L | 1 | | 8260B | Total/NA |
| Trichloroethene | 0.35 | J | 0.50 | 0.16 | ug/L | 1 | | 8260B | Total/NA |
| Benzo[a]anthracene | 0.24 | | 0.16 | 0.045 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[a]pyrene | 0.26 | | 0.16 | 0.079 | ug/L | 1 | | 8270D | Total/NA |
| Benzo[b]fluoranthene | 0.34 | | 0.16 | 0.065 | ug/L | 1 | | 8270D | Total/NA |
| Chrysene | 0.23 | | 0.16 | 0.055 | ug/L | 1 | | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 0.19 | | 0.16 | 0.060 | ug/L | 1 | | 8270D | Total/NA |
| Arsenic | 0.80 | J | 1.0 | 0.23 | ug/L | 1 | | 6020A | Dissolved |
| Barium | 66 | | 2.5 | 0.73 | ug/L | 1 | | 6020A | Dissolved |
| Lead | 0.28 | J | 0.50 | 0.19 | ug/L | 1 | | 6020A | Dissolved |
| Selenium | 1.1 | J | 2.5 | 0.98 | ug/L | 1 | | 6020A | Dissolved |

## Client Sample ID: TW600 — Lab Sample ID: 500-164364-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.22 | J | 0.50 | 0.15 | ug/L | 1 | | 8260B | Total/NA |
| cis-1,2-Dichloroethene | 0.73 | J | 1.0 | 0.41 | ug/L | 1 | | 8260B | Total/NA |
| Isopropylbenzene | 9.5 | | 1.0 | 0.39 | ug/L | 1 | | 8260B | Total/NA |
| Naphthalene | 0.47 | J | 1.0 | 0.34 | ug/L | 1 | | 8260B | Total/NA |
| n-Butylbenzene | 2.7 | | 1.0 | 0.39 | ug/L | 1 | | 8260B | Total/NA |
| N-Propylbenzene | 10 | | 1.0 | 0.41 | ug/L | 1 | | 8260B | Total/NA |
| sec-Butylbenzene | 7.6 | | 1.0 | 0.40 | ug/L | 1 | | 8260B | Total/NA |
| tert-Butylbenzene | 2.0 | | 1.0 | 0.40 | ug/L | 1 | | 8260B | Total/NA |
| Vinyl chloride | 0.63 | J | 1.0 | 0.20 | ug/L | 1 | | 8260B | Total/NA |
| Arsenic | 1.5 | | 1.0 | 0.23 | ug/L | 1 | | 6020A | Dissolved |
| Barium | 240 | | 2.5 | 0.73 | ug/L | 1 | | 6020A | Dissolved |

## Client Sample ID: TW700 — Lab Sample ID: 500-164364-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.96 | J | 1.0 | 0.23 | ug/L | 1 | | 6020A | Dissolved |
| Barium | 100 | | 2.5 | 0.73 | ug/L | 1 | | 6020A | Dissolved |
| Chromium | 19 | | 5.0 | 1.1 | ug/L | 1 | | 6020A | Dissolved |
| Lead | 0.81 | | 0.50 | 0.19 | ug/L | 1 | | 6020A | Dissolved |
| Selenium | 11 | | 2.5 | 0.98 | ug/L | 1 | | 6020A | Dissolved |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8270D | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 6020A | Metals (ICP/MS) | SW846 | TAL CHI |
| 7470A | Mercury (CVAA) | SW846 | TAL CHI |
| 3005A | Preparation, Total Recoverable or Dissolved Metals | SW846 | TAL CHI |
| 3510C | Liquid-Liquid Extraction (Separatory Funnel) | SW846 | TAL CHI |
| 5030B | Purge and Trap | SW846 | TAL CHI |
| 7470A | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-164364-1 | TW100 | Water | 05/30/19 10:30 | 06/01/19 09:30 | |
| 500-164364-2 | TW600 | Water | 05/30/19 11:05 | 06/01/19 09:30 | |
| 500-164364-3 | TW700 | Water | 05/30/19 11:45 | 06/01/19 09:30 | |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

**Client Sample ID: TW100**
**Date Collected: 05/30/19 10:30**
**Date Received: 06/01/19 09:30**

**Lab Sample ID: 500-164364-1**
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:18 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:18 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 06/10/19 14:18 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 06/10/19 14:18 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 14:18 | 1 |
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/10/19 14:18 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:18 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 14:18 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/10/19 14:18 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 06/10/19 14:18 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 06/10/19 14:18 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/10/19 14:18 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:18 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 06/10/19 14:18 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 06/10/19 14:18 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 06/10/19 14:18 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 14:18 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 06/10/19 14:18 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 06/10/19 14:18 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 06/10/19 14:18 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 06/10/19 14:18 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 06/10/19 14:18 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 06/10/19 14:18 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 06/10/19 14:18 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:18 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:18 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 06/10/19 14:18 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 06/10/19 14:18 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:18 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 14:18 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:18 | 1 |

## Client Sample ID: TW100
**Date Collected: 05/30/19 10:30**
**Date Received: 06/01/19 09:30**

## Lab Sample ID: 500-164364-1
**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 14:18 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:18 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 14:18 | 1 |
| **Tetrachloroethene** | **1.8** | | 1.0 | 0.37 | ug/L | | | 06/10/19 14:18 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/10/19 14:18 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 14:18 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:18 | 1 |
| **Trichloroethene** | **0.35** | **J** | 0.50 | 0.16 | ug/L | | | 06/10/19 14:18 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 14:18 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 06/10/19 14:18 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 06/10/19 14:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *75 - 126* | | *06/10/19 14:18* | *1* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *72 - 124* | | *06/10/19 14:18* | *1* |
| *Dibromofluoromethane* | *94* | | *75 - 120* | | *06/10/19 14:18* | *1* |
| *Toluene-d8 (Surr)* | *86* | | *75 - 120* | | *06/10/19 14:18* | *1* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.24 | | 1.6 | 0.24 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| 2-Methylnaphthalene | <0.052 | | 1.6 | 0.052 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Acenaphthene | <0.25 | | 0.80 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Acenaphthylene | <0.21 | | 0.80 | 0.21 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Anthracene | <0.27 | | 0.80 | 0.27 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| **Benzo[a]anthracene** | **0.24** | | 0.16 | 0.045 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| **Benzo[a]pyrene** | **0.26** | | 0.16 | 0.079 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| **Benzo[b]fluoranthene** | **0.34** | | 0.16 | 0.065 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Benzo[g,h,i]perylene | <0.30 | | 0.80 | 0.30 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Benzo[k]fluoranthene | <0.051 | | 0.16 | 0.051 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| **Chrysene** | **0.23** | | 0.16 | 0.055 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Dibenz(a,h)anthracene | <0.041 | | 0.24 | 0.041 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Fluoranthene | <0.36 | | 0.80 | 0.36 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Fluorene | <0.20 | | 0.80 | 0.20 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **0.19** | | 0.16 | 0.060 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Naphthalene | <0.25 | | 0.80 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Phenanthrene | <0.24 | | 0.80 | 0.24 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |
| Pyrene | <0.34 | | 0.80 | 0.34 | ug/L | | 06/04/19 14:10 | 06/05/19 12:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *56* | | *34 - 110* | *06/04/19 14:10* | *06/05/19 12:44* | *1* |
| *Nitrobenzene-d5 (Surr)* | *50* | | *36 - 120* | *06/04/19 14:10* | *06/05/19 12:44* | *1* |
| *Terphenyl-d14 (Surr)* | *102* | | *40 - 145* | *06/04/19 14:10* | *06/05/19 12:44* | *1* |

### Method: 6020A - Metals (ICP/MS) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.80** | **J** | 1.0 | 0.23 | ug/L | | 06/03/19 08:37 | 06/03/19 20:15 | 1 |
| **Barium** | **66** | | 2.5 | 0.73 | ug/L | | 06/03/19 08:37 | 06/03/19 20:15 | 1 |
| Cadmium | <0.17 | | 0.50 | 0.17 | ug/L | | 06/03/19 08:37 | 06/03/19 20:15 | 1 |
| Chromium | <1.1 | | 5.0 | 1.1 | ug/L | | 06/03/19 08:37 | 06/03/19 20:15 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

**Client Sample ID: TW100**
**Date Collected: 05/30/19 10:30**
**Date Received: 06/01/19 09:30**

**Lab Sample ID: 500-164364-1**
**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Dissolved (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.28 | J | 0.50 | 0.19 | ug/L | | 06/03/19 08:37 | 06/03/19 20:15 | 1 |
| Selenium | 1.1 | J | 2.5 | 0.98 | ug/L | | 06/03/19 08:37 | 06/03/19 20:15 | 1 |
| Silver | <0.12 | | 0.50 | 0.12 | ug/L | | 06/03/19 08:37 | 06/03/19 20:15 | 1 |

### Method: 7470A - Mercury (CVAA) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.098 | | 0.20 | 0.098 | ug/L | | 06/04/19 10:10 | 06/05/19 08:09 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

**Client Sample ID: TW600**
**Date Collected: 05/30/19 11:05**
**Date Received: 06/01/19 09:30**

**Lab Sample ID: 500-164364-2**
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:44 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:44 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 06/10/19 14:44 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 06/10/19 14:44 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 14:44 | 1 |
| **Benzene** | **0.22** | **J** | 0.50 | 0.15 | ug/L | | | 06/10/19 14:44 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:44 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 14:44 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/10/19 14:44 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 06/10/19 14:44 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 06/10/19 14:44 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/10/19 14:44 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:44 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 06/10/19 14:44 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 06/10/19 14:44 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 06/10/19 14:44 | 1 |
| **cis-1,2-Dichloroethene** | **0.73** | **J** | 1.0 | 0.41 | ug/L | | | 06/10/19 14:44 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 06/10/19 14:44 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 06/10/19 14:44 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 06/10/19 14:44 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 06/10/19 14:44 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 06/10/19 14:44 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 06/10/19 14:44 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 06/10/19 14:44 | 1 |
| **Isopropylbenzene** | **9.5** | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:44 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:44 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 06/10/19 14:44 | 1 |
| **Naphthalene** | **0.47** | **J** | 1.0 | 0.34 | ug/L | | | 06/10/19 14:44 | 1 |
| **n-Butylbenzene** | **2.7** | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:44 | 1 |
| **N-Propylbenzene** | **10** | | 1.0 | 0.41 | ug/L | | | 06/10/19 14:44 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:44 | 1 |

**Client Sample ID: TW600**
**Date Collected: 05/30/19 11:05**
**Date Received: 06/01/19 09:30**

**Lab Sample ID: 500-164364-2**
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **sec-Butylbenzene** | **7.6** | | 1.0 | 0.40 | ug/L | | | 06/10/19 14:44 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 14:44 | 1 |
| **tert-Butylbenzene** | **2.0** | | 1.0 | 0.40 | ug/L | | | 06/10/19 14:44 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/10/19 14:44 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/10/19 14:44 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 14:44 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 14:44 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 06/10/19 14:44 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 14:44 | 1 |
| **Vinyl chloride** | **0.63** | **J** | 1.0 | 0.20 | ug/L | | | 06/10/19 14:44 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 06/10/19 14:44 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *92* | | *75 - 126* | | *06/10/19 14:44* | *1* |
| *4-Bromofluorobenzene (Surr)* | *110* | | *72 - 124* | | *06/10/19 14:44* | *1* |
| *Dibromofluoromethane* | *95* | | *75 - 120* | | *06/10/19 14:44* | *1* |
| *Toluene-d8 (Surr)* | *85* | | *75 - 120* | | *06/10/19 14:44* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.25 | | 1.6 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| 2-Methylnaphthalene | <0.053 | | 1.6 | 0.053 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Acenaphthene | <0.25 | | 0.82 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Acenaphthylene | <0.22 | | 0.82 | 0.22 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Anthracene | <0.27 | | 0.82 | 0.27 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Benzo[a]anthracene | <0.046 | | 0.16 | 0.046 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Benzo[a]pyrene | <0.081 | | 0.16 | 0.081 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Benzo[b]fluoranthene | <0.066 | | 0.16 | 0.066 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Benzo[g,h,i]perylene | <0.31 | | 0.82 | 0.31 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Benzo[k]fluoranthene | <0.052 | | 0.16 | 0.052 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Chrysene | <0.056 | | 0.16 | 0.056 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Dibenz(a,h)anthracene | <0.041 | | 0.24 | 0.041 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Fluoranthene | <0.37 | | 0.82 | 0.37 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Fluorene | <0.20 | | 0.82 | 0.20 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.061 | | 0.16 | 0.061 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Naphthalene | <0.25 | | 0.82 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Phenanthrene | <0.25 | | 0.82 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |
| Pyrene | <0.35 | | 0.82 | 0.35 | ug/L | | 06/04/19 14:10 | 06/05/19 13:06 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *53* | | *34 - 110* | *06/04/19 14:10* | *06/05/19 13:06* | *1* |
| *Nitrobenzene-d5 (Surr)* | *44* | | *36 - 120* | *06/04/19 14:10* | *06/05/19 13:06* | *1* |
| *Terphenyl-d14 (Surr)* | *80* | | *40 - 145* | *06/04/19 14:10* | *06/05/19 13:06* | *1* |

## Method: 6020A - Metals (ICP/MS) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.5** | | 1.0 | 0.23 | ug/L | | 06/03/19 08:37 | 06/03/19 20:18 | 1 |
| **Barium** | **240** | | 2.5 | 0.73 | ug/L | | 06/03/19 08:37 | 06/03/19 20:18 | 1 |
| Cadmium | <0.17 | | 0.50 | 0.17 | ug/L | | 06/03/19 08:37 | 06/03/19 20:18 | 1 |
| Chromium | <1.1 | | 5.0 | 1.1 | ug/L | | 06/03/19 08:37 | 06/03/19 20:18 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

**Client Sample ID: TW600**
**Date Collected: 05/30/19 11:05**
**Date Received: 06/01/19 09:30**

**Lab Sample ID: 500-164364-2**
**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Dissolved (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lead | <0.19 | | 0.50 | 0.19 | ug/L | | 06/03/19 08:37 | 06/03/19 20:18 | 1 |
| Selenium | <0.98 | | 2.5 | 0.98 | ug/L | | 06/03/19 08:37 | 06/03/19 20:18 | 1 |
| Silver | <0.12 | | 0.50 | 0.12 | ug/L | | 06/03/19 08:37 | 06/03/19 20:18 | 1 |

### Method: 7470A - Mercury (CVAA) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.098 | | 0.20 | 0.098 | ug/L | | 06/04/19 10:10 | 06/05/19 08:11 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

**Client Sample ID: TW700**
**Date Collected: 05/30/19 11:45**
**Date Received: 06/01/19 09:30**

**Lab Sample ID: 500-164364-3**
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 15:09 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 15:09 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 06/10/19 15:09 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 06/10/19 15:09 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 15:09 | 1 |
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/10/19 15:09 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 15:09 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 15:09 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/10/19 15:09 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 06/10/19 15:09 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 06/10/19 15:09 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/10/19 15:09 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 15:09 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 06/10/19 15:09 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 06/10/19 15:09 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 06/10/19 15:09 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 15:09 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 06/10/19 15:09 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 06/10/19 15:09 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 06/10/19 15:09 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 06/10/19 15:09 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 06/10/19 15:09 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 06/10/19 15:09 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 06/10/19 15:09 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 15:09 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 15:09 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 06/10/19 15:09 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 06/10/19 15:09 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 15:09 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 15:09 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 15:09 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

**Client Sample ID: TW700**
**Date Collected: 05/30/19 11:45**
**Date Received: 06/01/19 09:30**

**Lab Sample ID: 500-164364-3**
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 15:09 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 15:09 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 15:09 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/10/19 15:09 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/10/19 15:09 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 15:09 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 15:09 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 06/10/19 15:09 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 15:09 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 06/10/19 15:09 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 06/10/19 15:09 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *75 - 126* | | *06/10/19 15:09* | *1* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *72 - 124* | | *06/10/19 15:09* | *1* |
| *Dibromofluoromethane* | *94* | | *75 - 120* | | *06/10/19 15:09* | *1* |
| *Toluene-d8 (Surr)* | *86* | | *75 - 120* | | *06/10/19 15:09* | *1* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.25 | | 1.6 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| 2-Methylnaphthalene | <0.053 | | 1.6 | 0.053 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Acenaphthene | <0.25 | | 0.82 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Acenaphthylene | <0.22 | | 0.82 | 0.22 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Anthracene | <0.27 | | 0.82 | 0.27 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Benzo[a]anthracene | <0.046 | | 0.16 | 0.046 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Benzo[a]pyrene | <0.081 | | 0.16 | 0.081 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Benzo[b]fluoranthene | <0.066 | | 0.16 | 0.066 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Benzo[g,h,i]perylene | <0.31 | | 0.82 | 0.31 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Benzo[k]fluoranthene | <0.052 | | 0.16 | 0.052 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Chrysene | <0.056 | | 0.16 | 0.056 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Dibenz(a,h)anthracene | <0.042 | | 0.25 | 0.042 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Fluoranthene | <0.37 | | 0.82 | 0.37 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Fluorene | <0.20 | | 0.82 | 0.20 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.061 | | 0.16 | 0.061 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Naphthalene | <0.25 | | 0.82 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Phenanthrene | <0.25 | | 0.82 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |
| Pyrene | <0.35 | | 0.82 | 0.35 | ug/L | | 06/04/19 14:10 | 06/05/19 13:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *46* | | *34 - 110* | *06/04/19 14:10* | *06/05/19 13:29* | *1* |
| *Nitrobenzene-d5 (Surr)* | *36* | | *36 - 120* | *06/04/19 14:10* | *06/05/19 13:29* | *1* |
| *Terphenyl-d14 (Surr)* | *80* | | *40 - 145* | *06/04/19 14:10* | *06/05/19 13:29* | *1* |

## Method: 6020A - Metals (ICP/MS) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **0.96** | **J** | 1.0 | 0.23 | ug/L | | 06/03/19 08:37 | 06/03/19 20:22 | 1 |
| **Barium** | **100** | | 2.5 | 0.73 | ug/L | | 06/03/19 08:37 | 06/03/19 20:22 | 1 |
| Cadmium | <0.17 | | 0.50 | 0.17 | ug/L | | 06/03/19 08:37 | 06/03/19 20:22 | 1 |
| **Chromium** | **19** | | 5.0 | 1.1 | ug/L | | 06/03/19 08:37 | 06/03/19 20:22 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

**Client Sample ID: TW700**
**Date Collected: 05/30/19 11:45**
**Date Received: 06/01/19 09:30**

**Lab Sample ID: 500-164364-3**
**Matrix: Water**

### Method: 6020A - Metals (ICP/MS) - Dissolved (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 0.81 | | 0.50 | 0.19 | ug/L | | 06/03/19 08:37 | 06/03/19 20:22 | 1 |
| Selenium | 11 | | 2.5 | 0.98 | ug/L | | 06/03/19 08:37 | 06/03/19 20:22 | 1 |
| Silver | <0.12 | | 0.50 | 0.12 | ug/L | | 06/03/19 08:37 | 06/03/19 20:22 | 1 |

### Method: 7470A - Mercury (CVAA) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.098 | | 0.20 | 0.098 | ug/L | | 06/04/19 10:10 | 06/05/19 08:12 | 1 |

# Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

## GC/MS VOA

### Analysis Batch: 489427

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164364-1 | TW100 | Total/NA | Water | 8260B | |
| 500-164364-2 | TW600 | Total/NA | Water | 8260B | |
| 500-164364-3 | TW700 | Total/NA | Water | 8260B | |
| MB 500-489427/6 | Method Blank | Total/NA | Water | 8260B | |
| LCS 500-489427/4 | Lab Control Sample | Total/NA | Water | 8260B | |

## GC/MS Semi VOA

### Prep Batch: 488624

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164364-1 | TW100 | Total/NA | Water | 3510C | |
| 500-164364-2 | TW600 | Total/NA | Water | 3510C | |
| 500-164364-3 | TW700 | Total/NA | Water | 3510C | |
| MB 500-488624/1-A | Method Blank | Total/NA | Water | 3510C | |
| LCS 500-488624/2-A | Lab Control Sample | Total/NA | Water | 3510C | |
| LCSD 500-488624/3-A | Lab Control Sample Dup | Total/NA | Water | 3510C | |

### Analysis Batch: 488779

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164364-1 | TW100 | Total/NA | Water | 8270D | 488624 |
| 500-164364-2 | TW600 | Total/NA | Water | 8270D | 488624 |
| 500-164364-3 | TW700 | Total/NA | Water | 8270D | 488624 |

### Analysis Batch: 488790

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-488624/1-A | Method Blank | Total/NA | Water | 8270D | 488624 |
| LCS 500-488624/2-A | Lab Control Sample | Total/NA | Water | 8270D | 488624 |
| LCSD 500-488624/3-A | Lab Control Sample Dup | Total/NA | Water | 8270D | 488624 |

## Metals

### Prep Batch: 488353

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164364-1 | TW100 | Dissolved | Water | 3005A | |
| 500-164364-2 | TW600 | Dissolved | Water | 3005A | |
| 500-164364-3 | TW700 | Dissolved | Water | 3005A | |
| MB 500-488353/1-A | Method Blank | Total Recoverable | Water | 3005A | |
| LCS 500-488353/2-A | Lab Control Sample | Total Recoverable | Water | 3005A | |

### Analysis Batch: 488494

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164364-1 | TW100 | Dissolved | Water | 6020A | 488353 |
| 500-164364-2 | TW600 | Dissolved | Water | 6020A | 488353 |
| 500-164364-3 | TW700 | Dissolved | Water | 6020A | 488353 |
| MB 500-488353/1-A | Method Blank | Total Recoverable | Water | 6020A | 488353 |
| LCS 500-488353/2-A | Lab Control Sample | Total Recoverable | Water | 6020A | 488353 |

### Prep Batch: 488572

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164364-1 | TW100 | Dissolved | Water | 7470A | |
| 500-164364-2 | TW600 | Dissolved | Water | 7470A | |
| 500-164364-3 | TW700 | Dissolved | Water | 7470A | |

## Metals (Continued)

### Prep Batch: 488572 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-488572/12-A | Method Blank | Total/NA | Water | 7470A | |
| LCS 500-488572/13-A | Lab Control Sample | Total/NA | Water | 7470A | |

### Analysis Batch: 488820

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164364-1 | TW100 | Dissolved | Water | 7470A | 488572 |
| 500-164364-2 | TW600 | Dissolved | Water | 7470A | 488572 |
| 500-164364-3 | TW700 | Dissolved | Water | 7470A | 488572 |
| MB 500-488572/12-A | Method Blank | Total/NA | Water | 7470A | 488572 |
| LCS 500-488572/13-A | Lab Control Sample | Total/NA | Water | 7470A | 488572 |

# Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (75-126) | (72-124) | (75-120) | (75-120) |
| 500-164364-1 | TW100 | 92 | 103 | 94 | 86 |
| 500-164364-2 | TW600 | 92 | 110 | 95 | 85 |
| 500-164364-3 | TW700 | 94 | 103 | 94 | 86 |
| LCS 500-489427/4 | Lab Control Sample | 93 | 97 | 98 | 88 |
| MB 500-489427/6 | Method Blank | 93 | 103 | 98 | 87 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Water** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | FBP | NBZ | TPHL |
| Lab Sample ID | Client Sample ID | (34-110) | (36-120) | (40-145) |
| 500-164364-1 | TW100 | 56 | 50 | 102 |
| 500-164364-2 | TW600 | 53 | 44 | 80 |
| 500-164364-3 | TW700 | 46 | 36 | 80 |
| LCS 500-488624/2-A | Lab Control Sample | 75 | 64 | 102 |
| LCSD 500-488624/3-A | Lab Control Sample Dup | 69 | 68 | 101 |
| MB 500-488624/1-A | Method Blank | 57 | 58 | 91 |

**Surrogate Legend**

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-489427/6**
**Matrix: Water**
**Analysis Batch: 489427**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,3,5-Trimethylbenzene | <0.25 | | 1.0 | 0.25 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 10:57 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 10:57 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/L | | | 06/10/19 10:57 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/L | | | 06/10/19 10:57 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 10:57 | 1 |
| Benzene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/10/19 10:57 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 10:57 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 10:57 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/10/19 10:57 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/L | | | 06/10/19 10:57 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/L | | | 06/10/19 10:57 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/L | | | 06/10/19 10:57 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 10:57 | 1 |
| Chloroethane | <0.51 | | 1.0 | 0.51 | ug/L | | | 06/10/19 10:57 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/L | | | 06/10/19 10:57 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/L | | | 06/10/19 10:57 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 10:57 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/L | | | 06/10/19 10:57 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/L | | | 06/10/19 10:57 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/L | | | 06/10/19 10:57 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/L | | | 06/10/19 10:57 | 1 |
| Ethylbenzene | <0.18 | | 0.50 | 0.18 | ug/L | | | 06/10/19 10:57 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/L | | | 06/10/19 10:57 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/L | | | 06/10/19 10:57 | 1 |
| Isopropylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 10:57 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 10:57 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/L | | | 06/10/19 10:57 | 1 |
| Naphthalene | <0.34 | | 1.0 | 0.34 | ug/L | | | 06/10/19 10:57 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 10:57 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/L | | | 06/10/19 10:57 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-489427/6**
**Matrix: Water**
**Analysis Batch: 489427**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 10:57 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 10:57 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/L | | | 06/10/19 10:57 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/L | | | 06/10/19 10:57 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/L | | | 06/10/19 10:57 | 1 |
| Toluene | <0.15 | | 0.50 | 0.15 | ug/L | | | 06/10/19 10:57 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/L | | | 06/10/19 10:57 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/L | | | 06/10/19 10:57 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/L | | | 06/10/19 10:57 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/L | | | 06/10/19 10:57 | 1 |
| Vinyl chloride | <0.20 | | 1.0 | 0.20 | ug/L | | | 06/10/19 10:57 | 1 |
| Xylenes, Total | <0.22 | | 1.0 | 0.22 | ug/L | | | 06/10/19 10:57 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *75 - 126* | | *06/10/19 10:57* | *1* |
| *4-Bromofluorobenzene (Surr)* | *103* | | *72 - 124* | | *06/10/19 10:57* | *1* |
| *Dibromofluoromethane* | *98* | | *75 - 120* | | *06/10/19 10:57* | *1* |
| *Toluene-d8 (Surr)* | *87* | | *75 - 120* | | *06/10/19 10:57* | *1* |

**Lab Sample ID: LCS 500-489427/4**
**Matrix: Water**
**Analysis Batch: 489427**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 45.8 | | ug/L | | 92 | 70 - 125 |
| 1,1,1-Trichloroethane | 50.0 | 47.3 | | ug/L | | 95 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 43.1 | | ug/L | | 86 | 62 - 140 |
| 1,1,2-Trichloroethane | 50.0 | 44.7 | | ug/L | | 89 | 71 - 130 |
| 1,1-Dichloroethane | 50.0 | 45.1 | | ug/L | | 90 | 70 - 125 |
| 1,1-Dichloroethene | 50.0 | 43.6 | | ug/L | | 87 | 67 - 122 |
| 1,1-Dichloropropene | 50.0 | 44.2 | | ug/L | | 88 | 70 - 121 |
| 1,2,3-Trichlorobenzene | 50.0 | 53.5 | | ug/L | | 107 | 51 - 145 |
| 1,2,3-Trichloropropane | 50.0 | 46.5 | | ug/L | | 93 | 50 - 133 |
| 1,2,4-Trichlorobenzene | 50.0 | 50.9 | | ug/L | | 102 | 57 - 137 |
| 1,2,4-Trimethylbenzene | 50.0 | 46.7 | | ug/L | | 93 | 70 - 123 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 39.2 | | ug/L | | 78 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 45.4 | | ug/L | | 91 | 70 - 125 |
| 1,2-Dichlorobenzene | 50.0 | 47.5 | | ug/L | | 95 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 41.8 | | ug/L | | 84 | 68 - 127 |
| 1,2-Dichloropropane | 50.0 | 48.1 | | ug/L | | 96 | 67 - 130 |
| 1,3,5-Trimethylbenzene | 50.0 | 46.9 | | ug/L | | 94 | 70 - 123 |
| 1,3-Dichlorobenzene | 50.0 | 47.7 | | ug/L | | 95 | 70 - 125 |
| 1,3-Dichloropropane | 50.0 | 44.5 | | ug/L | | 89 | 62 - 136 |
| 1,4-Dichlorobenzene | 50.0 | 47.7 | | ug/L | | 95 | 70 - 120 |
| 2,2-Dichloropropane | 50.0 | 47.2 | | ug/L | | 94 | 58 - 139 |
| 2-Chlorotoluene | 50.0 | 45.3 | | ug/L | | 91 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 44.8 | | ug/L | | 90 | 68 - 124 |
| Benzene | 50.0 | 43.5 | | ug/L | | 87 | 70 - 120 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-489427/4**
**Matrix: Water**
**Analysis Batch: 489427**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Bromobenzene | 50.0 | 49.8 | | ug/L | | 100 | 70 - 122 |
| Bromochloromethane | 50.0 | 50.4 | | ug/L | | 101 | 65 - 122 |
| Bromodichloromethane | 50.0 | 42.9 | | ug/L | | 86 | 69 - 120 |
| Bromoform | 50.0 | 43.8 | | ug/L | | 88 | 56 - 132 |
| Bromomethane | 50.0 | 34.6 | | ug/L | | 69 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 45.7 | | ug/L | | 91 | 59 - 133 |
| Chlorobenzene | 50.0 | 46.5 | | ug/L | | 93 | 70 - 120 |
| Chloroethane | 50.0 | 27.5 | | ug/L | | 55 | 48 - 136 |
| Chloroform | 50.0 | 43.6 | | ug/L | | 87 | 70 - 120 |
| Chloromethane | 50.0 | 49.4 | | ug/L | | 99 | 56 - 152 |
| cis-1,2-Dichloroethene | 50.0 | 46.1 | | ug/L | | 92 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 42.3 | | ug/L | | 85 | 64 - 127 |
| Dibromochloromethane | 50.0 | 42.4 | | ug/L | | 85 | 68 - 125 |
| Dibromomethane | 50.0 | 44.2 | | ug/L | | 88 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 42.9 | | ug/L | | 86 | 40 - 159 |
| Ethylbenzene | 50.0 | 44.8 | | ug/L | | 90 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 45.2 | | ug/L | | 90 | 51 - 150 |
| Isopropylbenzene | 50.0 | 47.5 | | ug/L | | 95 | 70 - 126 |
| Methyl tert-butyl ether | 50.0 | 43.5 | | ug/L | | 87 | 55 - 123 |
| Methylene Chloride | 50.0 | 44.2 | | ug/L | | 88 | 69 - 125 |
| Naphthalene | 50.0 | 49.9 | | ug/L | | 100 | 53 - 144 |
| n-Butylbenzene | 50.0 | 42.5 | | ug/L | | 85 | 68 - 125 |
| N-Propylbenzene | 50.0 | 45.9 | | ug/L | | 92 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 47.7 | | ug/L | | 95 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 46.1 | | ug/L | | 92 | 70 - 123 |
| Styrene | 50.0 | 48.1 | | ug/L | | 96 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 48.3 | | ug/L | | 97 | 70 - 121 |
| Tetrachloroethene | 50.0 | 48.7 | | ug/L | | 97 | 70 - 128 |
| Toluene | 50.0 | 43.7 | | ug/L | | 87 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 46.3 | | ug/L | | 93 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 42.0 | | ug/L | | 84 | 62 - 128 |
| Trichloroethene | 50.0 | 49.8 | | ug/L | | 100 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 45.1 | | ug/L | | 90 | 55 - 128 |
| Vinyl chloride | 50.0 | 44.0 | | ug/L | | 88 | 64 - 126 |
| Xylenes, Total | 100 | 90.8 | | ug/L | | 91 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *93* | | *75 - 126* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *72 - 124* |
| *Dibromofluoromethane* | *98* | | *75 - 120* |
| *Toluene-d8 (Surr)* | *88* | | *75 - 120* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-488624/1-A**
**Matrix: Water**
**Analysis Batch: 488790**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 488624**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <0.24 | | 1.6 | 0.24 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| 2-Methylnaphthalene | <0.052 | | 1.6 | 0.052 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Acenaphthene | <0.25 | | 0.80 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Acenaphthylene | <0.21 | | 0.80 | 0.21 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Anthracene | <0.27 | | 0.80 | 0.27 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Benzo[a]anthracene | <0.045 | | 0.16 | 0.045 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Benzo[a]pyrene | <0.079 | | 0.16 | 0.079 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Benzo[b]fluoranthene | <0.065 | | 0.16 | 0.065 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Benzo[g,h,i]perylene | <0.30 | | 0.80 | 0.30 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Benzo[k]fluoranthene | <0.051 | | 0.16 | 0.051 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Chrysene | <0.055 | | 0.16 | 0.055 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Dibenz(a,h)anthracene | <0.041 | | 0.24 | 0.041 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Fluoranthene | <0.36 | | 0.80 | 0.36 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Fluorene | <0.20 | | 0.80 | 0.20 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Indeno[1,2,3-cd]pyrene | <0.060 | | 0.16 | 0.060 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Naphthalene | <0.25 | | 0.80 | 0.25 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Phenanthrene | <0.24 | | 0.80 | 0.24 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |
| Pyrene | <0.34 | | 0.80 | 0.34 | ug/L | | 06/04/19 14:10 | 06/05/19 17:38 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *57* | | *34 - 110* | *06/04/19 14:10* | *06/05/19 17:38* | *1* |
| *Nitrobenzene-d5 (Surr)* | *58* | | *36 - 120* | *06/04/19 14:10* | *06/05/19 17:38* | *1* |
| *Terphenyl-d14 (Surr)* | *91* | | *40 - 145* | *06/04/19 14:10* | *06/05/19 17:38* | *1* |

**Lab Sample ID: LCS 500-488624/2-A**
**Matrix: Water**
**Analysis Batch: 488790**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 488624**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 32.0 | 23.4 | | ug/L | | 73 | 38 - 110 |
| 2-Methylnaphthalene | 32.0 | 20.8 | | ug/L | | 65 | 34 - 110 |
| Acenaphthene | 32.0 | 22.8 | | ug/L | | 71 | 46 - 110 |
| Acenaphthylene | 32.0 | 22.6 | | ug/L | | 70 | 47 - 113 |
| Anthracene | 32.0 | 27.6 | | ug/L | | 86 | 67 - 118 |
| Benzo[a]anthracene | 32.0 | 31.1 | | ug/L | | 97 | 70 - 126 |
| Benzo[a]pyrene | 32.0 | 33.3 | | ug/L | | 104 | 70 - 135 |
| Benzo[b]fluoranthene | 32.0 | 28.1 | | ug/L | | 88 | 69 - 136 |
| Benzo[g,h,i]perylene | 32.0 | 31.5 | | ug/L | | 99 | 70 - 135 |
| Benzo[k]fluoranthene | 32.0 | 28.6 | | ug/L | | 89 | 70 - 133 |
| Chrysene | 32.0 | 31.8 | | ug/L | | 99 | 68 - 129 |
| Dibenz(a,h)anthracene | 32.0 | 32.7 | | ug/L | | 102 | 70 - 134 |
| Fluoranthene | 32.0 | 23.9 | | ug/L | | 75 | 68 - 126 |
| Fluorene | 32.0 | 28.1 | | ug/L | | 88 | 53 - 120 |
| Indeno[1,2,3-cd]pyrene | 32.0 | 31.7 | | ug/L | | 99 | 65 - 133 |
| Naphthalene | 32.0 | 21.2 | | ug/L | | 66 | 36 - 110 |
| Phenanthrene | 32.0 | 27.4 | | ug/L | | 86 | 65 - 120 |
| Pyrene | 32.0 | 31.0 | | ug/L | | 97 | 70 - 126 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-488624/2-A**
**Matrix: Water**
**Analysis Batch: 488790**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 488624**

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *75* | | *34 - 110* |
| *Nitrobenzene-d5 (Surr)* | *64* | | *36 - 120* |
| *Terphenyl-d14 (Surr)* | *102* | | *40 - 145* |

**Lab Sample ID: LCSD 500-488624/3-A**
**Matrix: Water**
**Analysis Batch: 488790**

**Client Sample ID: Lab Control Sample Dup**
**Prep Type: Total/NA**
**Prep Batch: 488624**

| Analyte | | | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | | | 32.0 | 20.4 | | ug/L | | 64 | 38 - 110 | 14 | 20 |
| 2-Methylnaphthalene | | | 32.0 | 19.5 | | ug/L | | 61 | 34 - 110 | 6 | 20 |
| Acenaphthene | | | 32.0 | 23.9 | | ug/L | | 75 | 46 - 110 | 5 | 20 |
| Acenaphthylene | | | 32.0 | 23.4 | | ug/L | | 73 | 47 - 113 | 4 | 20 |
| Anthracene | | | 32.0 | 27.1 | | ug/L | | 85 | 67 - 118 | 2 | 20 |
| Benzo[a]anthracene | | | 32.0 | 29.3 | | ug/L | | 92 | 70 - 126 | 6 | 20 |
| Benzo[a]pyrene | | | 32.0 | 33.6 | | ug/L | | 105 | 70 - 135 | 1 | 20 |
| Benzo[b]fluoranthene | | | 32.0 | 27.9 | | ug/L | | 87 | 69 - 136 | 1 | 20 |
| Benzo[g,h,i]perylene | | | 32.0 | 26.5 | | ug/L | | 83 | 70 - 135 | 17 | 20 |
| Benzo[k]fluoranthene | | | 32.0 | 28.1 | | ug/L | | 88 | 70 - 133 | 2 | 20 |
| Chrysene | | | 32.0 | 30.2 | | ug/L | | 95 | 68 - 129 | 5 | 20 |
| Dibenz(a,h)anthracene | | | 32.0 | 31.4 | | ug/L | | 98 | 70 - 134 | 4 | 20 |
| Fluoranthene | | | 32.0 | 26.6 | | ug/L | | 83 | 68 - 126 | 11 | 20 |
| Fluorene | | | 32.0 | 24.4 | | ug/L | | 76 | 53 - 120 | 14 | 20 |
| Indeno[1,2,3-cd]pyrene | | | 32.0 | 30.8 | | ug/L | | 96 | 65 - 133 | 3 | 20 |
| Naphthalene | | | 32.0 | 21.1 | | ug/L | | 66 | 36 - 110 | 0 | 20 |
| Phenanthrene | | | 32.0 | 26.2 | | ug/L | | 82 | 65 - 120 | 4 | 20 |
| Pyrene | | | 32.0 | 29.9 | | ug/L | | 93 | 70 - 126 | 4 | 20 |

| *Surrogate* | *LCSD %Recovery* | *LCSD Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *69* | | *34 - 110* |
| *Nitrobenzene-d5 (Surr)* | *68* | | *36 - 120* |
| *Terphenyl-d14 (Surr)* | *101* | | *40 - 145* |

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: MB 500-488353/1-A**
**Matrix: Water**
**Analysis Batch: 488494**

**Client Sample ID: Method Blank**
**Prep Type: Total Recoverable**
**Prep Batch: 488353**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.23 | | 1.0 | 0.23 | ug/L | | 06/03/19 08:37 | 06/03/19 20:00 | 1 |
| Barium | <0.73 | | 2.5 | 0.73 | ug/L | | 06/03/19 08:37 | 06/03/19 20:00 | 1 |
| Cadmium | <0.17 | | 0.50 | 0.17 | ug/L | | 06/03/19 08:37 | 06/03/19 20:00 | 1 |
| Chromium | <1.1 | | 5.0 | 1.1 | ug/L | | 06/03/19 08:37 | 06/03/19 20:00 | 1 |
| Lead | <0.19 | | 0.50 | 0.19 | ug/L | | 06/03/19 08:37 | 06/03/19 20:00 | 1 |
| Selenium | <0.98 | | 2.5 | 0.98 | ug/L | | 06/03/19 08:37 | 06/03/19 20:00 | 1 |
| Silver | <0.12 | | 0.50 | 0.12 | ug/L | | 06/03/19 08:37 | 06/03/19 20:00 | 1 |

## Method: 6020A - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 500-488353/2-A**
**Matrix: Water**
**Analysis Batch: 488494**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total Recoverable**
**Prep Batch: 488353**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 100 | 96.5 | | ug/L | | 97 | 80 - 120 |
| Barium | 500 | 500 | | ug/L | | 100 | 80 - 120 |
| Cadmium | 50.0 | 49.2 | | ug/L | | 98 | 80 - 120 |
| Chromium | 200 | 195 | | ug/L | | 98 | 80 - 120 |
| Lead | 100 | 98.7 | | ug/L | | 99 | 80 - 120 |
| Selenium | 100 | 99.0 | | ug/L | | 99 | 80 - 120 |
| Silver | 50.0 | 49.4 | | ug/L | | 99 | 80 - 120 |

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 500-488572/12-A**
**Matrix: Water**
**Analysis Batch: 488820**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 488572**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.098 | | 0.20 | 0.098 | ug/L | | 06/04/19 10:10 | 06/05/19 08:05 | 1 |

**Lab Sample ID: LCS 500-488572/13-A**
**Matrix: Water**
**Analysis Batch: 488820**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 488572**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 2.00 | 2.12 | | ug/L | | 106 | 80 - 120 |

# Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164364-1

## Client Sample ID: TW100

**Date Collected: 05/30/19 10:30**
**Date Received: 06/01/19 09:30**

## Lab Sample ID: 500-164364-1

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 489427 | 06/10/19 14:18 | JLC | TAL CHI |
| Total/NA | Prep | 3510C | | | 488624 | 06/04/19 14:10 | DAK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 488779 | 06/05/19 12:44 | STW | TAL CHI |
| Dissolved | Prep | 3005A | | | 488353 | 06/03/19 08:37 | SAH | TAL CHI |
| Dissolved | Analysis | 6020A | | 1 | 488494 | 06/03/19 20:15 | FXG | TAL CHI |
| Dissolved | Prep | 7470A | | | 488572 | 06/04/19 10:10 | MJG | TAL CHI |
| Dissolved | Analysis | 7470A | | 1 | 488820 | 06/05/19 08:09 | MJG | TAL CHI |

## Client Sample ID: TW600

**Date Collected: 05/30/19 11:05**
**Date Received: 06/01/19 09:30**

## Lab Sample ID: 500-164364-2

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 489427 | 06/10/19 14:44 | JLC | TAL CHI |
| Total/NA | Prep | 3510C | | | 488624 | 06/04/19 14:10 | DAK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 488779 | 06/05/19 13:06 | STW | TAL CHI |
| Dissolved | Prep | 3005A | | | 488353 | 06/03/19 08:37 | SAH | TAL CHI |
| Dissolved | Analysis | 6020A | | 1 | 488494 | 06/03/19 20:18 | FXG | TAL CHI |
| Dissolved | Prep | 7470A | | | 488572 | 06/04/19 10:10 | MJG | TAL CHI |
| Dissolved | Analysis | 7470A | | 1 | 488820 | 06/05/19 08:11 | MJG | TAL CHI |

## Client Sample ID: TW700

**Date Collected: 05/30/19 11:45**
**Date Received: 06/01/19 09:30**

## Lab Sample ID: 500-164364-3

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | 8260B | | 1 | 489427 | 06/10/19 15:09 | JLC | TAL CHI |
| Total/NA | Prep | 3510C | | | 488624 | 06/04/19 14:10 | DAK | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 488779 | 06/05/19 13:29 | STW | TAL CHI |
| Dissolved | Prep | 3005A | | | 488353 | 06/03/19 08:37 | SAH | TAL CHI |
| Dissolved | Analysis | 6020A | | 1 | 488494 | 06/03/19 20:22 | FXG | TAL CHI |
| Dissolved | Prep | 7470A | | | 488572 | 06/04/19 10:10 | MJG | TAL CHI |
| Dissolved | Analysis | 7470A | | 1 | 488820 | 06/05/19 08:12 | MJG | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Job ID: 500-164364-1
Project/Site: BMO Properties - 193706891

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)

Report To
Contact: Tyler Hischke
Company: Stantec
Address:
Address:
Phone:
Fax:
E-Mail: tyler.hischke@stantec.com

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-164364

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 2.1

| Client | Client Project # | Preservative | HCl | None | HNO3 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stantec | 193706891 | | | | | | | | | | | |
| Project Name: BMO Properties | | Parameter | VOC | PAH | RCRA | | | | | | | |
| Project Location/State: Green Bay, WI | Lab Project # | | | | | | | | | | | |
| Sampler: Tyler Hischke | Lab PM: Sandie Fredrick | | | | | | | | | | | |

500-164364 COC

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | VOC | PAH | RCRA | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | TW100 | 5/30/19 | 1030 | 5 | W | X | X | X | | | | | | |
| 2 | | TW600 | 5/30/19 | 1105 | 5 | W | X | X | X | | | | | | |
| 3 | | TW700 | 5/30/19 | 1145 | 5 | W | X | X | X | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days X 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Tyler Hischke | Stantec | 5/31/19 | 1500 | Paula Buckley | TACHI | 6/1/19 | 0930 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier:
Shipped: X
Hand Delivered:

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

6/13/2019

# Login Sample Receipt Checklist

Client: Stantec Consulting Corp. Job Number: 500-164364-1

**Login Number: 164364** **List Source: Eurofins TestAmerica, Chicago**
**List Number: 1**
**Creator: Buckley, Paula M**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-164309-1
Client Project/Site: BMO Properties - 193706891

For:
Stantec Consulting Corp.
1165 Scheuring Road
De Pere, Wisconsin 54115

Attn: Tyler Hischke

*Authorized for release by:*
*6/14/2019 1:24:31 PM*

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

## Job ID: 500-164309-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-164309-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 5/31/2019 10:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

**GC/MS VOA**
The MSD (matrix spike duplicate) in batch 478975 was analyzed 19 minutes outside the method specified 12 hour tune time. B1 (2-4) (500-164309-1), B2 (4-6) (500-164309-2), B3 (2-4) (500-164309-3), B4 (2-4) (500-164309-4), B5 (2-4) (500-164309-5), B6 (2-4) (500-164309-6), B7 (0-2) (500-164309-7) and B8 (2-4) (500-164309-8)

The extraction LCS associated with preparation batch 488291 had several analytes recoveries above control limits. The instrument LCS associated with analytical batch 488910 had all analytes within control limits; therefore re-analysis was not performed. The data have been reported and qualified. B1 (2-4) (500-164309-1), B2 (4-6) (500-164309-2), B3 (2-4) (500-164309-3), B4 (2-4) (500-164309-4), B5 (2-4) (500-164309-5), B6 (2-4) (500-164309-6), B7 (0-2) (500-164309-7) and B8 (2-4) (500-164309-8)

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for 489110 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**GC/MS Semi VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**GC Semi VOA**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Organic Prep**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Client Sample ID: B1 (2-4) — Lab Sample ID: 500-164309-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 41 | J | 65 | 23 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Naphthalene | 32 | J | 65 | 22 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Tetrachloroethene | 220 | * | 65 | 24 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Toluene | 11 | J | 16 | 9.6 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Xylenes, Total | 25 | J * | 33 | 14 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| 1-Methylnaphthalene | 61 | J | 74 | 9.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 60 | J | 74 | 6.8 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthene | 140 | | 37 | 6.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 15 | J | 37 | 4.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 350 | | 37 | 6.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 1300 | | 37 | 5.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 1400 | | 37 | 7.1 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 2200 | | 37 | 8.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 620 | | 37 | 12 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 750 | | 37 | 11 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 1300 | | 37 | 10 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 190 | | 37 | 7.1 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 2500 | | 37 | 6.8 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 120 | | 37 | 5.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 570 | | 37 | 9.6 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 66 | | 37 | 5.7 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 1400 | | 37 | 5.1 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 2300 | | 37 | 7.3 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 1.7 | | 1.1 | 0.38 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 38 | | 1.1 | 0.13 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.20 | J | 0.22 | 0.040 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 8.4 | | 1.1 | 0.55 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 32 | | 0.55 | 0.25 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 1.5 | | 0.55 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.037 | | 0.018 | 0.0060 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: B2 (4-6) — Lab Sample ID: 500-164309-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Isopropylbenzene | 160 | | 76 | 29 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| n-Butylbenzene | 740 | | 76 | 30 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| N-Propylbenzene | 330 | | 76 | 32 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| sec-Butylbenzene | 830 | | 76 | 30 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Naphthalene | 28 | J | 41 | 6.3 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 3.3 | | 1.2 | 0.42 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 96 | | 1.2 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.16 | J | 0.25 | 0.044 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 32 | | 1.2 | 0.61 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 8.8 | | 0.61 | 0.28 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 4.8 | | 0.61 | 0.16 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.019 | J | 0.020 | 0.0065 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: B3 (2-4) — Lab Sample ID: 500-164309-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 56 | J * | 72 | 27 | ug/Kg | 50 | ☼ | 8260B | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Client Sample ID: B4 (2-4) — Lab Sample ID: 500-164309-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 110 | * | 65 | 24 | ug/Kg | 50 | ☼ | 8260B | Total/NA |

## Client Sample ID: B5 (2-4) — Lab Sample ID: 500-164309-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 300 | | 70 | 25 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| p-Isopropyltoluene | 300 | | 70 | 25 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| sec-Butylbenzene | 200 | | 70 | 28 | ug/Kg | 50 | ☼ | 8260B | Total/NA |
| Benzo[a]anthracene | 9.1 | J | 39 | 5.3 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 16 | J | 39 | 7.7 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 16 | J | 39 | 8.5 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 13 | J | 39 | 7.3 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 16 | J | 39 | 7.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 3.7 | | 1.0 | 0.35 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 100 | | 1.0 | 0.12 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.15 | J | 0.20 | 0.037 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 29 | | 1.0 | 0.50 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 9.0 | | 0.51 | 0.23 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Selenium | 0.75 | J | 1.0 | 0.60 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 4.7 | | 0.51 | 0.13 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.024 | | 0.019 | 0.0064 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: B6 (2-4) — Lab Sample ID: 500-164309-6

No Detections.

## Client Sample ID: B7 (0-2) — Lab Sample ID: 500-164309-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 10 | J | 75 | 9.1 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| 2-Methylnaphthalene | 12 | J | 75 | 6.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthene | 36 | J | 37 | 6.7 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Acenaphthylene | 8.8 | J | 37 | 4.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Anthracene | 120 | | 37 | 6.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]anthracene | 480 | | 37 | 5.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[a]pyrene | 490 | | 37 | 7.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[b]fluoranthene | 770 | | 37 | 8.1 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[g,h,i]perylene | 300 | | 37 | 12 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Benzo[k]fluoranthene | 300 | | 37 | 11 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Chrysene | 560 | | 37 | 10 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Dibenz(a,h)anthracene | 80 | | 37 | 7.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluoranthene | 1400 | | 37 | 6.9 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Fluorene | 41 | | 37 | 5.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Indeno[1,2,3-cd]pyrene | 260 | | 37 | 9.7 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Naphthalene | 9.0 | J | 37 | 5.7 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Phenanthrene | 770 | | 37 | 5.2 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Pyrene | 1100 | | 37 | 7.4 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 5.3 | | 1.0 | 0.35 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 25 | | 1.0 | 0.12 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.22 | | 0.20 | 0.036 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 11 | | 1.0 | 0.50 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 28 | | 0.50 | 0.23 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 1.2 | | 0.50 | 0.13 | mg/Kg | 1 | ☼ | 6010C | Total/NA |

This Detection Summary does not include radiochemical test results.

## Client Sample ID: B7 (0-2) (Continued)

## Lab Sample ID: 500-164309-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.080 | | 0.017 | 0.0057 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

## Client Sample ID: B8 (2-4)

## Lab Sample ID: 500-164309-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[a]pyrene | 9.7 | J | 41 | 8.0 | ug/Kg | 1 | ☼ | 8270D | Total/NA |
| Arsenic | 2.7 | | 1.2 | 0.41 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Barium | 69 | | 1.2 | 0.14 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Cadmium | 0.14 | J | 0.24 | 0.043 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Chromium | 24 | | 1.2 | 0.60 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Lead | 5.3 | | 0.60 | 0.28 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Silver | 3.6 | | 0.60 | 0.16 | mg/Kg | 1 | ☼ | 6010C | Total/NA |
| Mercury | 0.021 | | 0.020 | 0.0067 | mg/Kg | 1 | ☼ | 7471B | Total/NA |

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8270D | Semivolatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| 8082A | Polychlorinated Biphenyls (PCBs) by Gas Chromatography | SW846 | TAL CHI |
| 6010C | Metals (ICP) | SW846 | TAL CHI |
| 7471B | Mercury (CVAA) | SW846 | TAL CHI |
| Moisture | Percent Moisture | EPA | TAL CHI |
| 3050B | Preparation, Metals | SW846 | TAL CHI |
| 3541 | Automated Soxhlet Extraction | SW846 | TAL CHI |
| 5035 | Closed System Purge and Trap | SW846 | TAL CHI |
| 7471B | Preparation, Mercury | SW846 | TAL CHI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Solid | 05/28/19 09:00 | 05/31/19 10:25 | |
| 500-164309-2 | B2 (4-6) | Solid | 05/28/19 09:35 | 05/31/19 10:25 | |
| 500-164309-3 | B3 (2-4) | Solid | 05/28/19 10:10 | 05/31/19 10:25 | |
| 500-164309-4 | B4 (2-4) | Solid | 05/28/19 11:15 | 05/31/19 10:25 | |
| 500-164309-5 | B5 (2-4) | Solid | 05/28/19 13:00 | 05/31/19 10:25 | |
| 500-164309-6 | B6 (2-4) | Solid | 05/28/19 13:35 | 05/31/19 10:25 | |
| 500-164309-7 | B7 (0-2) | Solid | 05/28/19 13:40 | 05/31/19 10:25 | |
| 500-164309-8 | B8 (2-4) | Solid | 05/28/19 13:50 | 05/31/19 10:25 | |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B1 (2-4)**
**Date Collected: 05/28/19 09:00**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-1**
**Matrix: Solid**
**Percent Solids: 86.6**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <30 | * | 65 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,1,1-Trichloroethane | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,1,2,2-Tetrachloroethane | <26 | | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,1,2-Trichloroethane | <23 | * | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,1-Dichloroethane | <27 | * | 65 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,1-Dichloroethene | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,1-Dichloropropene | <19 | * | 65 | 19 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,2,3-Trichlorobenzene | <30 | | 65 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,2,3-Trichloropropane | <27 | | 130 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,2,4-Trichlorobenzene | <22 | | 65 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| **1,2,4-Trimethylbenzene** | **41** | **J** | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,2-Dibromo-3-Chloropropane | <130 | | 330 | 130 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,2-Dibromoethane | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,2-Dichlorobenzene | <22 | * | 65 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,2-Dichloroethane | <26 | * | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,2-Dichloropropane | <28 | * | 65 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,3,5-Trimethylbenzene | <25 | | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,3-Dichlorobenzene | <26 | * | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,3-Dichloropropane | <24 | | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 1,4-Dichlorobenzene | <24 | * | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 2,2-Dichloropropane | <29 | | 65 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 2-Chlorotoluene | <21 | | 65 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| 4-Chlorotoluene | <23 | | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Benzene | <9.5 | * | 16 | 9.5 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Bromobenzene | <23 | * | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Bromochloromethane | <28 | * | 65 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Bromodichloromethane | <24 | * | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Bromoform | <32 | * | 65 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Bromomethane | <52 | | 200 | 52 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Carbon tetrachloride | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Chlorobenzene | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Chloroethane | <33 | | 65 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Chloroform | <24 | * | 130 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Chloromethane | <21 | | 65 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| cis-1,2-Dichloroethene | <27 | * | 65 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| cis-1,3-Dichloropropene | <27 | | 65 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Dibromochloromethane | <32 | * | 65 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Dibromomethane | <18 | * | 65 | 18 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Dichlorodifluoromethane | <44 | | 200 | 44 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Ethylbenzene | <12 | * | 16 | 12 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Hexachlorobutadiene | <29 | | 65 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Isopropyl ether | <18 | | 65 | 18 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Isopropylbenzene | <25 | | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Methyl tert-butyl ether | <26 | * | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Methylene Chloride | <110 | * | 330 | 110 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| **Naphthalene** | **32** | **J** | 65 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| n-Butylbenzene | <25 | | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| N-Propylbenzene | <27 | | 65 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| p-Isopropyltoluene | <24 | | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |

## Client Sample ID: B1 (2-4)
**Date Collected: 05/28/19 09:00**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-1
**Matrix: Solid**
**Percent Solids: 86.6**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <26 | | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Styrene | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| tert-Butylbenzene | <26 | | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| **Tetrachloroethene** | **220** | * | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| **Toluene** | **11** | J | 16 | 9.6 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| trans-1,2-Dichloroethene | <23 | * | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| trans-1,3-Dichloropropene | <24 | | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Trichloroethene | <11 | * | 33 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Trichlorofluoromethane | <28 | | 65 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| Vinyl chloride | <17 | | 65 | 17 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |
| **Xylenes, Total** | **25** | J * | 33 | 14 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 16:59 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *75 - 126* | *05/28/19 13:30* | *06/07/19 16:59* | *50* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *72 - 124* | *05/28/19 13:30* | *06/07/19 16:59* | *50* |
| *Dibromofluoromethane* | *102* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 16:59* | *50* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 16:59* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1-Methylnaphthalene** | **61** | J | 74 | 9.0 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **2-Methylnaphthalene** | **60** | J | 74 | 6.8 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Acenaphthene** | **140** | | 37 | 6.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Acenaphthylene** | **15** | J | 37 | 4.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Anthracene** | **350** | | 37 | 6.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Benzo[a]anthracene** | **1300** | | 37 | 5.0 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Benzo[a]pyrene** | **1400** | | 37 | 7.1 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Benzo[b]fluoranthene** | **2200** | | 37 | 8.0 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Benzo[g,h,i]perylene** | **620** | | 37 | 12 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Benzo[k]fluoranthene** | **750** | | 37 | 11 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Chrysene** | **1300** | | 37 | 10 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Dibenz(a,h)anthracene** | **190** | | 37 | 7.1 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Fluoranthene** | **2500** | | 37 | 6.8 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Fluorene** | **120** | | 37 | 5.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **570** | | 37 | 9.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Naphthalene** | **66** | | 37 | 5.7 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Phenanthrene** | **1400** | | 37 | 5.1 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |
| **Pyrene** | **2300** | | 37 | 7.3 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 12:18 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *99* | | *43 - 145* | *06/11/19 08:04* | *06/14/19 12:18* | *1* |
| *Nitrobenzene-d5 (Surr)* | *85* | | *37 - 147* | *06/11/19 08:04* | *06/14/19 12:18* | *1* |
| *Terphenyl-d14 (Surr)* | *107* | | *42 - 157* | *06/11/19 08:04* | *06/14/19 12:18* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **1.7** | | 1.1 | 0.38 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:33 | 1 |
| **Barium** | **38** | | 1.1 | 0.13 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:33 | 1 |
| **Cadmium** | **0.20** | J | 0.22 | 0.040 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:33 | 1 |
| **Chromium** | **8.4** | | 1.1 | 0.55 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:33 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B1 (2-4)**
**Date Collected: 05/28/19 09:00**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-1**
**Matrix: Solid**
**Percent Solids: 86.6**

### Method: 6010C - Metals (ICP) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **32** | | 0.55 | 0.25 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:33 | 1 |
| Selenium | <0.65 | | 1.1 | 0.65 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:33 | 1 |
| **Silver** | **1.5** | | 0.55 | 0.14 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:33 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.037** | | 0.018 | 0.0060 | mg/Kg | ☼ | 06/11/19 14:20 | 06/12/19 08:56 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B2 (4-6)**
**Date Collected: 05/28/19 09:35**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-2**
**Matrix: Solid**
**Percent Solids: 79.2**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <35 | * | 76 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,1,1-Trichloroethane | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,1,2,2-Tetrachloroethane | <30 | | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,1,2-Trichloroethane | <27 | * | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,1-Dichloroethane | <31 | * | 76 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,1-Dichloroethene | <30 | * | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,1-Dichloropropene | <23 | * | 76 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2,3-Trichlorobenzene | <35 | | 76 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2,3-Trichloropropane | <32 | | 150 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2,4-Trichlorobenzene | <26 | | 76 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2,4-Trimethylbenzene | <27 | | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2-Dibromo-3-Chloropropane | <150 | | 380 | 150 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2-Dibromoethane | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2-Dichlorobenzene | <25 | * | 76 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2-Dichloroethane | <30 | * | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,2-Dichloropropane | <33 | * | 76 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,3,5-Trimethylbenzene | <29 | | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,3-Dichlorobenzene | <30 | * | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,3-Dichloropropane | <28 | | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 1,4-Dichlorobenzene | <28 | * | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 2,2-Dichloropropane | <34 | | 76 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 2-Chlorotoluene | <24 | | 76 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| 4-Chlorotoluene | <27 | | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Benzene | <11 | * | 19 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Bromobenzene | <27 | * | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Bromochloromethane | <33 | * | 76 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Bromodichloromethane | <28 | * | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Bromoform | <37 | * | 76 | 37 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Bromomethane | <61 | | 230 | 61 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Carbon tetrachloride | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Chlorobenzene | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Chloroethane | <38 | | 76 | 38 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Chloroform | <28 | * | 150 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Chloromethane | <24 | | 76 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| cis-1,2-Dichloroethene | <31 | * | 76 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| cis-1,3-Dichloropropene | <32 | | 76 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Dibromochloromethane | <37 | * | 76 | 37 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Dibromomethane | <21 | * | 76 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Dichlorodifluoromethane | <51 | | 230 | 51 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Ethylbenzene | <14 | * | 19 | 14 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Hexachlorobutadiene | <34 | | 76 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Isopropyl ether | <21 | | 76 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| **Isopropylbenzene** | **160** | | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Methyl tert-butyl ether | <30 | * | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Methylene Chloride | <120 | * | 380 | 120 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Naphthalene | <25 | | 76 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| **n-Butylbenzene** | **740** | | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| **N-Propylbenzene** | **330** | | 76 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| p-Isopropyltoluene | <28 | | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B2 (4-6)**
**Date Collected: 05/28/19 09:35**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-2**
**Matrix: Solid**
**Percent Solids: 79.2**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **sec-Butylbenzene** | **830** | | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Styrene | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| tert-Butylbenzene | <30 | | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Tetrachloroethene | <28 | * | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Toluene | <11 | | 19 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| trans-1,2-Dichloroethene | <27 | * | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| trans-1,3-Dichloropropene | <28 | | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Trichloroethene | <13 | * | 38 | 13 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Trichlorofluoromethane | <33 | | 76 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Vinyl chloride | <20 | | 76 | 20 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |
| Xylenes, Total | <17 | * | 38 | 17 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:26 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *107* | | *75 - 126* | *05/28/19 13:30* | *06/07/19 17:26* | *50* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *72 - 124* | *05/28/19 13:30* | *06/07/19 17:26* | *50* |
| *Dibromofluoromethane* | *101* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 17:26* | *50* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 17:26* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <10 | | 83 | 10 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| 2-Methylnaphthalene | <7.6 | | 83 | 7.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Acenaphthene | <7.4 | | 41 | 7.4 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Acenaphthylene | <5.4 | | 41 | 5.4 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Anthracene | <6.9 | | 41 | 6.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Benzo[a]anthracene | <5.5 | | 41 | 5.5 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Benzo[a]pyrene | <7.9 | | 41 | 7.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Benzo[b]fluoranthene | <8.9 | | 41 | 8.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Benzo[g,h,i]perylene | <13 | | 41 | 13 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Benzo[k]fluoranthene | <12 | | 41 | 12 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Chrysene | <11 | | 41 | 11 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Dibenz(a,h)anthracene | <7.9 | | 41 | 7.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Fluoranthene | <7.6 | | 41 | 7.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Fluorene | <5.8 | | 41 | 5.8 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Indeno[1,2,3-cd]pyrene | <11 | | 41 | 11 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| **Naphthalene** | **28** | **J** | 41 | 6.3 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Phenanthrene | <5.7 | | 41 | 5.7 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |
| Pyrene | <8.2 | | 41 | 8.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:04 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *100* | | *43 - 145* | *06/11/19 08:04* | *06/14/19 11:04* | *1* |
| *Nitrobenzene-d5 (Surr)* | *97* | | *37 - 147* | *06/11/19 08:04* | *06/14/19 11:04* | *1* |
| *Terphenyl-d14 (Surr)* | *132* | | *42 - 157* | *06/11/19 08:04* | *06/14/19 11:04* | *1* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | <7.3 | | 21 | 7.3 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 09:50 | 1 |
| PCB-1221 | <9.1 | | 21 | 9.1 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 09:50 | 1 |
| PCB-1232 | <9.0 | | 21 | 9.0 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 09:50 | 1 |
| PCB-1242 | <6.8 | | 21 | 6.8 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 09:50 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B2 (4-6)**
**Date Collected: 05/28/19 09:35**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-2**
**Matrix: Solid**
**Percent Solids: 79.2**

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1248 | <8.1 | | 21 | 8.1 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 09:50 | 1 |
| PCB-1254 | <4.5 | | 21 | 4.5 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 09:50 | 1 |
| PCB-1260 | <10 | | 21 | 10 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 09:50 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *77* | | *49 - 129* | *06/13/19 16:47* | *06/14/19 09:50* | *1* |
| *DCB Decachlorobiphenyl* | *105* | | *37 - 121* | *06/13/19 16:47* | *06/14/19 09:50* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.3** | | 1.2 | 0.42 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:37 | 1 |
| **Barium** | **96** | | 1.2 | 0.14 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:37 | 1 |
| **Cadmium** | **0.16** | **J** | 0.25 | 0.044 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:37 | 1 |
| **Chromium** | **32** | | 1.2 | 0.61 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:37 | 1 |
| **Lead** | **8.8** | | 0.61 | 0.28 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:37 | 1 |
| Selenium | <0.72 | | 1.2 | 0.72 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:37 | 1 |
| **Silver** | **4.8** | | 0.61 | 0.16 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:37 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.019** | **J** | 0.020 | 0.0065 | mg/Kg | ☼ | 06/11/19 14:20 | 06/12/19 08:58 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B3 (2-4)**
**Date Collected: 05/28/19 10:10**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-3**
**Matrix: Solid**
**Percent Solids: 81.4**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <33 | * | 72 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,1,1-Trichloroethane | <27 | * | 72 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,1,2,2-Tetrachloroethane | <29 | | 72 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,1,2-Trichloroethane | <25 | * | 72 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,1-Dichloroethane | <30 | * | 72 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,1-Dichloroethene | <28 | * | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,1-Dichloropropene | <22 | * | 72 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2,3-Trichlorobenzene | <33 | | 72 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2,3-Trichloropropane | <30 | | 140 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2,4-Trichlorobenzene | <25 | | 72 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2,4-Trimethylbenzene | <26 | | 72 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2-Dibromo-3-Chloropropane | <140 | | 360 | 140 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2-Dibromoethane | <28 | * | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2-Dichlorobenzene | <24 | * | 72 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2-Dichloroethane | <28 | * | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,2-Dichloropropane | <31 | * | 72 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,3,5-Trimethylbenzene | <27 | | 72 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,3-Dichlorobenzene | <29 | * | 72 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,3-Dichloropropane | <26 | | 72 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 1,4-Dichlorobenzene | <26 | * | 72 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 2,2-Dichloropropane | <32 | | 72 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 2-Chlorotoluene | <23 | | 72 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| 4-Chlorotoluene | <25 | | 72 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Benzene | <11 | * | 18 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Bromobenzene | <26 | * | 72 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Bromochloromethane | <31 | * | 72 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Bromodichloromethane | <27 | * | 72 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Bromoform | <35 | * | 72 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Bromomethane | <58 | | 220 | 58 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Carbon tetrachloride | <28 | * | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Chlorobenzene | <28 | * | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Chloroethane | <36 | | 72 | 36 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Chloroform | <27 | * | 140 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Chloromethane | <23 | | 72 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| cis-1,2-Dichloroethene | <29 | * | 72 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| cis-1,3-Dichloropropene | <30 | | 72 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Dibromochloromethane | <35 | * | 72 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Dibromomethane | <20 | * | 72 | 20 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Dichlorodifluoromethane | <49 | | 220 | 49 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Ethylbenzene | <13 | * | 18 | 13 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Hexachlorobutadiene | <32 | | 72 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Isopropyl ether | <20 | | 72 | 20 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Isopropylbenzene | <28 | | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Methyl tert-butyl ether | <28 | * | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Methylene Chloride | <120 | * | 360 | 120 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Naphthalene | <24 | | 72 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| n-Butylbenzene | <28 | | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| N-Propylbenzene | <30 | | 72 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| p-Isopropyltoluene | <26 | | 72 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B3 (2-4)**
**Date Collected: 05/28/19 10:10**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-3**
**Matrix: Solid**
**Percent Solids: 81.4**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <29 | | 72 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Styrene | <28 | * | 72 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| tert-Butylbenzene | <29 | | 72 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| **Tetrachloroethene** | **56** | **J *** | 72 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Toluene | <11 | | 18 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| trans-1,2-Dichloroethene | <25 | * | 72 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| trans-1,3-Dichloropropene | <26 | | 72 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Trichloroethene | <12 | * | 36 | 12 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Trichlorofluoromethane | <31 | | 72 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Vinyl chloride | <19 | | 72 | 19 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |
| Xylenes, Total | <16 | * | 36 | 16 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 17:53 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *75 - 126* | *05/28/19 13:30* | *06/07/19 17:53* | *50* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *72 - 124* | *05/28/19 13:30* | *06/07/19 17:53* | *50* |
| *Dibromofluoromethane* | *103* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 17:53* | *50* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 17:53* | *50* |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B4 (2-4)**
**Date Collected: 05/28/19 11:15**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-4**
**Matrix: Solid**
**Percent Solids: 87.4**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <30 | * | 65 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,1,1-Trichloroethane | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,1,2,2-Tetrachloroethane | <26 | | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,1,2-Trichloroethane | <23 | * | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,1-Dichloroethane | <26 | * | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,1-Dichloroethene | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,1-Dichloropropene | <19 | * | 65 | 19 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2,3-Trichlorobenzene | <30 | | 65 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2,3-Trichloropropane | <27 | | 130 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2,4-Trichlorobenzene | <22 | | 65 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2,4-Trimethylbenzene | <23 | | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2-Dibromo-3-Chloropropane | <130 | | 320 | 130 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2-Dibromoethane | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2-Dichlorobenzene | <22 | * | 65 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2-Dichloroethane | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,2-Dichloropropane | <28 | * | 65 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,3,5-Trimethylbenzene | <25 | | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,3-Dichlorobenzene | <26 | * | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,3-Dichloropropane | <23 | | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 1,4-Dichlorobenzene | <24 | * | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 2,2-Dichloropropane | <29 | | 65 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 2-Chlorotoluene | <20 | | 65 | 20 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| 4-Chlorotoluene | <23 | | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Benzene | <9.4 | * | 16 | 9.4 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Bromobenzene | <23 | * | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Bromochloromethane | <28 | * | 65 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Bromodichloromethane | <24 | * | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Bromoform | <31 | * | 65 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Bromomethane | <51 | | 190 | 51 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Carbon tetrachloride | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Chlorobenzene | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Chloroethane | <33 | | 65 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Chloroform | <24 | * | 130 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Chloromethane | <21 | | 65 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| cis-1,2-Dichloroethene | <26 | * | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| cis-1,3-Dichloropropene | <27 | | 65 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Dibromochloromethane | <32 | * | 65 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Dibromomethane | <17 | * | 65 | 17 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Dichlorodifluoromethane | <44 | | 190 | 44 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Ethylbenzene | <12 | * | 16 | 12 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Hexachlorobutadiene | <29 | | 65 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Isopropyl ether | <18 | | 65 | 18 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Isopropylbenzene | <25 | | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Methyl tert-butyl ether | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Methylene Chloride | <110 | * | 320 | 110 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Naphthalene | <22 | | 65 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| n-Butylbenzene | <25 | | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| N-Propylbenzene | <27 | | 65 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| p-Isopropyltoluene | <23 | | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B4 (2-4)**
**Date Collected: 05/28/19 11:15**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-4**
**Matrix: Solid**
**Percent Solids: 87.4**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <26 | | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Styrene | <25 | * | 65 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| tert-Butylbenzene | <26 | | 65 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| **Tetrachloroethene** | **110** | * | 65 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Toluene | <9.5 | | 16 | 9.5 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| trans-1,2-Dichloroethene | <23 | * | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| trans-1,3-Dichloropropene | <23 | | 65 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Trichloroethene | <11 | * | 32 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Trichlorofluoromethane | <28 | | 65 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Vinyl chloride | <17 | | 65 | 17 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |
| Xylenes, Total | <14 | * | 32 | 14 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:20 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *75 - 126* | *05/28/19 13:30* | *06/07/19 18:20* | *50* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *72 - 124* | *05/28/19 13:30* | *06/07/19 18:20* | *50* |
| *Dibromofluoromethane* | *105* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 18:20* | *50* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 18:20* | *50* |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B5 (2-4)**
**Date Collected: 05/28/19 13:00**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-5**
**Matrix: Solid**
**Percent Solids: 83.2**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <33 | * | 70 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,1,1-Trichloroethane | <27 | * | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,1,2,2-Tetrachloroethane | <28 | | 70 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,1,2-Trichloroethane | <25 | * | 70 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,1-Dichloroethane | <29 | * | 70 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,1-Dichloroethene | <27 | * | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,1-Dichloropropene | <21 | * | 70 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,2,3-Trichlorobenzene | <32 | | 70 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,2,3-Trichloropropane | <29 | | 140 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,2,4-Trichlorobenzene | <24 | | 70 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| **1,2,4-Trimethylbenzene** | **300** | | 70 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,2-Dibromo-3-Chloropropane | <140 | | 350 | 140 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,2-Dibromoethane | <27 | * | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,2-Dichlorobenzene | <24 | * | 70 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,2-Dichloroethane | <28 | * | 70 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,2-Dichloropropane | <30 | * | 70 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,3,5-Trimethylbenzene | <27 | | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,3-Dichlorobenzene | <28 | * | 70 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,3-Dichloropropane | <25 | | 70 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 1,4-Dichlorobenzene | <26 | * | 70 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 2,2-Dichloropropane | <31 | | 70 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 2-Chlorotoluene | <22 | | 70 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| 4-Chlorotoluene | <25 | | 70 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Benzene | <10 | * | 18 | 10 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Bromobenzene | <25 | * | 70 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Bromochloromethane | <30 | * | 70 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Bromodichloromethane | <26 | * | 70 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Bromoform | <34 | * | 70 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Bromomethane | <56 | | 210 | 56 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Carbon tetrachloride | <27 | * | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Chlorobenzene | <27 | * | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Chloroethane | <35 | | 70 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Chloroform | <26 | * | 140 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Chloromethane | <23 | | 70 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| cis-1,2-Dichloroethene | <29 | * | 70 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| cis-1,3-Dichloropropene | <29 | | 70 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Dibromochloromethane | <34 | * | 70 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Dibromomethane | <19 | * | 70 | 19 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Dichlorodifluoromethane | <47 | | 210 | 47 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Ethylbenzene | <13 | * | 18 | 13 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Hexachlorobutadiene | <31 | | 70 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Isopropyl ether | <19 | | 70 | 19 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Isopropylbenzene | <27 | | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Methyl tert-butyl ether | <28 | * | 70 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Methylene Chloride | <110 | * | 350 | 110 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Naphthalene | <24 | | 70 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| n-Butylbenzene | <27 | | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| N-Propylbenzene | <29 | | 70 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| **p-Isopropyltoluene** | **300** | | 70 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |

## Client Sample ID: B5 (2-4)
**Date Collected: 05/28/19 13:00**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-5
**Matrix: Solid**
**Percent Solids: 83.2**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **sec-Butylbenzene** | **200** | | 70 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Styrene | <27 | * | 70 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| tert-Butylbenzene | <28 | | 70 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Tetrachloroethene | <26 | * | 70 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Toluene | <10 | | 18 | 10 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| trans-1,2-Dichloroethene | <25 | * | 70 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| trans-1,3-Dichloropropene | <25 | | 70 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Trichloroethene | <12 | * | 35 | 12 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Trichlorofluoromethane | <30 | | 70 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Vinyl chloride | <18 | | 70 | 18 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |
| Xylenes, Total | <15 | * | 35 | 15 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 18:47 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *109* | | *75 - 126* | *05/28/19 13:30* | *06/07/19 18:47* | *50* |
| *4-Bromofluorobenzene (Surr)* | *90* | | *72 - 124* | *05/28/19 13:30* | *06/07/19 18:47* | *50* |
| *Dibromofluoromethane* | *103* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 18:47* | *50* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 18:47* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <9.7 | | 80 | 9.7 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| 2-Methylnaphthalene | <7.3 | | 80 | 7.3 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Acenaphthene | <7.1 | | 39 | 7.1 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Acenaphthylene | <5.2 | | 39 | 5.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Anthracene | <6.6 | | 39 | 6.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| **Benzo[a]anthracene** | **9.1** | **J** | 39 | 5.3 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| **Benzo[a]pyrene** | **16** | **J** | 39 | 7.7 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| **Benzo[b]fluoranthene** | **16** | **J** | 39 | 8.5 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Benzo[g,h,i]perylene | <13 | | 39 | 13 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Benzo[k]fluoranthene | <12 | | 39 | 12 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Chrysene | <11 | | 39 | 11 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Dibenz(a,h)anthracene | <7.6 | | 39 | 7.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| **Fluoranthene** | **13** | **J** | 39 | 7.3 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Fluorene | <5.6 | | 39 | 5.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Indeno[1,2,3-cd]pyrene | <10 | | 39 | 10 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Naphthalene | <6.1 | | 39 | 6.1 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| Phenanthrene | <5.5 | | 39 | 5.5 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |
| **Pyrene** | **16** | **J** | 39 | 7.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *112* | | *43 - 145* | *06/11/19 08:04* | *06/14/19 11:29* | *1* |
| *Nitrobenzene-d5 (Surr)* | *94* | | *37 - 147* | *06/11/19 08:04* | *06/14/19 11:29* | *1* |
| *Terphenyl-d14 (Surr)* | *133* | | *42 - 157* | *06/11/19 08:04* | *06/14/19 11:29* | *1* |

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | <6.7 | | 19 | 6.7 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 10:05 | 1 |
| PCB-1221 | <8.4 | | 19 | 8.4 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 10:05 | 1 |
| PCB-1232 | <8.3 | | 19 | 8.3 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 10:05 | 1 |
| PCB-1242 | <6.3 | | 19 | 6.3 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 10:05 | 1 |

## Client Sample ID: B5 (2-4)
**Date Collected: 05/28/19 13:00**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-5
**Matrix: Solid**
**Percent Solids: 83.2**

### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1248 | <7.5 | | 19 | 7.5 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 10:05 | 1 |
| PCB-1254 | <4.1 | | 19 | 4.1 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 10:05 | 1 |
| PCB-1260 | <9.3 | | 19 | 9.3 | ug/Kg | ☼ | 06/13/19 16:47 | 06/14/19 10:05 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *74* | | *49 - 129* | *06/13/19 16:47* | *06/14/19 10:05* | *1* |
| *DCB Decachlorobiphenyl* | *96* | | *37 - 121* | *06/13/19 16:47* | *06/14/19 10:05* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **3.7** | | 1.0 | 0.35 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:41 | 1 |
| **Barium** | **100** | | 1.0 | 0.12 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:41 | 1 |
| **Cadmium** | **0.15** | **J** | 0.20 | 0.037 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:41 | 1 |
| **Chromium** | **29** | | 1.0 | 0.50 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:41 | 1 |
| **Lead** | **9.0** | | 0.51 | 0.23 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:41 | 1 |
| **Selenium** | **0.75** | **J** | 1.0 | 0.60 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:41 | 1 |
| **Silver** | **4.7** | | 0.51 | 0.13 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:41 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.024** | | 0.019 | 0.0064 | mg/Kg | ☼ | 06/11/19 14:20 | 06/12/19 09:00 | 1 |

## Client Sample ID: B6 (2-4)

**Date Collected: 05/28/19 13:35**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-6

**Matrix: Solid**
**Percent Solids: 79.8**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <35 | * | 76 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,1,1-Trichloroethane | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,1,2,2-Tetrachloroethane | <30 | | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,1,2-Trichloroethane | <27 | * | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,1-Dichloroethane | <31 | * | 76 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,1-Dichloroethene | <30 | * | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,1-Dichloropropene | <23 | * | 76 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2,3-Trichlorobenzene | <35 | | 76 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2,3-Trichloropropane | <31 | | 150 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2,4-Trichlorobenzene | <26 | | 76 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2,4-Trimethylbenzene | <27 | | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2-Dibromo-3-Chloropropane | <150 | | 380 | 150 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2-Dibromoethane | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2-Dichlorobenzene | <25 | * | 76 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2-Dichloroethane | <30 | * | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,2-Dichloropropane | <33 | * | 76 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,3,5-Trimethylbenzene | <29 | | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,3-Dichlorobenzene | <30 | * | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,3-Dichloropropane | <28 | | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 1,4-Dichlorobenzene | <28 | * | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 2,2-Dichloropropane | <34 | | 76 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 2-Chlorotoluene | <24 | | 76 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| 4-Chlorotoluene | <27 | | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Benzene | <11 | * | 19 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Bromobenzene | <27 | * | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Bromochloromethane | <33 | * | 76 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Bromodichloromethane | <28 | * | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Bromoform | <37 | * | 76 | 37 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Bromomethane | <60 | | 230 | 60 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Carbon tetrachloride | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Chlorobenzene | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Chloroethane | <38 | | 76 | 38 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Chloroform | <28 | * | 150 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Chloromethane | <24 | | 76 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| cis-1,2-Dichloroethene | <31 | * | 76 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| cis-1,3-Dichloropropene | <32 | | 76 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Dibromochloromethane | <37 | * | 76 | 37 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Dibromomethane | <21 | * | 76 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Dichlorodifluoromethane | <51 | | 230 | 51 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Ethylbenzene | <14 | * | 19 | 14 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Hexachlorobutadiene | <34 | | 76 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Isopropyl ether | <21 | | 76 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Isopropylbenzene | <29 | | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Methyl tert-butyl ether | <30 | * | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Methylene Chloride | <120 | * | 380 | 120 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Naphthalene | <25 | | 76 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| n-Butylbenzene | <29 | | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| N-Propylbenzene | <31 | | 76 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| p-Isopropyltoluene | <28 | | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B6 (2-4)**
**Date Collected: 05/28/19 13:35**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-6**
**Matrix: Solid**
**Percent Solids: 79.8**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <30 | | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Styrene | <29 | * | 76 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| tert-Butylbenzene | <30 | | 76 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Tetrachloroethene | <28 | * | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Toluene | <11 | | 19 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| trans-1,2-Dichloroethene | <27 | * | 76 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| trans-1,3-Dichloropropene | <28 | | 76 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Trichloroethene | <12 | * | 38 | 12 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Trichlorofluoromethane | <33 | | 76 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Vinyl chloride | <20 | | 76 | 20 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |
| Xylenes, Total | <17 | * | 38 | 17 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:14 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *75 - 126* | *05/28/19 13:30* | *06/07/19 19:14* | *50* |
| *4-Bromofluorobenzene (Surr)* | *102* | | *72 - 124* | *05/28/19 13:30* | *06/07/19 19:14* | *50* |
| *Dibromofluoromethane* | *104* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 19:14* | *50* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 19:14* | *50* |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B7 (0-2)**
**Date Collected: 05/28/19 13:40**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-7**
**Matrix: Solid**
**Percent Solids: 88.3**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <29 | * | 62 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,1,1-Trichloroethane | <24 | * | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,1,2,2-Tetrachloroethane | <25 | | 62 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,1,2-Trichloroethane | <22 | * | 62 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,1-Dichloroethane | <26 | * | 62 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,1-Dichloroethene | <24 | * | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,1-Dichloropropene | <19 | * | 62 | 19 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2,3-Trichlorobenzene | <29 | | 62 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2,3-Trichloropropane | <26 | | 120 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2,4-Trichlorobenzene | <21 | | 62 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2,4-Trimethylbenzene | <22 | | 62 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2-Dibromo-3-Chloropropane | <120 | | 310 | 120 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2-Dibromoethane | <24 | * | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2-Dichlorobenzene | <21 | * | 62 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2-Dichloroethane | <24 | * | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,2-Dichloropropane | <27 | * | 62 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,3,5-Trimethylbenzene | <24 | | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,3-Dichlorobenzene | <25 | * | 62 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,3-Dichloropropane | <23 | | 62 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 1,4-Dichlorobenzene | <23 | * | 62 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 2,2-Dichloropropane | <28 | | 62 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 2-Chlorotoluene | <20 | | 62 | 20 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| 4-Chlorotoluene | <22 | | 62 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Benzene | <9.1 | * | 16 | 9.1 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Bromobenzene | <22 | * | 62 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Bromochloromethane | <27 | * | 62 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Bromodichloromethane | <23 | * | 62 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Bromoform | <30 | * | 62 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Bromomethane | <50 | | 190 | 50 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Carbon tetrachloride | <24 | * | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Chlorobenzene | <24 | * | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Chloroethane | <31 | | 62 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Chloroform | <23 | * | 120 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Chloromethane | <20 | | 62 | 20 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| cis-1,2-Dichloroethene | <25 | * | 62 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| cis-1,3-Dichloropropene | <26 | | 62 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Dibromochloromethane | <30 | * | 62 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Dibromomethane | <17 | * | 62 | 17 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Dichlorodifluoromethane | <42 | | 190 | 42 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Ethylbenzene | <11 | * | 16 | 11 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Hexachlorobutadiene | <28 | | 62 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Isopropyl ether | <17 | | 62 | 17 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Isopropylbenzene | <24 | | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Methyl tert-butyl ether | <25 | * | 62 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Methylene Chloride | <100 | * | 310 | 100 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Naphthalene | <21 | | 62 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| n-Butylbenzene | <24 | | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| N-Propylbenzene | <26 | | 62 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| p-Isopropyltoluene | <23 | | 62 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |

## Client Sample ID: B7 (0-2)
**Date Collected: 05/28/19 13:40**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-7
**Matrix: Solid**
**Percent Solids: 88.3**

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <25 | | 62 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Styrene | <24 | * | 62 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| tert-Butylbenzene | <25 | | 62 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Tetrachloroethene | <23 | * | 62 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Toluene | <9.2 | | 16 | 9.2 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| trans-1,2-Dichloroethene | <22 | * | 62 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| trans-1,3-Dichloropropene | <23 | | 62 | 23 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Trichloroethene | <10 | * | 31 | 10 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Trichlorofluoromethane | <27 | | 62 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Vinyl chloride | <16 | | 62 | 16 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |
| Xylenes, Total | <14 | * | 31 | 14 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 19:41 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *75 - 126* | *05/28/19 13:30* | *06/07/19 19:41* | *50* |
| *4-Bromofluorobenzene (Surr)* | *100* | | *72 - 124* | *05/28/19 13:30* | *06/07/19 19:41* | *50* |
| *Dibromofluoromethane* | *104* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 19:41* | *50* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 19:41* | *50* |

### Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **1-Methylnaphthalene** | **10** | **J** | 75 | 9.1 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **2-Methylnaphthalene** | **12** | **J** | 75 | 6.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Acenaphthene** | **36** | **J** | 37 | 6.7 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Acenaphthylene** | **8.8** | **J** | 37 | 4.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Anthracene** | **120** | | 37 | 6.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Benzo[a]anthracene** | **480** | | 37 | 5.0 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Benzo[a]pyrene** | **490** | | 37 | 7.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Benzo[b]fluoranthene** | **770** | | 37 | 8.1 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Benzo[g,h,i]perylene** | **300** | | 37 | 12 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Benzo[k]fluoranthene** | **300** | | 37 | 11 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Chrysene** | **560** | | 37 | 10 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Dibenz(a,h)anthracene** | **80** | | 37 | 7.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Fluoranthene** | **1400** | | 37 | 6.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Fluorene** | **41** | | 37 | 5.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Indeno[1,2,3-cd]pyrene** | **260** | | 37 | 9.7 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Naphthalene** | **9.0** | **J** | 37 | 5.7 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Phenanthrene** | **770** | | 37 | 5.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |
| **Pyrene** | **1100** | | 37 | 7.4 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 11:54 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *106* | | *43 - 145* | *06/11/19 08:04* | *06/14/19 11:54* | *1* |
| *Nitrobenzene-d5 (Surr)* | *89* | | *37 - 147* | *06/11/19 08:04* | *06/14/19 11:54* | *1* |
| *Terphenyl-d14 (Surr)* | *118* | | *42 - 157* | *06/11/19 08:04* | *06/14/19 11:54* | *1* |

### Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **5.3** | | 1.0 | 0.35 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:53 | 1 |
| **Barium** | **25** | | 1.0 | 0.12 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:53 | 1 |
| **Cadmium** | **0.22** | | 0.20 | 0.036 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:53 | 1 |
| **Chromium** | **11** | | 1.0 | 0.50 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:53 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B7 (0-2)**
**Date Collected: 05/28/19 13:40**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-7**
**Matrix: Solid**
**Percent Solids: 88.3**

### Method: 6010C - Metals (ICP) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **28** | | 0.50 | 0.23 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:53 | 1 |
| Selenium | <0.59 | | 1.0 | 0.59 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:53 | 1 |
| **Silver** | **1.2** | | 0.50 | 0.13 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:53 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.080** | | 0.017 | 0.0057 | mg/Kg | ☼ | 06/11/19 14:20 | 06/12/19 09:02 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B8 (2-4)**
**Date Collected: 05/28/19 13:50**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-8**
**Matrix: Solid**
**Percent Solids: 79.8**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <37 | * | 79 | 37 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,1,1-Trichloroethane | <30 | * | 79 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,1,2,2-Tetrachloroethane | <31 | | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,1,2-Trichloroethane | <28 | * | 79 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,1-Dichloroethane | <32 | * | 79 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,1-Dichloroethene | <31 | * | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,1-Dichloropropene | <24 | * | 79 | 24 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2,3-Trichlorobenzene | <36 | | 79 | 36 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2,3-Trichloropropane | <33 | | 160 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2,4-Trichlorobenzene | <27 | | 79 | 27 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2,4-Trimethylbenzene | <28 | | 79 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2-Dibromo-3-Chloropropane | <160 | | 400 | 160 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2-Dibromoethane | <31 | * | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2-Dichlorobenzene | <26 | * | 79 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2-Dichloroethane | <31 | * F1 | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,2-Dichloropropane | <34 | * | 79 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,3,5-Trimethylbenzene | <30 | | 79 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,3-Dichlorobenzene | <32 | * | 79 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,3-Dichloropropane | <29 | | 79 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 1,4-Dichlorobenzene | <29 | * | 79 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 2,2-Dichloropropane | <35 | | 79 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 2-Chlorotoluene | <25 | | 79 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| 4-Chlorotoluene | <28 | | 79 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Benzene | <12 | * | 20 | 12 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Bromobenzene | <28 | * | 79 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Bromochloromethane | <34 | F1 * | 79 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Bromodichloromethane | <29 | * F1 | 79 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Bromoform | <38 | * | 79 | 38 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Bromomethane | <63 | | 240 | 63 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Carbon tetrachloride | <30 | * | 79 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Chlorobenzene | <31 | * | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Chloroethane | <40 | | 79 | 40 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Chloroform | <29 | * F1 | 160 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Chloromethane | <25 | | 79 | 25 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| cis-1,2-Dichloroethene | <32 | * | 79 | 32 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| cis-1,3-Dichloropropene | <33 | | 79 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Dibromochloromethane | <39 | * | 79 | 39 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Dibromomethane | <21 | * | 79 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Dichlorodifluoromethane | <53 | | 240 | 53 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Ethylbenzene | <14 | * | 20 | 14 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Hexachlorobutadiene | <35 | | 79 | 35 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Isopropyl ether | <22 | | 79 | 22 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Isopropylbenzene | <30 | | 79 | 30 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Methyl tert-butyl ether | <31 | F1 * | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Methylene Chloride | <130 | * | 400 | 130 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Naphthalene | <26 | | 79 | 26 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| n-Butylbenzene | <31 | | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| N-Propylbenzene | <33 | | 79 | 33 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| p-Isopropyltoluene | <29 | | 79 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B8 (2-4)**
**Date Collected: 05/28/19 13:50**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-8**
**Matrix: Solid**
**Percent Solids: 79.8**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <31 | | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Styrene | <31 | * | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| tert-Butylbenzene | <31 | | 79 | 31 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Tetrachloroethene | <29 | * | 79 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Toluene | <12 | | 20 | 12 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| trans-1,2-Dichloroethene | <28 | * | 79 | 28 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| trans-1,3-Dichloropropene | <29 | | 79 | 29 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Trichloroethene | <13 | * F1 | 40 | 13 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Trichlorofluoromethane | <34 | | 79 | 34 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Vinyl chloride | <21 | | 79 | 21 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |
| Xylenes, Total | <17 | * | 40 | 17 | ug/Kg | ☼ | 05/28/19 13:30 | 06/07/19 20:07 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *111* | | *75 - 126* | *05/28/19 13:30* | *06/07/19 20:07* | *50* |
| *4-Bromofluorobenzene (Surr)* | *101* | | *72 - 124* | *05/28/19 13:30* | *06/07/19 20:07* | *50* |
| *Dibromofluoromethane* | *103* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 20:07* | *50* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* | *05/28/19 13:30* | *06/07/19 20:07* | *50* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <10 | | 83 | 10 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| 2-Methylnaphthalene | <7.6 | | 83 | 7.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Acenaphthene | <7.4 | | 41 | 7.4 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Acenaphthylene | <5.4 | | 41 | 5.4 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Anthracene | <6.9 | | 41 | 6.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Benzo[a]anthracene | <5.5 | | 41 | 5.5 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| **Benzo[a]pyrene** | **9.7** | **J** | 41 | 8.0 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Benzo[b]fluoranthene | <8.9 | | 41 | 8.9 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Benzo[g,h,i]perylene | <13 | | 41 | 13 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Benzo[k]fluoranthene | <12 | | 41 | 12 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Chrysene | <11 | | 41 | 11 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Dibenz(a,h)anthracene | <8.0 | | 41 | 8.0 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Fluoranthene | <7.6 | | 41 | 7.6 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Fluorene | <5.8 | | 41 | 5.8 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Indeno[1,2,3-cd]pyrene | <11 | | 41 | 11 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Naphthalene | <6.3 | | 41 | 6.3 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Phenanthrene | <5.7 | | 41 | 5.7 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |
| Pyrene | <8.2 | | 41 | 8.2 | ug/Kg | ☼ | 06/11/19 08:04 | 06/14/19 10:39 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *73* | | *43 - 145* | *06/11/19 08:04* | *06/14/19 10:39* | *1* |
| *Nitrobenzene-d5 (Surr)* | *63* | | *37 - 147* | *06/11/19 08:04* | *06/14/19 10:39* | *1* |
| *Terphenyl-d14 (Surr)* | *121* | | *42 - 157* | *06/11/19 08:04* | *06/14/19 10:39* | *1* |

## Method: 6010C - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Arsenic** | **2.7** | | 1.2 | 0.41 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:58 | 1 |
| **Barium** | **69** | | 1.2 | 0.14 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:58 | 1 |
| **Cadmium** | **0.14** | **J** | 0.24 | 0.043 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:58 | 1 |
| **Chromium** | **24** | | 1.2 | 0.60 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:58 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

**Client Sample ID: B8 (2-4)**
**Date Collected: 05/28/19 13:50**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-8**
**Matrix: Solid**
**Percent Solids: 79.8**

### Method: 6010C - Metals (ICP) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Lead** | **5.3** | | 0.60 | 0.28 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:58 | 1 |
| Selenium | <0.71 | F1 | 1.2 | 0.71 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:58 | 1 |
| **Silver** | **3.6** | | 0.60 | 0.16 | mg/Kg | ☼ | 06/10/19 08:36 | 06/10/19 19:58 | 1 |

### Method: 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Mercury** | **0.021** | | 0.020 | 0.0067 | mg/Kg | ☼ | 06/11/19 14:20 | 06/12/19 09:04 | 1 |

# Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### GC/MS Semi VOA

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

### Metals

| Qualifier | Qualifier Description |
|---|---|
| F1 | MS and/or MSD Recovery is outside acceptance limits. |
| F3 | Duplicate RPD exceeds the control limit |
| F5 | Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## GC/MS VOA

### Prep Batch: 488291

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | 5035 | |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 5035 | |
| 500-164309-3 | B3 (2-4) | Total/NA | Solid | 5035 | |
| 500-164309-4 | B4 (2-4) | Total/NA | Solid | 5035 | |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 5035 | |
| 500-164309-6 | B6 (2-4) | Total/NA | Solid | 5035 | |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | 5035 | |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | 5035 | |
| LB3 500-488291/18-A | Method Blank | Total/NA | Solid | 5035 | |
| LCS 500-488291/19-A | Lab Control Sample | Total/NA | Solid | 5035 | |
| 500-164309-8 MS | B8 (2-4) | Total/NA | Solid | 5035 | |
| 500-164309-8 MSD | B8 (2-4) | Total/NA | Solid | 5035 | |

### Analysis Batch: 488910

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| LB3 500-488291/18-A | Method Blank | Total/NA | Solid | 8260B | 488291 |
| MB 500-488910/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-488291/19-A | Lab Control Sample | Total/NA | Solid | 8260B | 488291 |
| LCS 500-488910/5 | Lab Control Sample | Total/NA | Solid | 8260B | |

### Analysis Batch: 489110

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | 8260B | 488291 |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 8260B | 488291 |
| 500-164309-3 | B3 (2-4) | Total/NA | Solid | 8260B | 488291 |
| 500-164309-4 | B4 (2-4) | Total/NA | Solid | 8260B | 488291 |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 8260B | 488291 |
| 500-164309-6 | B6 (2-4) | Total/NA | Solid | 8260B | 488291 |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | 8260B | 488291 |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | 8260B | 488291 |
| MB 500-489110/6 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-489110/4 | Lab Control Sample | Total/NA | Solid | 8260B | |
| 500-164309-8 MS | B8 (2-4) | Total/NA | Solid | 8260B | 488291 |
| 500-164309-8 MSD | B8 (2-4) | Total/NA | Solid | 8260B | 488291 |

## GC/MS Semi VOA

### Prep Batch: 489649

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | 3541 | |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 3541 | |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 3541 | |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | 3541 | |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | 3541 | |
| MB 500-489649/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-489649/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |

### Analysis Batch: 489650

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| MB 500-489649/1-A | Method Blank | Total/NA | Solid | 8270D | 489649 |
| LCS 500-489649/2-A | Lab Control Sample | Total/NA | Solid | 8270D | 489649 |

# QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## GC/MS Semi VOA

### Analysis Batch: 490236

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | 8270D | 489649 |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 8270D | 489649 |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 8270D | 489649 |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | 8270D | 489649 |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | 8270D | 489649 |

## GC Semi VOA

### Prep Batch: 490176

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 3541 | |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 3541 | |
| MB 500-490176/1-A | Method Blank | Total/NA | Solid | 3541 | |
| LCS 500-490176/2-A | Lab Control Sample | Total/NA | Solid | 3541 | |

### Analysis Batch: 490272

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 8082A | 490176 |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 8082A | 490176 |
| MB 500-490176/1-A | Method Blank | Total/NA | Solid | 8082A | 490176 |
| LCS 500-490176/2-A | Lab Control Sample | Total/NA | Solid | 8082A | 490176 |

## Metals

### Prep Batch: 489459

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | 3050B | |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 3050B | |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 3050B | |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | 3050B | |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | 3050B | |
| MB 500-489459/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 500-489459/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| 500-164309-8 MS | B8 (2-4) | Total/NA | Solid | 3050B | |
| 500-164309-8 MSD | B8 (2-4) | Total/NA | Solid | 3050B | |
| 500-164309-8 DU | B8 (2-4) | Total/NA | Solid | 3050B | |

### Analysis Batch: 489625

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | 6010C | 489459 |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 6010C | 489459 |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 6010C | 489459 |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | 6010C | 489459 |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | 6010C | 489459 |
| MB 500-489459/1-A | Method Blank | Total/NA | Solid | 6010C | 489459 |
| LCS 500-489459/2-A | Lab Control Sample | Total/NA | Solid | 6010C | 489459 |
| 500-164309-8 MS | B8 (2-4) | Total/NA | Solid | 6010C | 489459 |
| 500-164309-8 MSD | B8 (2-4) | Total/NA | Solid | 6010C | 489459 |
| 500-164309-8 DU | B8 (2-4) | Total/NA | Solid | 6010C | 489459 |

# QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Metals

### Prep Batch: 489708

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | 7471B | |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 7471B | |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 7471B | |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | 7471B | |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | 7471B | |
| MB 500-489708/12-A | Method Blank | Total/NA | Solid | 7471B | |
| LCS 500-489708/13-A | Lab Control Sample | Total/NA | Solid | 7471B | |

### Analysis Batch: 489888

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | 7471B | 489708 |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | 7471B | 489708 |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | 7471B | 489708 |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | 7471B | 489708 |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | 7471B | 489708 |
| MB 500-489708/12-A | Method Blank | Total/NA | Solid | 7471B | 489708 |
| LCS 500-489708/13-A | Lab Control Sample | Total/NA | Solid | 7471B | 489708 |

## General Chemistry

### Analysis Batch: 489698

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164309-1 | B1 (2-4) | Total/NA | Solid | Moisture | |
| 500-164309-2 | B2 (4-6) | Total/NA | Solid | Moisture | |
| 500-164309-3 | B3 (2-4) | Total/NA | Solid | Moisture | |
| 500-164309-4 | B4 (2-4) | Total/NA | Solid | Moisture | |
| 500-164309-5 | B5 (2-4) | Total/NA | Solid | Moisture | |
| 500-164309-6 | B6 (2-4) | Total/NA | Solid | Moisture | |
| 500-164309-7 | B7 (0-2) | Total/NA | Solid | Moisture | |
| 500-164309-8 | B8 (2-4) | Total/NA | Solid | Moisture | |

# Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid** | **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | DCA | BFB | DBFM | TOL |
| Lab Sample ID | Client Sample ID | (75-126) | (72-124) | (75-120) | (75-120) |
| 500-164309-1 | B1 (2-4) | 107 | 101 | 102 | 96 |
| 500-164309-2 | B2 (4-6) | 107 | 94 | 101 | 93 |
| 500-164309-3 | B3 (2-4) | 111 | 102 | 103 | 95 |
| 500-164309-4 | B4 (2-4) | 110 | 102 | 105 | 96 |
| 500-164309-5 | B5 (2-4) | 109 | 90 | 103 | 94 |
| 500-164309-6 | B6 (2-4) | 110 | 102 | 104 | 95 |
| 500-164309-7 | B7 (0-2) | 111 | 100 | 104 | 95 |
| 500-164309-8 | B8 (2-4) | 111 | 101 | 103 | 94 |
| 500-164309-8 MS | B8 (2-4) | 110 | 95 | 111 | 94 |
| 500-164309-8 MSD | B8 (2-4) | 108 | 97 | 110 | 95 |
| LB3 500-488291/18-A | Method Blank | 101 | 86 | 109 | 91 |
| LCS 500-488291/19-A | Lab Control Sample | 102 | 88 | 114 | 93 |
| LCS 500-488910/5 | Lab Control Sample | 97 | 89 | 103 | 95 |
| LCS 500-489110/4 | Lab Control Sample | 104 | 97 | 105 | 96 |
| MB 500-488910/7 | Method Blank | 99 | 85 | 107 | 93 |
| MB 500-489110/6 | Method Blank | 105 | 99 | 102 | 94 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Matrix: Solid** | **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|---|---|---|---|---|
| | | FBP | NBZ | TPHL |
| Lab Sample ID | Client Sample ID | (43-145) | (37-147) | (42-157) |
| 500-164309-1 | B1 (2-4) | 99 | 85 | 107 |
| 500-164309-2 | B2 (4-6) | 100 | 97 | 132 |
| 500-164309-5 | B5 (2-4) | 112 | 94 | 133 |
| 500-164309-7 | B7 (0-2) | 106 | 89 | 118 |
| 500-164309-8 | B8 (2-4) | 73 | 63 | 121 |
| LCS 500-489649/2-A | Lab Control Sample | 100 | 81 | 99 |
| MB 500-489649/1-A | Method Blank | 102 | 87 | 119 |

**Surrogate Legend**

FBP = 2-Fluorobiphenyl
NBZ = Nitrobenzene-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Matrix: Solid** | **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | |
|---|---|---|---|
| | | TCX2 | DCBP2 |
| Lab Sample ID | Client Sample ID | (49-129) | (37-121) |
| 500-164309-2 | B2 (4-6) | 77 | 105 |
| 500-164309-5 | B5 (2-4) | 74 | 96 |
| LCS 500-490176/2-A | Lab Control Sample | 78 | 100 |

# Surrogate Summary

Client: Stantec Consulting Corp.
Job ID: 500-164309-1
Project/Site: BMO Properties - 193706891

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

**Matrix: Solid** **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TCX2 | DCBP2 | | | | | | | | |
| Lab Sample ID | Client Sample ID | (49-129) | (37-121) | | | | | | | | |
| MB 500-490176/1-A | Method Blank | 82 | 101 | | | | | | | | |

**Surrogate Legend**

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: LB3 500-488291/18-A**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | LB3 Result | LB3 Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <23 | | 50 | 23 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,1,1-Trichloroethane | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,1,2,2-Tetrachloroethane | <20 | | 50 | 20 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,1,2-Trichloroethane | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,1-Dichloroethane | <21 | | 50 | 21 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,1-Dichloroethene | <20 | | 50 | 20 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,1-Dichloropropene | <15 | | 50 | 15 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2,3-Trichlorobenzene | <23 | | 50 | 23 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2,3-Trichloropropane | <21 | | 100 | 21 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2,4-Trichlorobenzene | <17 | | 50 | 17 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2,4-Trimethylbenzene | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2-Dibromo-3-Chloropropane | <100 | | 250 | 100 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2-Dibromoethane | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2-Dichlorobenzene | <17 | | 50 | 17 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2-Dichloroethane | <20 | | 50 | 20 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,2-Dichloropropane | <21 | | 50 | 21 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,3,5-Trimethylbenzene | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,3-Dichlorobenzene | <20 | | 50 | 20 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,3-Dichloropropane | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 1,4-Dichlorobenzene | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 2,2-Dichloropropane | <22 | | 50 | 22 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 2-Chlorotoluene | <16 | | 50 | 16 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| 4-Chlorotoluene | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Benzene | <7.3 | | 13 | 7.3 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Bromobenzene | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Bromochloromethane | <21 | | 50 | 21 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Bromodichloromethane | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Bromoform | <24 | | 50 | 24 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Bromomethane | <40 | | 150 | 40 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Carbon tetrachloride | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Chlorobenzene | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Chloroethane | <25 | | 50 | 25 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Chloroform | <19 | | 100 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Chloromethane | <16 | | 50 | 16 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| cis-1,2-Dichloroethene | <20 | | 50 | 20 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| cis-1,3-Dichloropropene | <21 | | 50 | 21 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Dibromochloromethane | <24 | | 50 | 24 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Dibromomethane | <14 | | 50 | 14 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Dichlorodifluoromethane | <34 | | 150 | 34 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Ethylbenzene | <9.2 | | 13 | 9.2 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Hexachlorobutadiene | <22 | | 50 | 22 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Isopropyl ether | <14 | | 50 | 14 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Isopropylbenzene | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Methyl tert-butyl ether | <20 | | 50 | 20 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Methylene Chloride | <82 | | 250 | 82 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Naphthalene | <17 | | 50 | 17 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| n-Butylbenzene | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| N-Propylbenzene | <21 | | 50 | 21 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LB3 500-488291/18-A**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | LB3 Result | LB3 Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| p-Isopropyltoluene | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| sec-Butylbenzene | <20 | | 50 | 20 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Styrene | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| tert-Butylbenzene | <20 | | 50 | 20 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Tetrachloroethene | <19 | | 50 | 19 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Toluene | <7.4 | | 13 | 7.4 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| trans-1,2-Dichloroethene | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| trans-1,3-Dichloropropene | <18 | | 50 | 18 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Trichloroethene | <8.2 | | 25 | 8.2 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Trichlorofluoromethane | <21 | | 50 | 21 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Vinyl chloride | <13 | | 50 | 13 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |
| Xylenes, Total | <11 | | 25 | 11 | ug/Kg | | 06/02/19 18:15 | 06/06/19 15:32 | 50 |

| *Surrogate* | *LB3 %Recovery* | *LB3 Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *101* | | *75 - 126* | *06/02/19 18:15* | *06/06/19 15:32* | *50* |
| *4-Bromofluorobenzene (Surr)* | *86* | | *72 - 124* | *06/02/19 18:15* | *06/06/19 15:32* | *50* |
| *Dibromofluoromethane* | *109* | | *75 - 120* | *06/02/19 18:15* | *06/06/19 15:32* | *50* |
| *Toluene-d8 (Surr)* | *91* | | *75 - 120* | *06/02/19 18:15* | *06/06/19 15:32* | *50* |

**Lab Sample ID: LCS 500-488291/19-A**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 2500 | 3780 | * | ug/Kg | | 151 | 70 - 125 |
| 1,1,1-Trichloroethane | 2500 | 3360 | * | ug/Kg | | 135 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 2500 | 3140 | | ug/Kg | | 126 | 62 - 140 |
| 1,1,2-Trichloroethane | 2500 | 3370 | * | ug/Kg | | 135 | 71 - 130 |
| 1,1-Dichloroethane | 2500 | 3310 | * | ug/Kg | | 132 | 70 - 125 |
| 1,1-Dichloroethene | 2500 | 3160 | * | ug/Kg | | 126 | 67 - 122 |
| 1,1-Dichloropropene | 2500 | 3180 | * | ug/Kg | | 127 | 70 - 121 |
| 1,2,3-Trichlorobenzene | 2500 | 2980 | | ug/Kg | | 119 | 51 - 145 |
| 1,2,3-Trichloropropane | 2500 | 3200 | | ug/Kg | | 128 | 50 - 133 |
| 1,2,4-Trichlorobenzene | 2500 | 2910 | | ug/Kg | | 116 | 57 - 137 |
| 1,2,4-Trimethylbenzene | 2500 | 2970 | | ug/Kg | | 119 | 70 - 123 |
| 1,2-Dibromo-3-Chloropropane | 2500 | 3090 | | ug/Kg | | 123 | 56 - 123 |
| 1,2-Dibromoethane | 2500 | 3370 | * | ug/Kg | | 135 | 70 - 125 |
| 1,2-Dichlorobenzene | 2500 | 3190 | * | ug/Kg | | 127 | 70 - 125 |
| 1,2-Dichloroethane | 2500 | 3530 | * | ug/Kg | | 141 | 68 - 127 |
| 1,2-Dichloropropane | 2500 | 3420 | * | ug/Kg | | 137 | 67 - 130 |
| 1,3,5-Trimethylbenzene | 2500 | 3020 | | ug/Kg | | 121 | 70 - 123 |
| 1,3-Dichlorobenzene | 2500 | 3190 | * | ug/Kg | | 128 | 70 - 125 |
| 1,3-Dichloropropane | 2500 | 3210 | | ug/Kg | | 128 | 62 - 136 |
| 1,4-Dichlorobenzene | 2500 | 3180 | * | ug/Kg | | 127 | 70 - 120 |
| 2,2-Dichloropropane | 2500 | 3060 | | ug/Kg | | 122 | 58 - 139 |
| 2-Chlorotoluene | 2500 | 3010 | | ug/Kg | | 121 | 70 - 125 |
| 4-Chlorotoluene | 2500 | 2950 | | ug/Kg | | 118 | 68 - 124 |
| Benzene | 2500 | 3290 | * | ug/Kg | | 132 | 70 - 120 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-488291/19-A**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Bromobenzene | 2500 | 3240 | * | ug/Kg | | 130 | 70 - 122 |
| Bromochloromethane | 2500 | 3810 | * | ug/Kg | | 153 | 65 - 122 |
| Bromodichloromethane | 2500 | 3650 | * | ug/Kg | | 146 | 69 - 120 |
| Bromoform | 2500 | 4260 | * | ug/Kg | | 170 | 56 - 132 |
| Bromomethane | 2500 | 2970 | | ug/Kg | | 119 | 40 - 152 |
| Carbon tetrachloride | 2500 | 3860 | * | ug/Kg | | 155 | 59 - 133 |
| Chlorobenzene | 2500 | 3290 | * | ug/Kg | | 132 | 70 - 120 |
| Chloroethane | 2500 | 2520 | | ug/Kg | | 101 | 48 - 136 |
| Chloroform | 2500 | 3370 | * | ug/Kg | | 135 | 70 - 120 |
| Chloromethane | 2500 | 2350 | | ug/Kg | | 94 | 56 - 152 |
| cis-1,2-Dichloroethene | 2500 | 3500 | * | ug/Kg | | 140 | 70 - 125 |
| cis-1,3-Dichloropropene | 2500 | 3100 | | ug/Kg | | 124 | 64 - 127 |
| Dibromochloromethane | 2500 | 3960 | * | ug/Kg | | 158 | 68 - 125 |
| Dibromomethane | 2500 | 3640 | * | ug/Kg | | 145 | 70 - 120 |
| Dichlorodifluoromethane | 2500 | 1630 | | ug/Kg | | 65 | 40 - 159 |
| Ethylbenzene | 2500 | 3420 | * | ug/Kg | | 137 | 70 - 123 |
| Hexachlorobutadiene | 2500 | 2620 | | ug/Kg | | 105 | 51 - 150 |
| Isopropylbenzene | 2500 | 2950 | | ug/Kg | | 118 | 70 - 126 |
| Methyl tert-butyl ether | 2500 | 3350 | * | ug/Kg | | 134 | 55 - 123 |
| Methylene Chloride | 2500 | 3300 | * | ug/Kg | | 132 | 69 - 125 |
| Naphthalene | 2500 | 3090 | | ug/Kg | | 124 | 53 - 144 |
| n-Butylbenzene | 2500 | 2830 | | ug/Kg | | 113 | 68 - 125 |
| N-Propylbenzene | 2500 | 2900 | | ug/Kg | | 116 | 69 - 127 |
| p-Isopropyltoluene | 2500 | 2890 | | ug/Kg | | 116 | 70 - 125 |
| sec-Butylbenzene | 2500 | 2940 | | ug/Kg | | 118 | 70 - 123 |
| Styrene | 2500 | 3420 | * | ug/Kg | | 137 | 70 - 120 |
| tert-Butylbenzene | 2500 | 2860 | | ug/Kg | | 114 | 70 - 121 |
| Tetrachloroethene | 2500 | 3340 | * | ug/Kg | | 134 | 70 - 128 |
| Toluene | 2500 | 3060 | | ug/Kg | | 122 | 70 - 125 |
| trans-1,2-Dichloroethene | 2500 | 3320 | * | ug/Kg | | 133 | 70 - 125 |
| trans-1,3-Dichloropropene | 2500 | 3130 | | ug/Kg | | 125 | 62 - 128 |
| Trichloroethene | 2500 | 3630 | * | ug/Kg | | 145 | 70 - 125 |
| Trichlorofluoromethane | 2500 | 3080 | | ug/Kg | | 123 | 55 - 128 |
| Vinyl chloride | 2500 | 2500 | | ug/Kg | | 100 | 64 - 126 |
| Xylenes, Total | 5000 | 6720 | * | ug/Kg | | 134 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *102* | | *75 - 126* |
| *4-Bromofluorobenzene (Surr)* | *88* | | *72 - 124* |
| *Dibromofluoromethane* | *114* | | *75 - 120* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 120* |

**Lab Sample ID: 500-164309-8 MS**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: B8 (2-4)**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <37 | * | 3950 | 4780 | | ug/Kg | ☼ | 121 | 70 - 125 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-164309-8 MS**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: B8 (2-4)**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | <30 | * | 3950 | 4820 | | ug/Kg | ☼ | 122 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | <31 | | 3950 | 3690 | | ug/Kg | ☼ | 93 | 62 - 140 |
| 1,1,2-Trichloroethane | <28 | * | 3950 | 4290 | | ug/Kg | ☼ | 109 | 71 - 130 |
| 1,1-Dichloroethane | <32 | * | 3950 | 4750 | | ug/Kg | ☼ | 120 | 70 - 125 |
| 1,1-Dichloroethene | <31 | * | 3950 | 4420 | | ug/Kg | ☼ | 112 | 67 - 122 |
| 1,1-Dichloropropene | <24 | * | 3950 | 4660 | | ug/Kg | ☼ | 118 | 70 - 121 |
| 1,2,3-Trichlorobenzene | <36 | | 3950 | 4990 | | ug/Kg | ☼ | 126 | 51 - 145 |
| 1,2,3-Trichloropropane | <33 | | 3950 | 3960 | | ug/Kg | ☼ | 100 | 50 - 133 |
| 1,2,4-Trichlorobenzene | <27 | | 3950 | 4880 | | ug/Kg | ☼ | 124 | 57 - 137 |
| 1,2,4-Trimethylbenzene | <28 | | 3950 | 4300 | | ug/Kg | ☼ | 109 | 70 - 123 |
| 1,2-Dibromo-3-Chloropropane | <160 | | 3950 | 3400 | | ug/Kg | ☼ | 86 | 56 - 123 |
| 1,2-Dibromoethane | <31 | * | 3950 | 4410 | | ug/Kg | ☼ | 111 | 70 - 125 |
| 1,2-Dichlorobenzene | <26 | * | 3950 | 4520 | | ug/Kg | ☼ | 114 | 70 - 125 |
| 1,2-Dichloroethane | <31 | * F1 | 3950 | 5120 | F1 | ug/Kg | ☼ | 130 | 68 - 127 |
| 1,2-Dichloropropane | <34 | * | 3950 | 4710 | | ug/Kg | ☼ | 119 | 67 - 130 |
| 1,3,5-Trimethylbenzene | <30 | | 3950 | 4250 | | ug/Kg | ☼ | 108 | 70 - 123 |
| 1,3-Dichlorobenzene | <32 | * | 3950 | 4440 | | ug/Kg | ☼ | 112 | 70 - 125 |
| 1,3-Dichloropropane | <29 | | 3950 | 4350 | | ug/Kg | ☼ | 110 | 62 - 136 |
| 1,4-Dichlorobenzene | <29 | * | 3950 | 4380 | | ug/Kg | ☼ | 111 | 70 - 120 |
| 2,2-Dichloropropane | <35 | | 3950 | 4140 | | ug/Kg | ☼ | 105 | 58 - 139 |
| 2-Chlorotoluene | <25 | | 3950 | 4170 | | ug/Kg | ☼ | 105 | 70 - 125 |
| 4-Chlorotoluene | <28 | | 3950 | 4100 | | ug/Kg | ☼ | 104 | 68 - 124 |
| Benzene | <12 | * | 3950 | 4510 | | ug/Kg | ☼ | 114 | 70 - 120 |
| Bromobenzene | <28 | * | 3950 | 4700 | | ug/Kg | ☼ | 119 | 70 - 122 |
| Bromochloromethane | <34 | F1 * | 3950 | 5250 | F1 | ug/Kg | ☼ | 133 | 65 - 122 |
| Bromodichloromethane | <29 | * F1 | 3950 | 4810 | F1 | ug/Kg | ☼ | 122 | 69 - 120 |
| Bromoform | <38 | * | 3950 | 4520 | | ug/Kg | ☼ | 114 | 56 - 132 |
| Bromomethane | <63 | | 3950 | 4540 | | ug/Kg | ☼ | 115 | 40 - 152 |
| Carbon tetrachloride | <30 | * | 3950 | 4890 | | ug/Kg | ☼ | 124 | 59 - 133 |
| Chlorobenzene | <31 | * | 3950 | 4660 | | ug/Kg | ☼ | 118 | 70 - 120 |
| Chloroethane | <40 | | 3950 | 4370 | | ug/Kg | ☼ | 111 | 48 - 136 |
| Chloroform | <29 | * F1 | 3950 | 4850 | F1 | ug/Kg | ☼ | 123 | 70 - 120 |
| Chloromethane | <25 | | 3950 | 3570 | | ug/Kg | ☼ | 90 | 56 - 152 |
| cis-1,2-Dichloroethene | <32 | * | 3950 | 4720 | | ug/Kg | ☼ | 119 | 70 - 125 |
| cis-1,3-Dichloropropene | <33 | | 3950 | 4040 | | ug/Kg | ☼ | 102 | 64 - 127 |
| Dibromochloromethane | <39 | * | 3950 | 4630 | | ug/Kg | ☼ | 117 | 68 - 125 |
| Dibromomethane | <21 | * | 3950 | 4660 | | ug/Kg | ☼ | 118 | 70 - 120 |
| Dichlorodifluoromethane | <53 | | 3950 | 3560 | | ug/Kg | ☼ | 90 | 40 - 159 |
| Ethylbenzene | <14 | * | 3950 | 4410 | | ug/Kg | ☼ | 112 | 70 - 123 |
| Hexachlorobutadiene | <35 | | 3950 | 5580 | | ug/Kg | ☼ | 141 | 51 - 150 |
| Isopropylbenzene | <30 | | 3950 | 4180 | | ug/Kg | ☼ | 106 | 70 - 126 |
| Methyl tert-butyl ether | <31 | F1 * | 3950 | 6310 | F1 | ug/Kg | ☼ | 160 | 55 - 123 |
| Methylene Chloride | <130 | * | 3950 | 4500 | | ug/Kg | ☼ | 114 | 69 - 125 |
| Naphthalene | <26 | | 3950 | 4740 | | ug/Kg | ☼ | 120 | 53 - 144 |
| n-Butylbenzene | <31 | | 3950 | 4330 | | ug/Kg | ☼ | 109 | 68 - 125 |
| N-Propylbenzene | <33 | | 3950 | 4190 | | ug/Kg | ☼ | 106 | 69 - 127 |
| p-Isopropyltoluene | <29 | | 3950 | 4540 | | ug/Kg | ☼ | 115 | 70 - 125 |
| sec-Butylbenzene | <31 | | 3950 | 4340 | | ug/Kg | ☼ | 110 | 70 - 123 |
| Styrene | <31 | * | 3950 | 4650 | | ug/Kg | ☼ | 118 | 70 - 120 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-164309-8 MS**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: B8 (2-4)**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | <31 | | 3950 | 4570 | | ug/Kg | ☼ | 116 | 70 - 121 |
| Tetrachloroethene | <29 | * | 3950 | 5020 | | ug/Kg | ☼ | 127 | 70 - 128 |
| Toluene | <12 | | 3950 | 3980 | | ug/Kg | ☼ | 101 | 70 - 125 |
| trans-1,2-Dichloroethene | <28 | * | 3950 | 4590 | | ug/Kg | ☼ | 116 | 70 - 125 |
| trans-1,3-Dichloropropene | <29 | | 3950 | 3960 | | ug/Kg | ☼ | 100 | 62 - 128 |
| Trichloroethene | <13 | * F1 | 3950 | 5030 | F1 | ug/Kg | ☼ | 127 | 70 - 125 |
| Trichlorofluoromethane | <34 | | 3950 | 4500 | | ug/Kg | ☼ | 114 | 55 - 128 |
| Vinyl chloride | <21 | | 3950 | 3870 | | ug/Kg | ☼ | 98 | 64 - 126 |
| Xylenes, Total | <17 | * | 7910 | 8950 | | ug/Kg | ☼ | 113 | 70 - 125 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *110* | | *75 - 126* |
| *4-Bromofluorobenzene (Surr)* | *95* | | *72 - 124* |
| *Dibromofluoromethane* | *111* | | *75 - 120* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* |

**Lab Sample ID: 500-164309-8 MSD**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: B8 (2-4)**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <37 | * | 3950 | 4640 | | ug/Kg | ☼ | 118 | 70 - 125 | 3 | 30 |
| 1,1,1-Trichloroethane | <30 | * | 3950 | 4830 | | ug/Kg | ☼ | 122 | 70 - 125 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | <31 | | 3950 | 3600 | | ug/Kg | ☼ | 91 | 62 - 140 | 2 | 30 |
| 1,1,2-Trichloroethane | <28 | * | 3950 | 4090 | | ug/Kg | ☼ | 103 | 71 - 130 | 5 | 30 |
| 1,1-Dichloroethane | <32 | * | 3950 | 4560 | | ug/Kg | ☼ | 115 | 70 - 125 | 4 | 30 |
| 1,1-Dichloroethene | <31 | * | 3950 | 4350 | | ug/Kg | ☼ | 110 | 67 - 122 | 2 | 30 |
| 1,1-Dichloropropene | <24 | * | 3950 | 4610 | | ug/Kg | ☼ | 117 | 70 - 121 | 1 | 30 |
| 1,2,3-Trichlorobenzene | <36 | | 3950 | 4840 | | ug/Kg | ☼ | 123 | 51 - 145 | 3 | 30 |
| 1,2,3-Trichloropropane | <33 | | 3950 | 3910 | | ug/Kg | ☼ | 99 | 50 - 133 | 1 | 30 |
| 1,2,4-Trichlorobenzene | <27 | | 3950 | 4570 | | ug/Kg | ☼ | 116 | 57 - 137 | 7 | 30 |
| 1,2,4-Trimethylbenzene | <28 | | 3950 | 4270 | | ug/Kg | ☼ | 108 | 70 - 123 | 1 | 30 |
| 1,2-Dibromo-3-Chloropropane | <160 | | 3950 | 3450 | | ug/Kg | ☼ | 87 | 56 - 123 | 1 | 30 |
| 1,2-Dibromoethane | <31 | * | 3950 | 4240 | | ug/Kg | ☼ | 107 | 70 - 125 | 4 | 30 |
| 1,2-Dichlorobenzene | <26 | * | 3950 | 4430 | | ug/Kg | ☼ | 112 | 70 - 125 | 2 | 30 |
| 1,2-Dichloroethane | <31 | * F1 | 3950 | 4850 | | ug/Kg | ☼ | 123 | 68 - 127 | 5 | 30 |
| 1,2-Dichloropropane | <34 | * | 3950 | 4570 | | ug/Kg | ☼ | 116 | 67 - 130 | 3 | 30 |
| 1,3,5-Trimethylbenzene | <30 | | 3950 | 4240 | | ug/Kg | ☼ | 107 | 70 - 123 | 0 | 30 |
| 1,3-Dichlorobenzene | <32 | * | 3950 | 4300 | | ug/Kg | ☼ | 109 | 70 - 125 | 3 | 30 |
| 1,3-Dichloropropane | <29 | | 3950 | 4120 | | ug/Kg | ☼ | 104 | 62 - 136 | 5 | 30 |
| 1,4-Dichlorobenzene | <29 | * | 3950 | 4220 | | ug/Kg | ☼ | 107 | 70 - 120 | 4 | 30 |
| 2,2-Dichloropropane | <35 | | 3950 | 4470 | | ug/Kg | ☼ | 113 | 58 - 139 | 8 | 30 |
| 2-Chlorotoluene | <25 | | 3950 | 4150 | | ug/Kg | ☼ | 105 | 70 - 125 | 0 | 30 |
| 4-Chlorotoluene | <28 | | 3950 | 4050 | | ug/Kg | ☼ | 102 | 68 - 124 | 1 | 30 |
| Benzene | <12 | * | 3950 | 4370 | | ug/Kg | ☼ | 111 | 70 - 120 | 3 | 30 |
| Bromobenzene | <28 | * | 3950 | 4740 | | ug/Kg | ☼ | 120 | 70 - 122 | 1 | 30 |
| Bromochloromethane | <34 | F1 * | 3950 | 5080 | F1 | ug/Kg | ☼ | 129 | 65 - 122 | 3 | 30 |
| Bromodichloromethane | <29 | * F1 | 3950 | 4650 | | ug/Kg | ☼ | 118 | 69 - 120 | 4 | 30 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 500-164309-8 MSD**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: B8 (2-4)**
**Prep Type: Total/NA**
**Prep Batch: 488291**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromoform | <38 | * | 3950 | 4390 | | ug/Kg | ☼ | 111 | 56 - 132 | 3 | 30 |
| Bromomethane | <63 | | 3950 | 4370 | | ug/Kg | ☼ | 111 | 40 - 152 | 4 | 30 |
| Carbon tetrachloride | <30 | * | 3950 | 4890 | | ug/Kg | ☼ | 124 | 59 - 133 | 0 | 30 |
| Chlorobenzene | <31 | * | 3950 | 4500 | | ug/Kg | ☼ | 114 | 70 - 120 | 4 | 30 |
| Chloroethane | <40 | | 3950 | 4760 | | ug/Kg | ☼ | 120 | 48 - 136 | 8 | 30 |
| Chloroform | <29 | * F1 | 3950 | 4680 | | ug/Kg | ☼ | 118 | 70 - 120 | 4 | 30 |
| Chloromethane | <25 | | 3950 | 3590 | | ug/Kg | ☼ | 91 | 56 - 152 | 1 | 30 |
| cis-1,2-Dichloroethene | <32 | * | 3950 | 4600 | | ug/Kg | ☼ | 116 | 70 - 125 | 3 | 30 |
| cis-1,3-Dichloropropene | <33 | | 3950 | 4020 | | ug/Kg | ☼ | 102 | 64 - 127 | 0 | 30 |
| Dibromochloromethane | <39 | * | 3950 | 4540 | | ug/Kg | ☼ | 115 | 68 - 125 | 2 | 30 |
| Dibromomethane | <21 | * | 3950 | 4560 | | ug/Kg | ☼ | 115 | 70 - 120 | 2 | 30 |
| Dichlorodifluoromethane | <53 | | 3950 | 3740 | | ug/Kg | ☼ | 95 | 40 - 159 | 5 | 30 |
| Ethylbenzene | <14 | * | 3950 | 4270 | | ug/Kg | ☼ | 108 | 70 - 123 | 3 | 30 |
| Hexachlorobutadiene | <35 | | 3950 | 5470 | | ug/Kg | ☼ | 138 | 51 - 150 | 2 | 30 |
| Isopropylbenzene | <30 | | 3950 | 4260 | | ug/Kg | ☼ | 108 | 70 - 126 | 2 | 30 |
| Methyl tert-butyl ether | <31 | F1 * | 3950 | 6410 | F1 | ug/Kg | ☼ | 162 | 55 - 123 | 2 | 30 |
| Methylene Chloride | <130 | * | 3950 | 4310 | | ug/Kg | ☼ | 109 | 69 - 125 | 4 | 30 |
| Naphthalene | <26 | | 3950 | 4750 | | ug/Kg | ☼ | 120 | 53 - 144 | 0 | 30 |
| n-Butylbenzene | <31 | | 3950 | 4170 | | ug/Kg | ☼ | 105 | 68 - 125 | 4 | 30 |
| N-Propylbenzene | <33 | | 3950 | 4220 | | ug/Kg | ☼ | 107 | 69 - 127 | 1 | 30 |
| p-Isopropyltoluene | <29 | | 3950 | 4490 | | ug/Kg | ☼ | 114 | 70 - 125 | 1 | 30 |
| sec-Butylbenzene | <31 | | 3950 | 4360 | | ug/Kg | ☼ | 110 | 70 - 123 | 1 | 30 |
| Styrene | <31 | * | 3950 | 4510 | | ug/Kg | ☼ | 114 | 70 - 120 | 3 | 30 |
| tert-Butylbenzene | <31 | | 3950 | 4720 | | ug/Kg | ☼ | 119 | 70 - 121 | 3 | 30 |
| Tetrachloroethene | <29 | * | 3950 | 4930 | | ug/Kg | ☼ | 125 | 70 - 128 | 2 | 30 |
| Toluene | <12 | | 3950 | 3910 | | ug/Kg | ☼ | 99 | 70 - 125 | 2 | 30 |
| trans-1,2-Dichloroethene | <28 | * | 3950 | 4500 | | ug/Kg | ☼ | 114 | 70 - 125 | 2 | 30 |
| trans-1,3-Dichloropropene | <29 | | 3950 | 3940 | | ug/Kg | ☼ | 100 | 62 - 128 | 0 | 30 |
| Trichloroethene | <13 | * F1 | 3950 | 4950 | | ug/Kg | ☼ | 125 | 70 - 125 | 2 | 30 |
| Trichlorofluoromethane | <34 | | 3950 | 4590 | | ug/Kg | ☼ | 116 | 55 - 128 | 2 | 30 |
| Vinyl chloride | <21 | | 3950 | 3980 | | ug/Kg | ☼ | 101 | 64 - 126 | 3 | 30 |
| Xylenes, Total | <17 | * | 7910 | 8700 | | ug/Kg | ☼ | 110 | 70 - 125 | 3 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *108* | | *75 - 126* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *72 - 124* |
| *Dibromofluoromethane* | *110* | | *75 - 120* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* |

**Lab Sample ID: MB 500-488910/7**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/06/19 10:46 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-488910/7**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,3,5-Trimethylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/Kg | | | 06/06/19 10:46 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Benzene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Chloroethane | <0.50 | | 1.0 | 0.50 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/Kg | | | 06/06/19 10:46 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/06/19 10:46 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Ethylbenzene | <0.18 | | 0.25 | 0.18 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Isopropylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Naphthalene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 06/06/19 10:46 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/06/19 10:46 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/06/19 10:46 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/06/19 10:46 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/06/19 10:46 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 06/06/19 10:46 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-488910/7**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Toluene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 06/06/19 10:46 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/06/19 10:46 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Vinyl chloride | <0.26 | | 1.0 | 0.26 | ug/Kg | | | 06/06/19 10:46 | 1 |
| Xylenes, Total | <0.22 | | 0.50 | 0.22 | ug/Kg | | | 06/06/19 10:46 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *99* | | *75 - 126* | | *06/06/19 10:46* | *1* |
| *4-Bromofluorobenzene (Surr)* | *85* | | *72 - 124* | | *06/06/19 10:46* | *1* |
| *Dibromofluoromethane* | *107* | | *75 - 120* | | *06/06/19 10:46* | *1* |
| *Toluene-d8 (Surr)* | *93* | | *75 - 120* | | *06/06/19 10:46* | *1* |

**Lab Sample ID: LCS 500-488910/5**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 57.6 | | ug/Kg | | 115 | 70 - 125 |
| 1,1,1-Trichloroethane | 50.0 | 55.1 | | ug/Kg | | 110 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 46.2 | | ug/Kg | | 92 | 62 - 140 |
| 1,1,2-Trichloroethane | 50.0 | 49.4 | | ug/Kg | | 99 | 71 - 130 |
| 1,1-Dichloroethane | 50.0 | 51.1 | | ug/Kg | | 102 | 70 - 125 |
| 1,1-Dichloroethene | 50.0 | 54.0 | | ug/Kg | | 108 | 67 - 122 |
| 1,1-Dichloropropene | 50.0 | 52.0 | | ug/Kg | | 104 | 70 - 121 |
| 1,2,3-Trichlorobenzene | 50.0 | 46.1 | | ug/Kg | | 92 | 51 - 145 |
| 1,2,3-Trichloropropane | 50.0 | 49.1 | | ug/Kg | | 98 | 50 - 133 |
| 1,2,4-Trichlorobenzene | 50.0 | 47.4 | | ug/Kg | | 95 | 57 - 137 |
| 1,2,4-Trimethylbenzene | 50.0 | 49.3 | | ug/Kg | | 99 | 70 - 123 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 49.4 | | ug/Kg | | 99 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 48.2 | | ug/Kg | | 96 | 70 - 125 |
| 1,2-Dichlorobenzene | 50.0 | 50.1 | | ug/Kg | | 100 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 51.0 | | ug/Kg | | 102 | 68 - 127 |
| 1,2-Dichloropropane | 50.0 | 50.6 | | ug/Kg | | 101 | 67 - 130 |
| 1,3,5-Trimethylbenzene | 50.0 | 50.5 | | ug/Kg | | 101 | 70 - 123 |
| 1,3-Dichlorobenzene | 50.0 | 51.1 | | ug/Kg | | 102 | 70 - 125 |
| 1,3-Dichloropropane | 50.0 | 48.5 | | ug/Kg | | 97 | 62 - 136 |
| 1,4-Dichlorobenzene | 50.0 | 51.9 | | ug/Kg | | 104 | 70 - 120 |
| 2,2-Dichloropropane | 50.0 | 52.7 | | ug/Kg | | 105 | 58 - 139 |
| 2-Chlorotoluene | 50.0 | 50.0 | | ug/Kg | | 100 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 50.0 | | ug/Kg | | 100 | 68 - 124 |
| Benzene | 50.0 | 50.7 | | ug/Kg | | 101 | 70 - 120 |
| Bromobenzene | 50.0 | 51.4 | | ug/Kg | | 103 | 70 - 122 |
| Bromochloromethane | 50.0 | 55.8 | | ug/Kg | | 112 | 65 - 122 |
| Bromodichloromethane | 50.0 | 53.3 | | ug/Kg | | 107 | 69 - 120 |
| Bromoform | 50.0 | 64.7 | | ug/Kg | | 129 | 56 - 132 |
| Bromomethane | 50.0 | 51.1 | | ug/Kg | | 102 | 40 - 152 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-488910/5**
**Matrix: Solid**
**Analysis Batch: 488910**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | 50.0 | 64.0 | | ug/Kg | | 128 | 59 - 133 |
| Chlorobenzene | 50.0 | 51.0 | | ug/Kg | | 102 | 70 - 120 |
| Chloroethane | 50.0 | 55.1 | | ug/Kg | | 110 | 48 - 136 |
| Chloroform | 50.0 | 50.1 | | ug/Kg | | 100 | 70 - 120 |
| Chloromethane | 50.0 | 46.0 | | ug/Kg | | 92 | 56 - 152 |
| cis-1,2-Dichloroethene | 50.0 | 52.7 | | ug/Kg | | 105 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 48.1 | | ug/Kg | | 96 | 64 - 127 |
| Dibromochloromethane | 50.0 | 58.2 | | ug/Kg | | 116 | 68 - 125 |
| Dibromomethane | 50.0 | 51.7 | | ug/Kg | | 103 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 44.3 | | ug/Kg | | 89 | 40 - 159 |
| Ethylbenzene | 50.0 | 54.6 | | ug/Kg | | 109 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 45.2 | | ug/Kg | | 90 | 51 - 150 |
| Isopropylbenzene | 50.0 | 51.4 | | ug/Kg | | 103 | 70 - 126 |
| Methyl tert-butyl ether | 50.0 | 48.6 | | ug/Kg | | 97 | 55 - 123 |
| Methylene Chloride | 50.0 | 50.6 | | ug/Kg | | 101 | 69 - 125 |
| Naphthalene | 50.0 | 47.1 | | ug/Kg | | 94 | 53 - 144 |
| n-Butylbenzene | 50.0 | 50.1 | | ug/Kg | | 100 | 68 - 125 |
| N-Propylbenzene | 50.0 | 50.6 | | ug/Kg | | 101 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 49.9 | | ug/Kg | | 100 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 51.5 | | ug/Kg | | 103 | 70 - 123 |
| Styrene | 50.0 | 52.3 | | ug/Kg | | 105 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 49.5 | | ug/Kg | | 99 | 70 - 121 |
| Tetrachloroethene | 50.0 | 55.6 | | ug/Kg | | 111 | 70 - 128 |
| Toluene | 50.0 | 49.2 | | ug/Kg | | 98 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 53.6 | | ug/Kg | | 107 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 48.5 | | ug/Kg | | 97 | 62 - 128 |
| Trichloroethene | 50.0 | 58.2 | | ug/Kg | | 116 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 54.1 | | ug/Kg | | 108 | 55 - 128 |
| Vinyl chloride | 50.0 | 47.3 | | ug/Kg | | 95 | 64 - 126 |
| Xylenes, Total | 100 | 103 | | ug/Kg | | 103 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *97* | | *75 - 126* |
| *4-Bromofluorobenzene (Surr)* | *89* | | *72 - 124* |
| *Dibromofluoromethane* | *103* | | *75 - 120* |
| *Toluene-d8 (Surr)* | *95* | | *75 - 120* |

**Lab Sample ID: MB 500-489110/6**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/07/19 11:34 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-489110/6**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,3,5-Trimethylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/Kg | | | 06/07/19 11:34 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Benzene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Chloroethane | <0.50 | | 1.0 | 0.50 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/Kg | | | 06/07/19 11:34 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/07/19 11:34 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Ethylbenzene | <0.18 | | 0.25 | 0.18 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Isopropylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Naphthalene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 06/07/19 11:34 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/07/19 11:34 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/07/19 11:34 | 1 |
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/07/19 11:34 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/07/19 11:34 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Toluene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 06/07/19 11:34 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/07/19 11:34 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-489110/6**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Vinyl chloride | <0.26 | | 1.0 | 0.26 | ug/Kg | | | 06/07/19 11:34 | 1 |
| Xylenes, Total | <0.22 | | 0.50 | 0.22 | ug/Kg | | | 06/07/19 11:34 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *105* | | *75 - 126* | | *06/07/19 11:34* | *1* |
| *4-Bromofluorobenzene (Surr)* | *99* | | *72 - 124* | | *06/07/19 11:34* | *1* |
| *Dibromofluoromethane* | *102* | | *75 - 120* | | *06/07/19 11:34* | *1* |
| *Toluene-d8 (Surr)* | *94* | | *75 - 120* | | *06/07/19 11:34* | *1* |

**Lab Sample ID: LCS 500-489110/4**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 50.1 | | ug/Kg | | 100 | 70 - 125 |
| 1,1,1-Trichloroethane | 50.0 | 51.3 | | ug/Kg | | 103 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 39.3 | | ug/Kg | | 79 | 62 - 140 |
| 1,1,2-Trichloroethane | 50.0 | 43.8 | | ug/Kg | | 88 | 71 - 130 |
| 1,1-Dichloroethane | 50.0 | 48.8 | | ug/Kg | | 98 | 70 - 125 |
| 1,1-Dichloroethene | 50.0 | 48.4 | | ug/Kg | | 97 | 67 - 122 |
| 1,1-Dichloropropene | 50.0 | 49.3 | | ug/Kg | | 99 | 70 - 121 |
| 1,2,3-Trichlorobenzene | 50.0 | 51.9 | | ug/Kg | | 104 | 51 - 145 |
| 1,2,3-Trichloropropane | 50.0 | 42.5 | | ug/Kg | | 85 | 50 - 133 |
| 1,2,4-Trichlorobenzene | 50.0 | 51.9 | | ug/Kg | | 104 | 57 - 137 |
| 1,2,4-Trimethylbenzene | 50.0 | 46.9 | | ug/Kg | | 94 | 70 - 123 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 36.6 | | ug/Kg | | 73 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 45.3 | | ug/Kg | | 91 | 70 - 125 |
| 1,2-Dichlorobenzene | 50.0 | 47.3 | | ug/Kg | | 95 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 50.9 | | ug/Kg | | 102 | 68 - 127 |
| 1,2-Dichloropropane | 50.0 | 48.0 | | ug/Kg | | 96 | 67 - 130 |
| 1,3,5-Trimethylbenzene | 50.0 | 46.9 | | ug/Kg | | 94 | 70 - 123 |
| 1,3-Dichlorobenzene | 50.0 | 47.6 | | ug/Kg | | 95 | 70 - 125 |
| 1,3-Dichloropropane | 50.0 | 44.6 | | ug/Kg | | 89 | 62 - 136 |
| 1,4-Dichlorobenzene | 50.0 | 46.7 | | ug/Kg | | 93 | 70 - 120 |
| 2,2-Dichloropropane | 50.0 | 44.3 | | ug/Kg | | 89 | 58 - 139 |
| 2-Chlorotoluene | 50.0 | 45.4 | | ug/Kg | | 91 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 44.5 | | ug/Kg | | 89 | 68 - 124 |
| Benzene | 50.0 | 46.3 | | ug/Kg | | 93 | 70 - 120 |
| Bromobenzene | 50.0 | 51.9 | | ug/Kg | | 104 | 70 - 122 |
| Bromochloromethane | 50.0 | 52.8 | | ug/Kg | | 106 | 65 - 122 |
| Bromodichloromethane | 50.0 | 48.1 | | ug/Kg | | 96 | 69 - 120 |
| Bromoform | 50.0 | 48.2 | | ug/Kg | | 96 | 56 - 132 |
| Bromomethane | 50.0 | 44.7 | | ug/Kg | | 89 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 53.2 | | ug/Kg | | 106 | 59 - 133 |
| Chlorobenzene | 50.0 | 48.9 | | ug/Kg | | 98 | 70 - 120 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-489110/4**
**Matrix: Solid**
**Analysis Batch: 489110**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Chloroethane | 50.0 | 45.6 | | ug/Kg | | 91 | 48 - 136 |
| Chloroform | 50.0 | 49.3 | | ug/Kg | | 99 | 70 - 120 |
| Chloromethane | 50.0 | 39.0 | | ug/Kg | | 78 | 56 - 152 |
| cis-1,2-Dichloroethene | 50.0 | 48.6 | | ug/Kg | | 97 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 43.7 | | ug/Kg | | 87 | 64 - 127 |
| Dibromochloromethane | 50.0 | 49.5 | | ug/Kg | | 99 | 68 - 125 |
| Dibromomethane | 50.0 | 46.9 | | ug/Kg | | 94 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 41.5 | | ug/Kg | | 83 | 40 - 159 |
| Ethylbenzene | 50.0 | 47.4 | | ug/Kg | | 95 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 60.2 | | ug/Kg | | 120 | 51 - 150 |
| Isopropylbenzene | 50.0 | 46.7 | | ug/Kg | | 93 | 70 - 126 |
| Methyl tert-butyl ether | 50.0 | 61.0 | | ug/Kg | | 122 | 55 - 123 |
| Methylene Chloride | 50.0 | 45.8 | | ug/Kg | | 92 | 69 - 125 |
| Naphthalene | 50.0 | 48.0 | | ug/Kg | | 96 | 53 - 144 |
| n-Butylbenzene | 50.0 | 47.7 | | ug/Kg | | 95 | 68 - 125 |
| N-Propylbenzene | 50.0 | 46.5 | | ug/Kg | | 93 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 49.9 | | ug/Kg | | 100 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 47.4 | | ug/Kg | | 95 | 70 - 123 |
| Styrene | 50.0 | 49.1 | | ug/Kg | | 98 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 50.3 | | ug/Kg | | 101 | 70 - 121 |
| Tetrachloroethene | 50.0 | 56.6 | | ug/Kg | | 113 | 70 - 128 |
| Toluene | 50.0 | 43.0 | | ug/Kg | | 86 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 48.1 | | ug/Kg | | 96 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 42.4 | | ug/Kg | | 85 | 62 - 128 |
| Trichloroethene | 50.0 | 53.3 | | ug/Kg | | 107 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 49.0 | | ug/Kg | | 98 | 55 - 128 |
| Vinyl chloride | 50.0 | 42.1 | | ug/Kg | | 84 | 64 - 126 |
| Xylenes, Total | 100 | 95.5 | | ug/Kg | | 96 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *104* | | *75 - 126* |
| *4-Bromofluorobenzene (Surr)* | *97* | | *72 - 124* |
| *Dibromofluoromethane* | *105* | | *75 - 120* |
| *Toluene-d8 (Surr)* | *96* | | *75 - 120* |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-489649/1-A**
**Matrix: Solid**
**Analysis Batch: 489650**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 489649**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | <8.1 | | 67 | 8.1 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| 2-Methylnaphthalene | <6.1 | | 67 | 6.1 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Acenaphthene | <6.0 | | 33 | 6.0 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Acenaphthylene | <4.4 | | 33 | 4.4 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Anthracene | <5.6 | | 33 | 5.6 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Benzo[a]anthracene | <4.5 | | 33 | 4.5 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Benzo[a]pyrene | <6.4 | | 33 | 6.4 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |

## Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-489649/1-A**
**Matrix: Solid**
**Analysis Batch: 489650**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 489649**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Benzo[b]fluoranthene | <7.2 | | 33 | 7.2 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Benzo[g,h,i]perylene | <11 | | 33 | 11 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Benzo[k]fluoranthene | <9.8 | | 33 | 9.8 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Chrysene | <9.1 | | 33 | 9.1 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Dibenz(a,h)anthracene | <6.4 | | 33 | 6.4 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Fluoranthene | <6.2 | | 33 | 6.2 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Fluorene | <4.7 | | 33 | 4.7 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Indeno[1,2,3-cd]pyrene | <8.6 | | 33 | 8.6 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Naphthalene | <5.1 | | 33 | 5.1 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Phenanthrene | <4.6 | | 33 | 4.6 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |
| Pyrene | <6.6 | | 33 | 6.6 | ug/Kg | | 06/11/19 08:04 | 06/11/19 16:54 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *2-Fluorobiphenyl* | *102* | | *43 - 145* | *06/11/19 08:04* | *06/11/19 16:54* | *1* |
| *Nitrobenzene-d5 (Surr)* | *87* | | *37 - 147* | *06/11/19 08:04* | *06/11/19 16:54* | *1* |
| *Terphenyl-d14 (Surr)* | *119* | | *42 - 157* | *06/11/19 08:04* | *06/11/19 16:54* | *1* |

**Lab Sample ID: LCS 500-489649/2-A**
**Matrix: Solid**
**Analysis Batch: 489650**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 489649**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 1330 | 1320 | | ug/Kg | | 99 | 68 - 111 |
| 2-Methylnaphthalene | 1330 | 1310 | | ug/Kg | | 98 | 69 - 112 |
| Acenaphthene | 1330 | 1220 | | ug/Kg | | 91 | 65 - 124 |
| Acenaphthylene | 1330 | 1210 | | ug/Kg | | 91 | 68 - 120 |
| Anthracene | 1330 | 1310 | | ug/Kg | | 99 | 70 - 114 |
| Benzo[a]anthracene | 1330 | 1220 | | ug/Kg | | 92 | 67 - 122 |
| Benzo[a]pyrene | 1330 | 1280 | | ug/Kg | | 96 | 65 - 133 |
| Benzo[b]fluoranthene | 1330 | 1440 | | ug/Kg | | 108 | 69 - 129 |
| Benzo[g,h,i]perylene | 1330 | 1150 | | ug/Kg | | 86 | 72 - 131 |
| Benzo[k]fluoranthene | 1330 | 1420 | | ug/Kg | | 107 | 68 - 127 |
| Chrysene | 1330 | 1230 | | ug/Kg | | 93 | 63 - 120 |
| Dibenz(a,h)anthracene | 1330 | 1190 | | ug/Kg | | 89 | 64 - 131 |
| Fluoranthene | 1330 | 1330 | | ug/Kg | | 99 | 62 - 120 |
| Fluorene | 1330 | 1280 | | ug/Kg | | 96 | 62 - 120 |
| Indeno[1,2,3-cd]pyrene | 1330 | 1100 | | ug/Kg | | 82 | 68 - 130 |
| Naphthalene | 1330 | 1280 | | ug/Kg | | 96 | 63 - 110 |
| Phenanthrene | 1330 | 1280 | | ug/Kg | | 96 | 62 - 120 |
| Pyrene | 1330 | 1250 | | ug/Kg | | 94 | 61 - 128 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *2-Fluorobiphenyl* | *100* | | *43 - 145* |
| *Nitrobenzene-d5 (Surr)* | *81* | | *37 - 147* |
| *Terphenyl-d14 (Surr)* | *99* | | *42 - 157* |

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 500-490176/1-A**
**Matrix: Solid**
**Analysis Batch: 490272**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 490176**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 | <5.9 | | 17 | 5.9 | ug/Kg | | 06/13/19 16:47 | 06/14/19 09:19 | 1 |
| PCB-1221 | <7.3 | | 17 | 7.3 | ug/Kg | | 06/13/19 16:47 | 06/14/19 09:19 | 1 |
| PCB-1232 | <7.3 | | 17 | 7.3 | ug/Kg | | 06/13/19 16:47 | 06/14/19 09:19 | 1 |
| PCB-1242 | <5.5 | | 17 | 5.5 | ug/Kg | | 06/13/19 16:47 | 06/14/19 09:19 | 1 |
| PCB-1248 | <6.6 | | 17 | 6.6 | ug/Kg | | 06/13/19 16:47 | 06/14/19 09:19 | 1 |
| PCB-1254 | <3.6 | | 17 | 3.6 | ug/Kg | | 06/13/19 16:47 | 06/14/19 09:19 | 1 |
| PCB-1260 | <8.2 | | 17 | 8.2 | ug/Kg | | 06/13/19 16:47 | 06/14/19 09:19 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *Tetrachloro-m-xylene* | *82* | | *49 - 129* | *06/13/19 16:47* | *06/14/19 09:19* | *1* |
| *DCB Decachlorobiphenyl* | *101* | | *37 - 121* | *06/13/19 16:47* | *06/14/19 09:19* | *1* |

**Lab Sample ID: LCS 500-490176/2-A**
**Matrix: Solid**
**Analysis Batch: 490272**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 490176**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| PCB-1016 | 167 | 137 | | ug/Kg | | 82 | 57 - 120 |
| PCB-1260 | 167 | 153 | | ug/Kg | | 92 | 61 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *Tetrachloro-m-xylene* | *78* | | *49 - 129* |
| *DCB Decachlorobiphenyl* | *100* | | *37 - 121* |

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 500-489459/1-A**
**Matrix: Solid**
**Analysis Batch: 489625**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 489459**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | <0.34 | | 1.0 | 0.34 | mg/Kg | | 06/10/19 08:36 | 06/10/19 18:53 | 1 |
| Barium | <0.11 | | 1.0 | 0.11 | mg/Kg | | 06/10/19 08:36 | 06/10/19 18:53 | 1 |
| Cadmium | <0.036 | | 0.20 | 0.036 | mg/Kg | | 06/10/19 08:36 | 06/10/19 18:53 | 1 |
| Chromium | <0.50 | | 1.0 | 0.50 | mg/Kg | | 06/10/19 08:36 | 06/10/19 18:53 | 1 |
| Lead | <0.23 | | 0.50 | 0.23 | mg/Kg | | 06/10/19 08:36 | 06/10/19 18:53 | 1 |
| Selenium | <0.59 | | 1.0 | 0.59 | mg/Kg | | 06/10/19 08:36 | 06/10/19 18:53 | 1 |
| Silver | <0.13 | | 0.50 | 0.13 | mg/Kg | | 06/10/19 08:36 | 06/10/19 18:53 | 1 |

**Lab Sample ID: LCS 500-489459/2-A**
**Matrix: Solid**
**Analysis Batch: 489625**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 489459**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Arsenic | 10.0 | 9.02 | | mg/Kg | | 90 | 80 - 120 |
| Barium | 200 | 197 | | mg/Kg | | 99 | 80 - 120 |
| Cadmium | 5.00 | 4.62 | | mg/Kg | | 92 | 80 - 120 |
| Chromium | 20.0 | 20.0 | | mg/Kg | | 100 | 80 - 120 |

## Method: 6010C - Metals (ICP) (Continued)

**Lab Sample ID: LCS 500-489459/2-A**
**Matrix: Solid**
**Analysis Batch: 489625**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 489459**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Lead | 10.0 | 9.41 | | mg/Kg | | 94 | 80 - 120 |
| Selenium | 10.0 | 8.95 | | mg/Kg | | 89 | 80 - 120 |
| Silver | 5.00 | 4.51 | | mg/Kg | | 90 | 80 - 120 |

**Lab Sample ID: 500-164309-8 MS**
**Matrix: Solid**
**Analysis Batch: 489625**

**Client Sample ID: B8 (2-4)**
**Prep Type: Total/NA**
**Prep Batch: 489459**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.7 | | 11.9 | 12.7 | | mg/Kg | ☼ | 84 | 75 - 125 |
| Barium | 69 | | 239 | 302 | | mg/Kg | ☼ | 97 | 75 - 125 |
| Cadmium | 0.14 | J | 5.97 | 4.77 | | mg/Kg | ☼ | 78 | 75 - 125 |
| Chromium | 24 | | 23.9 | 49.7 | | mg/Kg | ☼ | 109 | 75 - 125 |
| Lead | 5.3 | | 11.9 | 18.8 | | mg/Kg | ☼ | 113 | 75 - 125 |
| Selenium | <0.71 | F1 | 11.9 | 8.75 | F1 | mg/Kg | ☼ | 73 | 75 - 125 |
| Silver | 3.6 | | 5.97 | 8.91 | | mg/Kg | ☼ | 89 | 75 - 125 |

**Lab Sample ID: 500-164309-8 MSD**
**Matrix: Solid**
**Analysis Batch: 489625**

**Client Sample ID: B8 (2-4)**
**Prep Type: Total/NA**
**Prep Batch: 489459**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.7 | | 11.5 | 12.1 | | mg/Kg | ☼ | 81 | 75 - 125 | 5 | 20 |
| Barium | 69 | | 231 | 285 | | mg/Kg | ☼ | 94 | 75 - 125 | 6 | 20 |
| Cadmium | 0.14 | J | 5.77 | 4.47 | | mg/Kg | ☼ | 75 | 75 - 125 | 7 | 20 |
| Chromium | 24 | | 23.1 | 46.4 | | mg/Kg | ☼ | 98 | 75 - 125 | 7 | 20 |
| Lead | 5.3 | | 11.5 | 17.6 | | mg/Kg | ☼ | 107 | 75 - 125 | 7 | 20 |
| Selenium | <0.71 | F1 | 11.5 | 8.63 | | mg/Kg | ☼ | 75 | 75 - 125 | 1 | 20 |
| Silver | 3.6 | | 5.77 | 9.25 | | mg/Kg | ☼ | 98 | 75 - 125 | 4 | 20 |

**Lab Sample ID: 500-164309-8 DU**
**Matrix: Solid**
**Analysis Batch: 489625**

**Client Sample ID: B8 (2-4)**
**Prep Type: Total/NA**
**Prep Batch: 489459**

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|
| Arsenic | 2.7 | | 3.13 | | mg/Kg | ☼ | 15 | 20 |
| Barium | 69 | | 103 | F3 | mg/Kg | ☼ | 39 | 20 |
| Cadmium | 0.14 | J | 0.0751 | J F5 | mg/Kg | ☼ | 62 | 20 |
| Chromium | 24 | | 29.4 | F3 | mg/Kg | ☼ | 21 | 20 |
| Lead | 5.3 | | 7.26 | F3 | mg/Kg | ☼ | 31 | 20 |
| Selenium | <0.71 | F1 | <0.72 | | mg/Kg | ☼ | NC | 20 |
| Silver | 3.6 | | 4.79 | F3 | mg/Kg | ☼ | 29 | 20 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-489708/12-A**
**Matrix: Solid**
**Analysis Batch: 489888**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 489708**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | <0.0056 | | 0.017 | 0.0056 | mg/Kg | | 06/11/19 14:20 | 06/12/19 08:24 | 1 |

**Lab Sample ID: LCS 500-489708/13-A**
**Matrix: Solid**
**Analysis Batch: 489888**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 489708**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Mercury | 0.167 | 0.167 | | mg/Kg | | 100 | 80 - 120 |

# Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Client Sample ID: B1 (2-4)
**Date Collected: 05/28/19 09:00**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489698 | 06/11/19 09:52 | LWN | TAL CHI |

## Client Sample ID: B1 (2-4)
**Date Collected: 05/28/19 09:00**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-1**
**Matrix: Solid**
**Percent Solids: 86.6**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 488291 | 05/28/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 489110 | 06/07/19 16:59 | EMA | TAL CHI |
| Total/NA | Prep | 3541 | | | 489649 | 06/11/19 08:04 | DX | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 490236 | 06/14/19 12:18 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 489459 | 06/10/19 08:36 | SAH | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 489625 | 06/10/19 19:33 | EEN | TAL CHI |
| Total/NA | Prep | 7471B | | | 489708 | 06/11/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 489888 | 06/12/19 08:56 | MJG | TAL CHI |

## Client Sample ID: B2 (4-6)
**Date Collected: 05/28/19 09:35**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-2**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489698 | 06/11/19 09:52 | LWN | TAL CHI |

## Client Sample ID: B2 (4-6)
**Date Collected: 05/28/19 09:35**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-2**
**Matrix: Solid**
**Percent Solids: 79.2**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 488291 | 05/28/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 489110 | 06/07/19 17:26 | EMA | TAL CHI |
| Total/NA | Prep | 3541 | | | 489649 | 06/11/19 08:04 | DX | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 490236 | 06/14/19 11:04 | AJD | TAL CHI |
| Total/NA | Prep | 3541 | | | 490176 | 06/13/19 16:47 | NRJ | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 490272 | 06/14/19 09:50 | BJH | TAL CHI |
| Total/NA | Prep | 3050B | | | 489459 | 06/10/19 08:36 | SAH | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 489625 | 06/10/19 19:37 | EEN | TAL CHI |
| Total/NA | Prep | 7471B | | | 489708 | 06/11/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 489888 | 06/12/19 08:58 | MJG | TAL CHI |

## Client Sample ID: B3 (2-4)
**Date Collected: 05/28/19 10:10**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-3**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489698 | 06/11/19 09:52 | LWN | TAL CHI |

# Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Client Sample ID: B3 (2-4)
**Date Collected: 05/28/19 10:10**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-3
**Matrix: Solid**
**Percent Solids: 81.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 488291 | 05/28/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 489110 | 06/07/19 17:53 | EMA | TAL CHI |

## Client Sample ID: B4 (2-4)
**Date Collected: 05/28/19 11:15**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-4
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489698 | 06/11/19 09:52 | LWN | TAL CHI |

## Client Sample ID: B4 (2-4)
**Date Collected: 05/28/19 11:15**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-4
**Matrix: Solid**
**Percent Solids: 87.4**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 488291 | 05/28/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 489110 | 06/07/19 18:20 | EMA | TAL CHI |

## Client Sample ID: B5 (2-4)
**Date Collected: 05/28/19 13:00**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-5
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489698 | 06/11/19 09:52 | LWN | TAL CHI |

## Client Sample ID: B5 (2-4)
**Date Collected: 05/28/19 13:00**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-5
**Matrix: Solid**
**Percent Solids: 83.2**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 488291 | 05/28/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 489110 | 06/07/19 18:47 | EMA | TAL CHI |
| Total/NA | Prep | 3541 | | | 489649 | 06/11/19 08:04 | DX | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 490236 | 06/14/19 11:29 | AJD | TAL CHI |
| Total/NA | Prep | 3541 | | | 490176 | 06/13/19 16:47 | NRJ | TAL CHI |
| Total/NA | Analysis | 8082A | | 1 | 490272 | 06/14/19 10:05 | BJH | TAL CHI |
| Total/NA | Prep | 3050B | | | 489459 | 06/10/19 08:36 | SAH | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 489625 | 06/10/19 19:41 | EEN | TAL CHI |
| Total/NA | Prep | 7471B | | | 489708 | 06/11/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 489888 | 06/12/19 09:00 | MJG | TAL CHI |

**Client Sample ID: B6 (2-4)**
**Date Collected: 05/28/19 13:35**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-6**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489698 | 06/11/19 09:52 | LWN | TAL CHI |

**Client Sample ID: B6 (2-4)**
**Date Collected: 05/28/19 13:35**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-6**
**Matrix: Solid**
**Percent Solids: 79.8**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 488291 | 05/28/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 489110 | 06/07/19 19:14 | EMA | TAL CHI |

**Client Sample ID: B7 (0-2)**
**Date Collected: 05/28/19 13:40**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-7**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489698 | 06/11/19 09:52 | LWN | TAL CHI |

**Client Sample ID: B7 (0-2)**
**Date Collected: 05/28/19 13:40**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-7**
**Matrix: Solid**
**Percent Solids: 88.3**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 488291 | 05/28/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 489110 | 06/07/19 19:41 | EMA | TAL CHI |
| Total/NA | Prep | 3541 | | | 489649 | 06/11/19 08:04 | DX | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 490236 | 06/14/19 11:54 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 489459 | 06/10/19 08:36 | SAH | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 489625 | 06/10/19 19:53 | EEN | TAL CHI |
| Total/NA | Prep | 7471B | | | 489708 | 06/11/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 489888 | 06/12/19 09:02 | MJG | TAL CHI |

**Client Sample ID: B8 (2-4)**
**Date Collected: 05/28/19 13:50**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-8**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489698 | 06/11/19 09:52 | LWN | TAL CHI |

**Client Sample ID: B8 (2-4)**
**Date Collected: 05/28/19 13:50**
**Date Received: 05/31/19 10:25**

**Lab Sample ID: 500-164309-8**
**Matrix: Solid**
**Percent Solids: 79.8**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 488291 | 05/28/19 13:30 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 489110 | 06/07/19 20:07 | EMA | TAL CHI |

# Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164309-1

## Client Sample ID: B8 (2-4)

**Date Collected: 05/28/19 13:50**
**Date Received: 05/31/19 10:25**

## Lab Sample ID: 500-164309-8

**Matrix: Solid**
**Percent Solids: 79.8**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 3541 | | | 489649 | 06/11/19 08:04 | DX | TAL CHI |
| Total/NA | Analysis | 8270D | | 1 | 490236 | 06/14/19 10:39 | AJD | TAL CHI |
| Total/NA | Prep | 3050B | | | 489459 | 06/10/19 08:36 | SAH | TAL CHI |
| Total/NA | Analysis | 6010C | | 1 | 489625 | 06/10/19 19:58 | EEN | TAL CHI |
| Total/NA | Prep | 7471B | | | 489708 | 06/11/19 14:20 | MJG | TAL CHI |
| Total/NA | Analysis | 7471B | | 1 | 489888 | 06/12/19 09:04 | MJG | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Job ID: 500-164309-1
Project/Site: BMO Properties - 193706891

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)
Report To
Contact: Tyler Hischke
Company: Stantec
Address:
Address:
Phone:
Fax:
E-Mail: tyler.hischke@stantec.com

(optional)
Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

500-164309 COC

# Chain of Custody Record

Lab Job #: 500-164309
Chain of Custody Number:
Page 1 of 1
Temperature °C of Cooler: 0.1→2.1

Client: Stantec
Client Project #: 193706891
Project Name: BMO Properties
Project Location/State: Green Bay, WI
Lab Project #:
Sampler: Tyler Hischke
Lab PM: Sandie Fredrick

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | Preservative | Parameter: VOC | PAH | RCRA | PCB | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | MeOH | | | | | | | | | |
| 1 | | B1 (2-4) | 5/28/19 | 0900 | 3 | S | | X | X | X | | | | | | |
| 2 | | B2 (4-6) | 5/28/19 | 0935 | 4 | S | | X | X | X | X | | | | | |
| 3 | | B3 (2-4) | 5/28/19 | 1010 | 2 | S | | X | | | | | | | | |
| 4 | | B4 (2-4) | 5/28/19 | 1115 | 2 | S | | X | | | | | | | | |
| 5 | | B5 (2-4) | 5/28/19 | 1300 | 4 | S | | X | X | X | X | | | | | |
| 6 | | B6 (2-4) | 5/28/19 | 1335 | 2 | S | | X | | | | | | | | |
| 7 | | B7 (0-2) | 5/28/19 | 1340 | 3 | S | | X | X | X | | | | | | |
| 8 | | B8 (2-4) | 5/28/19 | 1350 | 3 | S | | X | X | X | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days X 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Tyler Hischke | Stantec | 5/29/19 | 1500 | [signature] | TA | 5/31/19 | 1025 |
| | | | | | | | |
| | | | | | | | |

Lab Courier
Shipped
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:



TAL-4124-500 (1209)

6/14/2019

# Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 500-164309-1
SDG Number:

**Login Number: 164309**
**List Number: 1**
**Creator: James, Jeff A**

**List Source: Eurofins TestAmerica, Chicago**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | True | 2.1 |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-164609-1
Client Project/Site: BMO Properties - 193706891

For:
Stantec Consulting Corp.
1165 Scheuring Road
De Pere, Wisconsin 54115

Attn: Tyler Hischke

Sandie Fredrick

*Authorized for release by:*
*6/18/2019 9:26:58 PM*

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

# Case Narrative

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Job ID: 500-164609-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-164609-1**

**Comments**
No additional comments.

**Receipt**
The sample was received on 6/6/2019 9:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.4º C.

**GC/MS VOA**
The extraction LCS associated with preparation batch 489398 had several analytes recoveries above control limits. The instrument LCS associated with analytical batch 490005 had all analytes within control limits; therefore re-analysis was not performed. The data have been reported and qualified. B9 (6-8) (500-164609-1), East (500-164696-1), West (500-164696-2), North (500-164696-3), South (500-164696-4) and Base (500-164696-5)

The method blank for analytical batch 490005 contained Naphthalene above the Method dectection limit (MDL) but below reporting limit (RL). Naphthalene was non-dectect in the sample: therefore, no re-analysis was done and the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Client Sample ID: B9 (6-8)

## Lab Sample ID: 500-164609-1

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| Moisture | Percent Moisture | EPA | TAL CHI |
| 5035 | Closed System Purge and Trap | SW846 | TAL CHI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-164609-1 | B9 (6-8) | Solid | 06/05/19 13:45 | 06/06/19 09:00 | |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

**Client Sample ID: B9 (6-8)**
**Date Collected: 06/05/19 13:45**
**Date Received: 06/06/19 09:00**

**Lab Sample ID: 500-164609-1**
**Matrix: Solid**
**Percent Solids: 77.0**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <37 | | 80 | 37 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1,1-Trichloroethane | <30 | * | 80 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1,2,2-Tetrachloroethane | <32 | | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1,2-Trichloroethane | <28 | | 80 | 28 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1-Dichloroethane | <33 | | 80 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1-Dichloroethene | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1-Dichloropropene | <24 | * | 80 | 24 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2,3-Trichlorobenzene | <37 | | 80 | 37 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2,3-Trichloropropane | <33 | | 160 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2,4-Trichlorobenzene | <27 | | 80 | 27 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2,4-Trimethylbenzene | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dibromo-3-Chloropropane | <160 | | 400 | 160 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dibromoethane | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dichlorobenzene | <27 | | 80 | 27 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dichloroethane | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dichloropropane | <34 | | 80 | 34 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,3,5-Trimethylbenzene | <30 | * | 80 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,3-Dichlorobenzene | <32 | | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,3-Dichloropropane | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,4-Dichlorobenzene | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 2,2-Dichloropropane | <36 | | 80 | 36 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 2-Chlorotoluene | <25 | | 80 | 25 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 4-Chlorotoluene | <28 | | 80 | 28 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Benzene | <12 | | 20 | 12 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromobenzene | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromochloromethane | <34 | | 80 | 34 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromodichloromethane | <30 | | 80 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromoform | <39 | | 80 | 39 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromomethane | <64 | | 240 | 64 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Carbon tetrachloride | <31 | * | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Chlorobenzene | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Chloroethane | <40 | | 80 | 40 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Chloroform | <30 | | 160 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Chloromethane | <26 | | 80 | 26 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| cis-1,2-Dichloroethene | <33 | | 80 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| cis-1,3-Dichloropropene | <33 | | 80 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Dibromochloromethane | <39 | | 80 | 39 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Dibromomethane | <22 | | 80 | 22 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Dichlorodifluoromethane | <54 | | 240 | 54 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Ethylbenzene | <15 | | 20 | 15 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Hexachlorobutadiene | <36 | | 80 | 36 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Isopropyl ether | <22 | | 80 | 22 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Isopropylbenzene | <31 | * | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Methyl tert-butyl ether | <32 | | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Methylene Chloride | <130 | | 400 | 130 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Naphthalene | <27 | | 80 | 27 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| n-Butylbenzene | <31 | * | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| N-Propylbenzene | <33 | | 80 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| p-Isopropyltoluene | <29 | * | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

**Client Sample ID: B9 (6-8)**
**Date Collected: 06/05/19 13:45**
**Date Received: 06/06/19 09:00**

**Lab Sample ID: 500-164609-1**
**Matrix: Solid**
**Percent Solids: 77.0**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <32 | * | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Styrene | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| tert-Butylbenzene | <32 | * | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Tetrachloroethene | <30 | | 80 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Toluene | <12 | | 20 | 12 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| trans-1,2-Dichloroethene | <28 | | 80 | 28 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| trans-1,3-Dichloropropene | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Trichloroethene | <13 | | 40 | 13 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Trichlorofluoromethane | <34 | | 80 | 34 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Vinyl chloride | <21 | | 80 | 21 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Xylenes, Total | <18 | | 40 | 18 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *75 - 126* | *06/05/19 13:45* | *06/18/19 16:17* | *50* |
| *4-Bromofluorobenzene (Surr)* | *89* | | *72 - 124* | *06/05/19 13:45* | *06/18/19 16:17* | *50* |
| *Dibromofluoromethane* | *93* | | *75 - 120* | *06/05/19 13:45* | *06/18/19 16:17* | *50* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 120* | *06/05/19 13:45* | *06/18/19 16:17* | *50* |

# Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## GC/MS VOA

### Prep Batch: 489398

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164609-1 | B9 (6-8) | Total/NA | Solid | 5035 | |

### Analysis Batch: 490698

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164609-1 | B9 (6-8) | Total/NA | Solid | 8260B | 489398 |
| MB 500-490698/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-490698/5 | Lab Control Sample | Total/NA | Solid | 8260B | |

## General Chemistry

### Analysis Batch: 489373

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164609-1 | B9 (6-8) | Total/NA | Solid | Moisture | |

# Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | DCA (75-126) | BFB (72-124) | DBFM (75-120) | TOL (75-120) |
| 500-164609-1 | B9 (6-8) | 98 | 89 | 93 | 100 |
| LCS 500-490698/5 | Lab Control Sample | 94 | 96 | 98 | 105 |
| MB 500-490698/7 | Method Blank | 95 | 94 | 96 | 104 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-490698/7**
**Matrix: Solid**
**Analysis Batch: 490698**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,3,5-Trimethylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Benzene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Chloroethane | <0.50 | | 1.0 | 0.50 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/Kg | | | 06/18/19 10:22 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/18/19 10:22 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Ethylbenzene | <0.18 | | 0.25 | 0.18 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Isopropylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Naphthalene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 06/18/19 10:22 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/18/19 10:22 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-490698/7**
**Matrix: Solid**
**Analysis Batch: 490698**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Toluene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 06/18/19 10:22 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/18/19 10:22 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Vinyl chloride | <0.26 | | 1.0 | 0.26 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Xylenes, Total | <0.22 | | 0.50 | 0.22 | ug/Kg | | | 06/18/19 10:22 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *75 - 126* | | *06/18/19 10:22* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *72 - 124* | | *06/18/19 10:22* | *1* |
| *Dibromofluoromethane* | *96* | | *75 - 120* | | *06/18/19 10:22* | *1* |
| *Toluene-d8 (Surr)* | *104* | | *75 - 120* | | *06/18/19 10:22* | *1* |

**Lab Sample ID: LCS 500-490698/5**
**Matrix: Solid**
**Analysis Batch: 490698**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 49.2 | | ug/Kg | | 98 | 70 - 125 |
| 1,1,1-Trichloroethane | 50.0 | 43.6 | | ug/Kg | | 87 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 49.8 | | ug/Kg | | 100 | 62 - 140 |
| 1,1,2-Trichloroethane | 50.0 | 51.8 | | ug/Kg | | 104 | 71 - 130 |
| 1,1-Dichloroethane | 50.0 | 55.1 | | ug/Kg | | 110 | 70 - 125 |
| 1,1-Dichloroethene | 50.0 | 50.1 | | ug/Kg | | 100 | 67 - 122 |
| 1,1-Dichloropropene | 50.0 | 46.4 | | ug/Kg | | 93 | 70 - 121 |
| 1,2,3-Trichlorobenzene | 50.0 | 54.9 | | ug/Kg | | 110 | 51 - 145 |
| 1,2,3-Trichloropropane | 50.0 | 47.7 | | ug/Kg | | 95 | 50 - 133 |
| 1,2,4-Trichlorobenzene | 50.0 | 53.4 | | ug/Kg | | 107 | 57 - 137 |
| 1,2,4-Trimethylbenzene | 50.0 | 49.8 | | ug/Kg | | 100 | 70 - 123 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 39.3 | | ug/Kg | | 79 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 50.2 | | ug/Kg | | 100 | 70 - 125 |
| 1,2-Dichlorobenzene | 50.0 | 49.4 | | ug/Kg | | 99 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 47.5 | | ug/Kg | | 95 | 68 - 127 |
| 1,2-Dichloropropane | 50.0 | 59.3 | | ug/Kg | | 119 | 67 - 130 |
| 1,3,5-Trimethylbenzene | 50.0 | 49.5 | | ug/Kg | | 99 | 70 - 123 |
| 1,3-Dichlorobenzene | 50.0 | 49.1 | | ug/Kg | | 98 | 70 - 125 |
| 1,3-Dichloropropane | 50.0 | 50.8 | | ug/Kg | | 102 | 62 - 136 |
| 1,4-Dichlorobenzene | 50.0 | 48.3 | | ug/Kg | | 97 | 70 - 120 |
| 2,2-Dichloropropane | 50.0 | 41.4 | | ug/Kg | | 83 | 58 - 139 |
| 2-Chlorotoluene | 50.0 | 47.8 | | ug/Kg | | 96 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 46.6 | | ug/Kg | | 93 | 68 - 124 |
| Benzene | 50.0 | 49.5 | | ug/Kg | | 99 | 70 - 120 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-490698/5**
**Matrix: Solid**
**Analysis Batch: 490698**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Bromobenzene | 50.0 | 50.0 | | ug/Kg | | 100 | 70 - 122 |
| Bromochloromethane | 50.0 | 51.7 | | ug/Kg | | 103 | 65 - 122 |
| Bromodichloromethane | 50.0 | 44.9 | | ug/Kg | | 90 | 69 - 120 |
| Bromoform | 50.0 | 41.0 | | ug/Kg | | 82 | 56 - 132 |
| Bromomethane | 50.0 | 49.7 | | ug/Kg | | 99 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 42.2 | | ug/Kg | | 84 | 59 - 133 |
| Chlorobenzene | 50.0 | 50.4 | | ug/Kg | | 101 | 70 - 120 |
| Chloroethane | 50.0 | 51.8 | | ug/Kg | | 104 | 48 - 136 |
| Chloroform | 50.0 | 46.6 | | ug/Kg | | 93 | 70 - 120 |
| Chloromethane | 50.0 | 63.2 | | ug/Kg | | 126 | 56 - 152 |
| cis-1,2-Dichloroethene | 50.0 | 51.3 | | ug/Kg | | 103 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 48.2 | | ug/Kg | | 96 | 64 - 127 |
| Dibromochloromethane | 50.0 | 47.1 | | ug/Kg | | 94 | 68 - 125 |
| Dibromomethane | 50.0 | 46.9 | | ug/Kg | | 94 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 36.4 | | ug/Kg | | 73 | 40 - 159 |
| Ethylbenzene | 50.0 | 52.4 | | ug/Kg | | 105 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 56.5 | | ug/Kg | | 113 | 51 - 150 |
| Isopropylbenzene | 50.0 | 48.9 | | ug/Kg | | 98 | 70 - 126 |
| Methyl tert-butyl ether | 50.0 | 45.9 | | ug/Kg | | 92 | 55 - 123 |
| Methylene Chloride | 50.0 | 52.9 | | ug/Kg | | 106 | 69 - 125 |
| Naphthalene | 50.0 | 49.3 | | ug/Kg | | 99 | 53 - 144 |
| n-Butylbenzene | 50.0 | 48.9 | | ug/Kg | | 98 | 68 - 125 |
| N-Propylbenzene | 50.0 | 48.7 | | ug/Kg | | 97 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 49.8 | | ug/Kg | | 100 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 49.3 | | ug/Kg | | 99 | 70 - 123 |
| Styrene | 50.0 | 52.1 | | ug/Kg | | 104 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 48.4 | | ug/Kg | | 97 | 70 - 121 |
| Tetrachloroethene | 50.0 | 50.4 | | ug/Kg | | 101 | 70 - 128 |
| Toluene | 50.0 | 48.2 | | ug/Kg | | 96 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 50.7 | | ug/Kg | | 101 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 46.6 | | ug/Kg | | 93 | 62 - 128 |
| Trichloroethene | 50.0 | 46.6 | | ug/Kg | | 93 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 42.7 | | ug/Kg | | 85 | 55 - 128 |
| Vinyl chloride | 50.0 | 47.6 | | ug/Kg | | 95 | 64 - 126 |
| Xylenes, Total | 100 | 102 | | ug/Kg | | 102 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *75 - 126* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *72 - 124* |
| *Dibromofluoromethane* | *98* | | *75 - 120* |
| *Toluene-d8 (Surr)* | *105* | | *75 - 120* |

# Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Client Sample ID: B9 (6-8)
**Date Collected: 06/05/19 13:45**
**Date Received: 06/06/19 09:00**

**Lab Sample ID: 500-164609-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489373 | 06/09/19 09:25 | LWN | TAL CHI |

## Client Sample ID: B9 (6-8)
**Date Collected: 06/05/19 13:45**
**Date Received: 06/06/19 09:00**

**Lab Sample ID: 500-164609-1**
**Matrix: Solid**
**Percent Solids: 77.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 489398 | 06/05/19 13:45 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 490698 | 06/18/19 16:17 | JDD | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Job ID: 500-164609-1
Project/Site: BMO Properties - 193706891

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)

Report To
Contact: Tyler Hischke
Company: Stantec
Address:
Address:
Phone:
Fax:
E-Mail: tyler.hischke@stantec.com

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-164609

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 5.4

| Client | Client Project # | Preservative | MeOH | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stantec | 193706891 | | | | | | | | | | |
| Project Name: BMO Properties | | Parameter | | | | | | | | | |
| Project Location/State: Green Bay, WI | Lab Project # | | | | | | | | | | |
| Sampler: Tyler Hischke | Lab PM: Sandie Fredrick | | VOC | | | | | | | | |

500-164609 COC

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | VOC | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | B9 (6-8) | 6/5/19 | 1345 | 2 | S | X | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days X 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Tyler Hischke | Stantec | 6/5/19 | 1500 | Paula Buckley | TACH1 | 6/6/19 | 0900 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier
Shipped X
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

ORIGIN ID:RRLA (262) 202-5955
EVAN WEBER
STANTEC
1165 SCHEURING ROAD

DE PERE, WI 54115
UNITED STATES US

SHIP DATE: 23MAY19
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

(708) 634-5200 REF:

INV:
PO: DEPT:

RMA:

FedEx Express

FedEx
TRK# 0221 7125 4940 0855

THU - 06 JUN 10:30A
PRIORITY OVERNIGHT

60484
IL-US
ORD

NA JOTA

FID 6006119 06JUN19 GRBA 563C1/D210/0C8A

500-164609 Waybill

# Login Sample Receipt Checklist

Client: Stantec Consulting Corp. Job Number: 500-164609-1

**Login Number: 164609** **List Source: Eurofins TestAmerica, Chicago**
**List Number: 1**
**Creator: Buckley, Paula M**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | 5.4 |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-164609-1
Client Project/Site: BMO Properties - 193706891

For:
Stantec Consulting Corp.
1165 Scheuring Road
De Pere, Wisconsin 54115

Attn: Tyler Hischke

Sandie Fredrick

*Authorized for release by:*
*6/18/2019 9:26:58 PM*

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

# Case Narrative

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Job ID: 500-164609-1

### Laboratory: Eurofins TestAmerica, Chicago

**Narrative**

**Job Narrative**
**500-164609-1**

**Comments**
No additional comments.

**Receipt**
The sample was received on 6/6/2019 9:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.4º C.

**GC/MS VOA**
The extraction LCS associated with preparation batch 489398 had several analytes recoveries above control limits. The instrument LCS associated with analytical batch 490005 had all analytes within control limits; therefore re-analysis was not performed. The data have been reported and qualified. B9 (6-8) (500-164609-1), East (500-164696-1), West (500-164696-2), North (500-164696-3), South (500-164696-4) and Base (500-164696-5)

The method blank for analytical batch 490005 contained Naphthalene above the Method dectection limit (MDL) but below reporting limit (RL). Naphthalene was non-dectect in the sample: therefore, no re-analysis was done and the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

**Metals**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Client Sample ID: B9 (6-8)

## Lab Sample ID: 500-164609-1

No Detections.

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 8260B | Volatile Organic Compounds (GC/MS) | SW846 | TAL CHI |
| Moisture | Percent Moisture | EPA | TAL CHI |
| 5035 | Closed System Purge and Trap | SW846 | TAL CHI |

**Protocol References:**

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Sample Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 500-164609-1 | B9 (6-8) | Solid | 06/05/19 13:45 | 06/06/19 09:00 | |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

**Client Sample ID: B9 (6-8)**
**Date Collected: 06/05/19 13:45**
**Date Received: 06/06/19 09:00**

**Lab Sample ID: 500-164609-1**
**Matrix: Solid**
**Percent Solids: 77.0**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <37 | | 80 | 37 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1,1-Trichloroethane | <30 | * | 80 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1,2,2-Tetrachloroethane | <32 | | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1,2-Trichloroethane | <28 | | 80 | 28 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1-Dichloroethane | <33 | | 80 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1-Dichloroethene | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,1-Dichloropropene | <24 | * | 80 | 24 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2,3-Trichlorobenzene | <37 | | 80 | 37 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2,3-Trichloropropane | <33 | | 160 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2,4-Trichlorobenzene | <27 | | 80 | 27 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2,4-Trimethylbenzene | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dibromo-3-Chloropropane | <160 | | 400 | 160 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dibromoethane | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dichlorobenzene | <27 | | 80 | 27 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dichloroethane | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,2-Dichloropropane | <34 | | 80 | 34 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,3,5-Trimethylbenzene | <30 | * | 80 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,3-Dichlorobenzene | <32 | | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,3-Dichloropropane | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 1,4-Dichlorobenzene | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 2,2-Dichloropropane | <36 | | 80 | 36 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 2-Chlorotoluene | <25 | | 80 | 25 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| 4-Chlorotoluene | <28 | | 80 | 28 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Benzene | <12 | | 20 | 12 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromobenzene | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromochloromethane | <34 | | 80 | 34 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromodichloromethane | <30 | | 80 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromoform | <39 | | 80 | 39 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Bromomethane | <64 | | 240 | 64 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Carbon tetrachloride | <31 | * | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Chlorobenzene | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Chloroethane | <40 | | 80 | 40 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Chloroform | <30 | | 160 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Chloromethane | <26 | | 80 | 26 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| cis-1,2-Dichloroethene | <33 | | 80 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| cis-1,3-Dichloropropene | <33 | | 80 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Dibromochloromethane | <39 | | 80 | 39 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Dibromomethane | <22 | | 80 | 22 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Dichlorodifluoromethane | <54 | | 240 | 54 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Ethylbenzene | <15 | | 20 | 15 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Hexachlorobutadiene | <36 | | 80 | 36 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Isopropyl ether | <22 | | 80 | 22 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Isopropylbenzene | <31 | * | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Methyl tert-butyl ether | <32 | | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Methylene Chloride | <130 | | 400 | 130 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Naphthalene | <27 | | 80 | 27 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| n-Butylbenzene | <31 | * | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| N-Propylbenzene | <33 | | 80 | 33 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| p-Isopropyltoluene | <29 | * | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

**Client Sample ID: B9 (6-8)**
**Date Collected: 06/05/19 13:45**
**Date Received: 06/06/19 09:00**

**Lab Sample ID: 500-164609-1**
**Matrix: Solid**
**Percent Solids: 77.0**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| sec-Butylbenzene | <32 | * | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Styrene | <31 | | 80 | 31 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| tert-Butylbenzene | <32 | * | 80 | 32 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Tetrachloroethene | <30 | | 80 | 30 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Toluene | <12 | | 20 | 12 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| trans-1,2-Dichloroethene | <28 | | 80 | 28 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| trans-1,3-Dichloropropene | <29 | | 80 | 29 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Trichloroethene | <13 | | 40 | 13 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Trichlorofluoromethane | <34 | | 80 | 34 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Vinyl chloride | <21 | | 80 | 21 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |
| Xylenes, Total | <18 | | 40 | 18 | ug/Kg | ☼ | 06/05/19 13:45 | 06/18/19 16:17 | 50 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *98* | | *75 - 126* | *06/05/19 13:45* | *06/18/19 16:17* | *50* |
| *4-Bromofluorobenzene (Surr)* | *89* | | *72 - 124* | *06/05/19 13:45* | *06/18/19 16:17* | *50* |
| *Dibromofluoromethane* | *93* | | *75 - 120* | *06/05/19 13:45* | *06/18/19 16:17* | *50* |
| *Toluene-d8 (Surr)* | *100* | | *75 - 120* | *06/05/19 13:45* | *06/18/19 16:17* | *50* |

# Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Qualifiers

### GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| * | LCS or LCSD is outside acceptance limits. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

# QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## GC/MS VOA

### Prep Batch: 489398

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164609-1 | B9 (6-8) | Total/NA | Solid | 5035 | |

### Analysis Batch: 490698

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164609-1 | B9 (6-8) | Total/NA | Solid | 8260B | 489398 |
| MB 500-490698/7 | Method Blank | Total/NA | Solid | 8260B | |
| LCS 500-490698/5 | Lab Control Sample | Total/NA | Solid | 8260B | |

## General Chemistry

### Analysis Batch: 489373

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 500-164609-1 | B9 (6-8) | Total/NA | Solid | Moisture | |

# Surrogate Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Matrix: Solid**

**Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| Lab Sample ID | Client Sample ID | DCA (75-126) | BFB (72-124) | DBFM (75-120) | TOL (75-120) |
| 500-164609-1 | B9 (6-8) | 98 | 89 | 93 | 100 |
| LCS 500-490698/5 | Lab Control Sample | 94 | 96 | 98 | 105 |
| MB 500-490698/7 | Method Blank | 95 | 94 | 96 | 104 |

**Surrogate Legend**

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-490698/7**
**Matrix: Solid**
**Analysis Batch: 490698**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1,1-Trichloroethane | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1,2-Trichloroethane | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1-Dichloroethane | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1-Dichloroethene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,1-Dichloropropene | <0.30 | | 1.0 | 0.30 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2,3-Trichlorobenzene | <0.46 | | 1.0 | 0.46 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2,3-Trichloropropane | <0.41 | | 2.0 | 0.41 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2,4-Trichlorobenzene | <0.34 | | 1.0 | 0.34 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2,4-Trimethylbenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dibromo-3-Chloropropane | <2.0 | | 5.0 | 2.0 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dibromoethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dichlorobenzene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dichloroethane | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,2-Dichloropropane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,3,5-Trimethylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,3-Dichlorobenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,3-Dichloropropane | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 1,4-Dichlorobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 2,2-Dichloropropane | <0.44 | | 1.0 | 0.44 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 2-Chlorotoluene | <0.31 | | 1.0 | 0.31 | ug/Kg | | | 06/18/19 10:22 | 1 |
| 4-Chlorotoluene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Benzene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromobenzene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromochloromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromodichloromethane | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromoform | <0.48 | | 1.0 | 0.48 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Bromomethane | <0.80 | | 3.0 | 0.80 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Carbon tetrachloride | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Chlorobenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Chloroethane | <0.50 | | 1.0 | 0.50 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Chloromethane | <0.32 | | 1.0 | 0.32 | ug/Kg | | | 06/18/19 10:22 | 1 |
| cis-1,2-Dichloroethene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/18/19 10:22 | 1 |
| cis-1,3-Dichloropropene | <0.42 | | 1.0 | 0.42 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Dibromochloromethane | <0.49 | | 1.0 | 0.49 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Dibromomethane | <0.27 | | 1.0 | 0.27 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Dichlorodifluoromethane | <0.67 | | 3.0 | 0.67 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Ethylbenzene | <0.18 | | 0.25 | 0.18 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Hexachlorobutadiene | <0.45 | | 1.0 | 0.45 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Isopropyl ether | <0.28 | | 1.0 | 0.28 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Isopropylbenzene | <0.38 | | 1.0 | 0.38 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Methyl tert-butyl ether | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Methylene Chloride | <1.6 | | 5.0 | 1.6 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Naphthalene | <0.33 | | 1.0 | 0.33 | ug/Kg | | | 06/18/19 10:22 | 1 |
| n-Butylbenzene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| N-Propylbenzene | <0.41 | | 1.0 | 0.41 | ug/Kg | | | 06/18/19 10:22 | 1 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-490698/7**
**Matrix: Solid**
**Analysis Batch: 490698**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| p-Isopropyltoluene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| sec-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Styrene | <0.39 | | 1.0 | 0.39 | ug/Kg | | | 06/18/19 10:22 | 1 |
| tert-Butylbenzene | <0.40 | | 1.0 | 0.40 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Tetrachloroethene | <0.37 | | 1.0 | 0.37 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Toluene | <0.15 | | 0.25 | 0.15 | ug/Kg | | | 06/18/19 10:22 | 1 |
| trans-1,2-Dichloroethene | <0.35 | | 1.0 | 0.35 | ug/Kg | | | 06/18/19 10:22 | 1 |
| trans-1,3-Dichloropropene | <0.36 | | 1.0 | 0.36 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Trichloroethene | <0.16 | | 0.50 | 0.16 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Trichlorofluoromethane | <0.43 | | 1.0 | 0.43 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Vinyl chloride | <0.26 | | 1.0 | 0.26 | ug/Kg | | | 06/18/19 10:22 | 1 |
| Xylenes, Total | <0.22 | | 0.50 | 0.22 | ug/Kg | | | 06/18/19 10:22 | 1 |

| *Surrogate* | *MB %Recovery* | *MB Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *95* | | *75 - 126* | | *06/18/19 10:22* | *1* |
| *4-Bromofluorobenzene (Surr)* | *94* | | *72 - 124* | | *06/18/19 10:22* | *1* |
| *Dibromofluoromethane* | *96* | | *75 - 120* | | *06/18/19 10:22* | *1* |
| *Toluene-d8 (Surr)* | *104* | | *75 - 120* | | *06/18/19 10:22* | *1* |

**Lab Sample ID: LCS 500-490698/5**
**Matrix: Solid**
**Analysis Batch: 490698**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 50.0 | 49.2 | | ug/Kg | | 98 | 70 - 125 |
| 1,1,1-Trichloroethane | 50.0 | 43.6 | | ug/Kg | | 87 | 70 - 125 |
| 1,1,2,2-Tetrachloroethane | 50.0 | 49.8 | | ug/Kg | | 100 | 62 - 140 |
| 1,1,2-Trichloroethane | 50.0 | 51.8 | | ug/Kg | | 104 | 71 - 130 |
| 1,1-Dichloroethane | 50.0 | 55.1 | | ug/Kg | | 110 | 70 - 125 |
| 1,1-Dichloroethene | 50.0 | 50.1 | | ug/Kg | | 100 | 67 - 122 |
| 1,1-Dichloropropene | 50.0 | 46.4 | | ug/Kg | | 93 | 70 - 121 |
| 1,2,3-Trichlorobenzene | 50.0 | 54.9 | | ug/Kg | | 110 | 51 - 145 |
| 1,2,3-Trichloropropane | 50.0 | 47.7 | | ug/Kg | | 95 | 50 - 133 |
| 1,2,4-Trichlorobenzene | 50.0 | 53.4 | | ug/Kg | | 107 | 57 - 137 |
| 1,2,4-Trimethylbenzene | 50.0 | 49.8 | | ug/Kg | | 100 | 70 - 123 |
| 1,2-Dibromo-3-Chloropropane | 50.0 | 39.3 | | ug/Kg | | 79 | 56 - 123 |
| 1,2-Dibromoethane | 50.0 | 50.2 | | ug/Kg | | 100 | 70 - 125 |
| 1,2-Dichlorobenzene | 50.0 | 49.4 | | ug/Kg | | 99 | 70 - 125 |
| 1,2-Dichloroethane | 50.0 | 47.5 | | ug/Kg | | 95 | 68 - 127 |
| 1,2-Dichloropropane | 50.0 | 59.3 | | ug/Kg | | 119 | 67 - 130 |
| 1,3,5-Trimethylbenzene | 50.0 | 49.5 | | ug/Kg | | 99 | 70 - 123 |
| 1,3-Dichlorobenzene | 50.0 | 49.1 | | ug/Kg | | 98 | 70 - 125 |
| 1,3-Dichloropropane | 50.0 | 50.8 | | ug/Kg | | 102 | 62 - 136 |
| 1,4-Dichlorobenzene | 50.0 | 48.3 | | ug/Kg | | 97 | 70 - 120 |
| 2,2-Dichloropropane | 50.0 | 41.4 | | ug/Kg | | 83 | 58 - 139 |
| 2-Chlorotoluene | 50.0 | 47.8 | | ug/Kg | | 96 | 70 - 125 |
| 4-Chlorotoluene | 50.0 | 46.6 | | ug/Kg | | 93 | 68 - 124 |
| Benzene | 50.0 | 49.5 | | ug/Kg | | 99 | 70 - 120 |

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-490698/5**
**Matrix: Solid**
**Analysis Batch: 490698**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Bromobenzene | 50.0 | 50.0 | | ug/Kg | | 100 | 70 - 122 |
| Bromochloromethane | 50.0 | 51.7 | | ug/Kg | | 103 | 65 - 122 |
| Bromodichloromethane | 50.0 | 44.9 | | ug/Kg | | 90 | 69 - 120 |
| Bromoform | 50.0 | 41.0 | | ug/Kg | | 82 | 56 - 132 |
| Bromomethane | 50.0 | 49.7 | | ug/Kg | | 99 | 40 - 152 |
| Carbon tetrachloride | 50.0 | 42.2 | | ug/Kg | | 84 | 59 - 133 |
| Chlorobenzene | 50.0 | 50.4 | | ug/Kg | | 101 | 70 - 120 |
| Chloroethane | 50.0 | 51.8 | | ug/Kg | | 104 | 48 - 136 |
| Chloroform | 50.0 | 46.6 | | ug/Kg | | 93 | 70 - 120 |
| Chloromethane | 50.0 | 63.2 | | ug/Kg | | 126 | 56 - 152 |
| cis-1,2-Dichloroethene | 50.0 | 51.3 | | ug/Kg | | 103 | 70 - 125 |
| cis-1,3-Dichloropropene | 50.0 | 48.2 | | ug/Kg | | 96 | 64 - 127 |
| Dibromochloromethane | 50.0 | 47.1 | | ug/Kg | | 94 | 68 - 125 |
| Dibromomethane | 50.0 | 46.9 | | ug/Kg | | 94 | 70 - 120 |
| Dichlorodifluoromethane | 50.0 | 36.4 | | ug/Kg | | 73 | 40 - 159 |
| Ethylbenzene | 50.0 | 52.4 | | ug/Kg | | 105 | 70 - 123 |
| Hexachlorobutadiene | 50.0 | 56.5 | | ug/Kg | | 113 | 51 - 150 |
| Isopropylbenzene | 50.0 | 48.9 | | ug/Kg | | 98 | 70 - 126 |
| Methyl tert-butyl ether | 50.0 | 45.9 | | ug/Kg | | 92 | 55 - 123 |
| Methylene Chloride | 50.0 | 52.9 | | ug/Kg | | 106 | 69 - 125 |
| Naphthalene | 50.0 | 49.3 | | ug/Kg | | 99 | 53 - 144 |
| n-Butylbenzene | 50.0 | 48.9 | | ug/Kg | | 98 | 68 - 125 |
| N-Propylbenzene | 50.0 | 48.7 | | ug/Kg | | 97 | 69 - 127 |
| p-Isopropyltoluene | 50.0 | 49.8 | | ug/Kg | | 100 | 70 - 125 |
| sec-Butylbenzene | 50.0 | 49.3 | | ug/Kg | | 99 | 70 - 123 |
| Styrene | 50.0 | 52.1 | | ug/Kg | | 104 | 70 - 120 |
| tert-Butylbenzene | 50.0 | 48.4 | | ug/Kg | | 97 | 70 - 121 |
| Tetrachloroethene | 50.0 | 50.4 | | ug/Kg | | 101 | 70 - 128 |
| Toluene | 50.0 | 48.2 | | ug/Kg | | 96 | 70 - 125 |
| trans-1,2-Dichloroethene | 50.0 | 50.7 | | ug/Kg | | 101 | 70 - 125 |
| trans-1,3-Dichloropropene | 50.0 | 46.6 | | ug/Kg | | 93 | 62 - 128 |
| Trichloroethene | 50.0 | 46.6 | | ug/Kg | | 93 | 70 - 125 |
| Trichlorofluoromethane | 50.0 | 42.7 | | ug/Kg | | 85 | 55 - 128 |
| Vinyl chloride | 50.0 | 47.6 | | ug/Kg | | 95 | 64 - 126 |
| Xylenes, Total | 100 | 102 | | ug/Kg | | 102 | 70 - 125 |

| *Surrogate* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *1,2-Dichloroethane-d4 (Surr)* | *94* | | *75 - 126* |
| *4-Bromofluorobenzene (Surr)* | *96* | | *72 - 124* |
| *Dibromofluoromethane* | *98* | | *75 - 120* |
| *Toluene-d8 (Surr)* | *105* | | *75 - 120* |

# Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 500-164609-1

## Client Sample ID: B9 (6-8)
**Date Collected: 06/05/19 13:45**
**Date Received: 06/06/19 09:00**

**Lab Sample ID: 500-164609-1**
**Matrix: Solid**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | Moisture | | 1 | 489373 | 06/09/19 09:25 | LWN | TAL CHI |

## Client Sample ID: B9 (6-8)
**Date Collected: 06/05/19 13:45**
**Date Received: 06/06/19 09:00**

**Lab Sample ID: 500-164609-1**
**Matrix: Solid**
**Percent Solids: 77.0**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 5035 | | | 489398 | 06/05/19 13:45 | WRE | TAL CHI |
| Total/NA | Analysis | 8260B | | 50 | 490698 | 06/18/19 16:17 | JDD | TAL CHI |

**Laboratory References:**

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Job ID: 500-164609-1
Project/Site: BMO Properties - 193706891

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2417 Bond Street, University Park, IL 60484
Phone: 708.534.5200 Fax: 708.534.5211

(optional)

Report To
Contact: Tyler Hischke
Company: Stantec
Address:
Address:
Phone:
Fax:
E-Mail: tyler.hischke@stantec.com

(optional)

Bill To
Contact:
Company:
Address:
Address:
Phone:
Fax:
PO#/Reference#

## Chain of Custody Record

Lab Job #: 500-164609

Chain of Custody Number:

Page 1 of 1

Temperature °C of Cooler: 5.4

| Client | Client Project # | Preservative | MeOH | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stantec | 193706891 | | | | | | | | | | |
| Project Name: BMO Properties | | Parameter | | | | | | | | | |
| Project Location/State: Green Bay, WI | Lab Project # | | | | | | | | | | |
| Sampler: Tyler Hischke | Lab PM: Sandie Fredrick | | VOC | | | | | | | | |

500-164609 COC

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

| Lab ID | MS/MSD | Sample ID | Sampling Date | Sampling Time | # of Containers | Matrix | VOC | | | | | | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | B9 (6-8) | 6/5/19 | 1345 | 2 | S | X | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days X 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
|---|---|---|---|---|---|---|---|
| Tyler Hischke | Stantec | 6/5/19 | 1500 | Paula Buckley | TACH1 | 6/6/19 | 0900 |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |
| Relinquished By | Company | Date | Time | Received By | Company | Date | Time |

Lab Courier
Shipped X
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments

Lab Comments:

TAL-4124-500 (1209)

ORIGIN ID:RRLA (262) 202-5955
EVAN WEBER
STANTEC
1165 SCHEURING ROAD

DE PERE, WI 54115
UNITED STATES US

SHIP DATE: 23MAY19
ACTWGT: 25.00 LB MAN
CAD: 525155/CAFE3211

TO

TESTAMERICA CHICAGO
2417 BOND STREET

UNIVERSITY PARK IL 60484-3101

(708) 634-5200 REF:

INV:
PO: DEPT:

RMA:

FedEx Express

FedEx
TRK# 0221 7125 4940 0855

THU - 06 JUN 10:30A
PRIORITY OVERNIGHT

60484
IL-US
ORD

NA JOTA

FID 6006119 06JUN19 GRBA 563C1/D210/0C8A

500-164609 Waybill

# Login Sample Receipt Checklist

Client: Stantec Consulting Corp. Job Number: 500-164609-1

**Login Number: 164609** **List Source: Eurofins TestAmerica, Chicago**
**List Number: 1**
**Creator: Buckley, Paula M**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable. | True | 5.4 |
| Cooler Temperature is recorded. | True | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

eurofins | Environment Testing TestAmerica

# ANALYTICAL REPORT

Eurofins TestAmerica, Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
Tel: (802)660-1990

Laboratory Job ID: 200-49066-1
Client Project/Site: BMO Properties - 193706891

For:
Stantec Consulting Corp.
1165 Scheuring Road
De Pere, Wisconsin 54115

Attn: Evan Weber

Sandie Fredrick

*Authorized for release by:*
*6/24/2019 1:40:22 PM*

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

# Table of Contents

# Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

## Qualifiers

### Air - GC/MS VOA

| Qualifier | Qualifier Description |
|---|---|
| B | Compound was found in the blank and sample. |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ¤ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| PQL | Practical Quantitation Limit |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |

## Job ID: 200-49066-1

### Laboratory: Eurofins TestAmerica, Burlington

**Narrative**

**Job Narrative**
**200-49066-1**

**Comments**
No additional comments.

**Receipt**
The samples were received on 6/6/2019 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

**Air Toxics**
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Detection Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

## Client Sample ID: VP-1

## Lab Sample ID: 200-49066-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 0.085 | J B | 4.0 | 0.068 | ppb v/v | 2 | | TO-15 | Total/NA |
| 1,2,4-Trimethylbenzene | 0.78 | | 0.40 | 0.032 | ppb v/v | 2 | | TO-15 | Total/NA |
| 1,3,5-Trimethylbenzene | 0.21 | J | 0.40 | 0.038 | ppb v/v | 2 | | TO-15 | Total/NA |
| 2-Butanone (MEK) | 1.1 | J | 2.0 | 0.18 | ppb v/v | 2 | | TO-15 | Total/NA |
| Acetone | 33 | | 10 | 1.4 | ppb v/v | 2 | | TO-15 | Total/NA |
| Benzene | 0.53 | | 0.40 | 0.058 | ppb v/v | 2 | | TO-15 | Total/NA |
| Carbon disulfide | 0.36 | J | 1.0 | 0.060 | ppb v/v | 2 | | TO-15 | Total/NA |
| Carbon tetrachloride | 0.057 | J | 0.40 | 0.022 | ppb v/v | 2 | | TO-15 | Total/NA |
| Chloromethane | 0.47 | J | 1.0 | 0.12 | ppb v/v | 2 | | TO-15 | Total/NA |
| Cyclohexane | 0.16 | J | 1.0 | 0.020 | ppb v/v | 2 | | TO-15 | Total/NA |
| Dichlorodifluoromethane | 15 | | 1.0 | 0.11 | ppb v/v | 2 | | TO-15 | Total/NA |
| Ethylbenzene | 0.30 | J | 0.40 | 0.040 | ppb v/v | 2 | | TO-15 | Total/NA |
| Hexane | 0.31 | J | 1.6 | 0.056 | ppb v/v | 2 | | TO-15 | Total/NA |
| Isopropyl alcohol | 1.8 | J | 10 | 0.30 | ppb v/v | 2 | | TO-15 | Total/NA |
| Isopropylbenzene | 0.056 | J | 1.6 | 0.038 | ppb v/v | 2 | | TO-15 | Total/NA |
| m-Xylene & p-Xylene | 0.69 | J | 1.6 | 0.050 | ppb v/v | 2 | | TO-15 | Total/NA |
| Naphthalene | 0.21 | J B | 1.0 | 0.060 | ppb v/v | 2 | | TO-15 | Total/NA |
| o-Xylene | 0.32 | J | 0.40 | 0.036 | ppb v/v | 2 | | TO-15 | Total/NA |
| Styrene | 0.15 | J | 0.40 | 0.032 | ppb v/v | 2 | | TO-15 | Total/NA |
| Tetrachloroethene | 27 | | 0.40 | 0.060 | ppb v/v | 2 | | TO-15 | Total/NA |
| Toluene | 1.3 | | 0.40 | 0.050 | ppb v/v | 2 | | TO-15 | Total/NA |
| Trichloroethene | 0.11 | J | 0.40 | 0.060 | ppb v/v | 2 | | TO-15 | Total/NA |
| Trichlorofluoromethane | 0.23 | J | 0.40 | 0.090 | ppb v/v | 2 | | TO-15 | Total/NA |
| Xylenes, Total | 1.0 | | 0.40 | 0.082 | ppb v/v | 2 | | TO-15 | Total/NA |

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 0.63 | J B | 30 | 0.50 | ug/m3 | 2 | | TO-15 | Total/NA |
| 1,2,4-Trimethylbenzene | 3.8 | | 2.0 | 0.16 | ug/m3 | 2 | | TO-15 | Total/NA |
| 1,3,5-Trimethylbenzene | 1.0 | J | 2.0 | 0.19 | ug/m3 | 2 | | TO-15 | Total/NA |
| 2-Butanone (MEK) | 3.4 | J | 5.9 | 0.54 | ug/m3 | 2 | | TO-15 | Total/NA |
| Acetone | 79 | | 24 | 3.3 | ug/m3 | 2 | | TO-15 | Total/NA |
| Benzene | 1.7 | | 1.3 | 0.19 | ug/m3 | 2 | | TO-15 | Total/NA |
| Carbon disulfide | 1.1 | J | 3.1 | 0.19 | ug/m3 | 2 | | TO-15 | Total/NA |
| Carbon tetrachloride | 0.36 | J | 2.5 | 0.14 | ug/m3 | 2 | | TO-15 | Total/NA |
| Chloromethane | 0.98 | J | 2.1 | 0.25 | ug/m3 | 2 | | TO-15 | Total/NA |
| Cyclohexane | 0.56 | J | 3.4 | 0.069 | ug/m3 | 2 | | TO-15 | Total/NA |
| Dichlorodifluoromethane | 72 | | 4.9 | 0.55 | ug/m3 | 2 | | TO-15 | Total/NA |
| Ethylbenzene | 1.3 | J | 1.7 | 0.17 | ug/m3 | 2 | | TO-15 | Total/NA |
| Hexane | 1.1 | J | 5.6 | 0.20 | ug/m3 | 2 | | TO-15 | Total/NA |
| Isopropyl alcohol | 4.5 | J | 25 | 0.74 | ug/m3 | 2 | | TO-15 | Total/NA |
| Isopropylbenzene | 0.27 | J | 7.9 | 0.19 | ug/m3 | 2 | | TO-15 | Total/NA |
| m-Xylene & p-Xylene | 3.0 | J | 6.9 | 0.22 | ug/m3 | 2 | | TO-15 | Total/NA |
| Naphthalene | 1.1 | J B | 5.2 | 0.31 | ug/m3 | 2 | | TO-15 | Total/NA |
| o-Xylene | 1.4 | J | 1.7 | 0.16 | ug/m3 | 2 | | TO-15 | Total/NA |
| Styrene | 0.65 | J | 1.7 | 0.14 | ug/m3 | 2 | | TO-15 | Total/NA |
| Tetrachloroethene | 180 | | 2.7 | 0.41 | ug/m3 | 2 | | TO-15 | Total/NA |
| Toluene | 4.9 | | 1.5 | 0.19 | ug/m3 | 2 | | TO-15 | Total/NA |
| Trichloroethene | 0.62 | J | 2.1 | 0.32 | ug/m3 | 2 | | TO-15 | Total/NA |
| Trichlorofluoromethane | 1.3 | J | 2.2 | 0.51 | ug/m3 | 2 | | TO-15 | Total/NA |
| Xylenes, Total | 4.4 | | 1.7 | 0.36 | ug/m3 | 2 | | TO-15 | Total/NA |

This Detection Summary does not include radiochemical test results.

# Detection Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

## Client Sample ID: VP-2

## Lab Sample ID: 200-49066-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 0.73 | J | 1.0 | 0.080 | ppb v/v | 5 | | TO-15 | Total/NA |
| 2-Butanone (MEK) | 1.1 | J | 5.0 | 0.46 | ppb v/v | 5 | | TO-15 | Total/NA |
| Acetone | 22 | J | 25 | 3.5 | ppb v/v | 5 | | TO-15 | Total/NA |
| Benzene | 0.19 | J | 1.0 | 0.15 | ppb v/v | 5 | | TO-15 | Total/NA |
| Carbon disulfide | 0.51 | J | 2.5 | 0.15 | ppb v/v | 5 | | TO-15 | Total/NA |
| Dichlorodifluoromethane | 45 | | 2.5 | 0.28 | ppb v/v | 5 | | TO-15 | Total/NA |
| Ethylbenzene | 0.21 | J | 1.0 | 0.10 | ppb v/v | 5 | | TO-15 | Total/NA |
| Isopropyl alcohol | 2.0 | J | 25 | 0.75 | ppb v/v | 5 | | TO-15 | Total/NA |
| m-Xylene & p-Xylene | 0.50 | J | 4.0 | 0.13 | ppb v/v | 5 | | TO-15 | Total/NA |
| Naphthalene | 0.28 | J B | 2.5 | 0.15 | ppb v/v | 5 | | TO-15 | Total/NA |
| o-Xylene | 0.29 | J | 1.0 | 0.090 | ppb v/v | 5 | | TO-15 | Total/NA |
| Styrene | 0.24 | J | 1.0 | 0.080 | ppb v/v | 5 | | TO-15 | Total/NA |
| Tetrachloroethene | 100 | | 1.0 | 0.15 | ppb v/v | 5 | | TO-15 | Total/NA |
| Toluene | 0.64 | J | 1.0 | 0.13 | ppb v/v | 5 | | TO-15 | Total/NA |
| Xylenes, Total | 0.79 | J | 1.0 | 0.21 | ppb v/v | 5 | | TO-15 | Total/NA |

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trimethylbenzene | 3.6 | J | 4.9 | 0.39 | ug/m3 | 5 | | TO-15 | Total/NA |
| 2-Butanone (MEK) | 3.3 | J | 15 | 1.4 | ug/m3 | 5 | | TO-15 | Total/NA |
| Acetone | 51 | J | 59 | 8.2 | ug/m3 | 5 | | TO-15 | Total/NA |
| Benzene | 0.60 | J | 3.2 | 0.46 | ug/m3 | 5 | | TO-15 | Total/NA |
| Carbon disulfide | 1.6 | J | 7.8 | 0.47 | ug/m3 | 5 | | TO-15 | Total/NA |
| Dichlorodifluoromethane | 220 | | 12 | 1.4 | ug/m3 | 5 | | TO-15 | Total/NA |
| Ethylbenzene | 0.90 | J | 4.3 | 0.43 | ug/m3 | 5 | | TO-15 | Total/NA |
| Isopropyl alcohol | 4.9 | J | 61 | 1.8 | ug/m3 | 5 | | TO-15 | Total/NA |
| m-Xylene & p-Xylene | 2.2 | J | 17 | 0.54 | ug/m3 | 5 | | TO-15 | Total/NA |
| Naphthalene | 1.5 | J B | 13 | 0.79 | ug/m3 | 5 | | TO-15 | Total/NA |
| o-Xylene | 1.3 | J | 4.3 | 0.39 | ug/m3 | 5 | | TO-15 | Total/NA |
| Styrene | 1.0 | J | 4.3 | 0.34 | ug/m3 | 5 | | TO-15 | Total/NA |
| Tetrachloroethene | 710 | | 6.8 | 1.0 | ug/m3 | 5 | | TO-15 | Total/NA |
| Toluene | 2.4 | J | 3.8 | 0.47 | ug/m3 | 5 | | TO-15 | Total/NA |
| Xylenes, Total | 3.4 | J | 4.3 | 0.89 | ug/m3 | 5 | | TO-15 | Total/NA |

This Detection Summary does not include radiochemical test results.

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

## Client Sample ID: VP-1

**Lab Sample ID: 200-49066-1**

**Date Collected: 06/05/19 10:55**
**Matrix: Air**
**Date Received: 06/06/19 09:50**
**Sample Container: Summa Canister 6L**

### Method: TO-15 - Volatile Organic Compounds in Ambient Air

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | <0.060 | | 0.40 | 0.060 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,1,2,2-Tetrachloroethane | <0.068 | | 0.40 | 0.068 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <0.082 | | 0.40 | 0.082 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,1,2-Trichloroethane | <0.074 | | 0.40 | 0.074 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,1-Dichloroethane | <0.056 | | 0.40 | 0.056 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,1-Dichloroethene | <0.020 | | 0.40 | 0.020 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **1,2,4-Trichlorobenzene** | **0.085** | **J B** | 4.0 | 0.068 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **1,2,4-Trimethylbenzene** | **0.78** | | 0.40 | 0.032 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,2-Dibromoethane (EDB) | <0.036 | | 0.40 | 0.036 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | <0.10 | | 0.40 | 0.10 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,2-Dichlorobenzene | <0.036 | | 0.40 | 0.036 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,2-Dichloroethane | <0.10 | | 0.40 | 0.10 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,2-Dichloropropane | <0.070 | | 0.40 | 0.070 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **1,3,5-Trimethylbenzene** | **0.21** | **J** | 0.40 | 0.038 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,3-Dichlorobenzene | <0.040 | | 0.40 | 0.040 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,4-Dichlorobenzene | <0.038 | | 0.40 | 0.038 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 1,4-Dioxane | <0.32 | | 10 | 0.32 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **2-Butanone (MEK)** | **1.1** | **J** | 2.0 | 0.18 | ppb v/v | | | 06/23/19 07:12 | 2 |
| 4-Methyl-2-pentanone (MIBK) | <0.36 | | 1.0 | 0.36 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Acetone** | **33** | | 10 | 1.4 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Benzene** | **0.53** | | 0.40 | 0.058 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Benzyl chloride | <0.036 | | 1.6 | 0.036 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Bromodichloromethane | <0.058 | | 0.40 | 0.058 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Bromoform | <0.050 | | 0.40 | 0.050 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Bromomethane | <0.088 | | 0.40 | 0.088 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Carbon disulfide** | **0.36** | **J** | 1.0 | 0.060 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Carbon tetrachloride** | **0.057** | **J** | 0.40 | 0.022 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Chlorobenzene | <0.036 | | 0.40 | 0.036 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Chloroethane | <0.12 | | 1.6 | 0.12 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Chloroform | <0.076 | | 0.40 | 0.076 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Chloromethane** | **0.47** | **J** | 1.0 | 0.12 | ppb v/v | | | 06/23/19 07:12 | 2 |
| cis-1,2-Dichloroethene | <0.060 | | 0.40 | 0.060 | ppb v/v | | | 06/23/19 07:12 | 2 |
| cis-1,3-Dichloropropene | <0.058 | | 0.40 | 0.058 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Cyclohexane** | **0.16** | **J** | 1.0 | 0.020 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Dibromochloromethane | <0.040 | | 0.40 | 0.040 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Dichlorodifluoromethane** | **15** | | 1.0 | 0.11 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Ethylbenzene** | **0.30** | **J** | 0.40 | 0.040 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Hexachlorobutadiene | <0.072 | | 4.0 | 0.072 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Hexane** | **0.31** | **J** | 1.6 | 0.056 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Isopropyl alcohol** | **1.8** | **J** | 10 | 0.30 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Isopropylbenzene** | **0.056** | **J** | 1.6 | 0.038 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Methyl tert-butyl ether | <0.044 | | 2.0 | 0.044 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Methylene Chloride | <0.24 | | 1.0 | 0.24 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **m-Xylene & p-Xylene** | **0.69** | **J** | 1.6 | 0.050 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Naphthalene** | **0.21** | **J B** | 1.0 | 0.060 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **o-Xylene** | **0.32** | **J** | 0.40 | 0.036 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Styrene** | **0.15** | **J** | 0.40 | 0.032 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Tetrachloroethene** | **27** | | 0.40 | 0.060 | ppb v/v | | | 06/23/19 07:12 | 2 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

**Client Sample ID: VP-1**
**Date Collected: 06/05/19 10:55**
**Date Received: 06/06/19 09:50**
**Sample Container: Summa Canister 6L**

**Lab Sample ID: 200-49066-1**
**Matrix: Air**

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | <0.36 | | 10 | 0.36 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Toluene** | **1.3** | | 0.40 | 0.050 | ppb v/v | | | 06/23/19 07:12 | 2 |
| trans-1,2-Dichloroethene | <0.054 | | 0.40 | 0.054 | ppb v/v | | | 06/23/19 07:12 | 2 |
| trans-1,3-Dichloropropene | <0.052 | | 0.40 | 0.052 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Trichloroethene** | **0.11** | **J** | 0.40 | 0.060 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Trichlorofluoromethane** | **0.23** | **J** | 0.40 | 0.090 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Vinyl acetate | <0.17 | | 10 | 0.17 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Vinyl bromide | <0.040 | | 0.40 | 0.040 | ppb v/v | | | 06/23/19 07:12 | 2 |
| Vinyl chloride | <0.052 | | 0.40 | 0.052 | ppb v/v | | | 06/23/19 07:12 | 2 |
| **Xylenes, Total** | **1.0** | | 0.40 | 0.082 | ppb v/v | | | 06/23/19 07:12 | 2 |

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | <0.33 | | 2.2 | 0.33 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,1,2,2-Tetrachloroethane | <0.47 | | 2.7 | 0.47 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <0.63 | | 3.1 | 0.63 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,1,2-Trichloroethane | <0.40 | | 2.2 | 0.40 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,1-Dichloroethane | <0.23 | | 1.6 | 0.23 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,1-Dichloroethene | <0.079 | | 1.6 | 0.079 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **1,2,4-Trichlorobenzene** | **0.63** | **J B** | 30 | 0.50 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **1,2,4-Trimethylbenzene** | **3.8** | | 2.0 | 0.16 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,2-Dibromoethane (EDB) | <0.28 | | 3.1 | 0.28 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | <0.73 | | 2.8 | 0.73 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,2-Dichlorobenzene | <0.22 | | 2.4 | 0.22 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,2-Dichloroethane | <0.42 | | 1.6 | 0.42 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,2-Dichloropropane | <0.32 | | 1.8 | 0.32 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **1,3,5-Trimethylbenzene** | **1.0** | **J** | 2.0 | 0.19 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,3-Dichlorobenzene | <0.24 | | 2.4 | 0.24 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,4-Dichlorobenzene | <0.23 | | 2.4 | 0.23 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 1,4-Dioxane | <1.2 | | 36 | 1.2 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **2-Butanone (MEK)** | **3.4** | **J** | 5.9 | 0.54 | ug/m3 | | | 06/23/19 07:12 | 2 |
| 4-Methyl-2-pentanone (MIBK) | <1.5 | | 4.1 | 1.5 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Acetone** | **79** | | 24 | 3.3 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Benzene** | **1.7** | | 1.3 | 0.19 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Benzyl chloride | <0.19 | | 8.3 | 0.19 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Bromodichloromethane | <0.39 | | 2.7 | 0.39 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Bromoform | <0.52 | | 4.1 | 0.52 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Bromomethane | <0.34 | | 1.6 | 0.34 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Carbon disulfide** | **1.1** | **J** | 3.1 | 0.19 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Carbon tetrachloride** | **0.36** | **J** | 2.5 | 0.14 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Chlorobenzene | <0.17 | | 1.8 | 0.17 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Chloroethane | <0.32 | | 4.2 | 0.32 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Chloroform | <0.37 | | 2.0 | 0.37 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Chloromethane** | **0.98** | **J** | 2.1 | 0.25 | ug/m3 | | | 06/23/19 07:12 | 2 |
| cis-1,2-Dichloroethene | <0.24 | | 1.6 | 0.24 | ug/m3 | | | 06/23/19 07:12 | 2 |
| cis-1,3-Dichloropropene | <0.26 | | 1.8 | 0.26 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Cyclohexane** | **0.56** | **J** | 3.4 | 0.069 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Dibromochloromethane | <0.34 | | 3.4 | 0.34 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Dichlorodifluoromethane** | **72** | | 4.9 | 0.55 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Ethylbenzene** | **1.3** | **J** | 1.7 | 0.17 | ug/m3 | | | 06/23/19 07:12 | 2 |

## Client Sample ID: VP-1

**Lab Sample ID: 200-49066-1**

**Date Collected: 06/05/19 10:55**
**Matrix: Air**
**Date Received: 06/06/19 09:50**
**Sample Container: Summa Canister 6L**

### Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | <0.77 | | 43 | 0.77 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Hexane** | **1.1** | **J** | 5.6 | 0.20 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Isopropyl alcohol** | **4.5** | **J** | 25 | 0.74 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Isopropylbenzene** | **0.27** | **J** | 7.9 | 0.19 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Methyl tert-butyl ether | <0.16 | | 7.2 | 0.16 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Methylene Chloride | <0.83 | | 3.5 | 0.83 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **m-Xylene & p-Xylene** | **3.0** | **J** | 6.9 | 0.22 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Naphthalene** | **1.1** | **J B** | 5.2 | 0.31 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **o-Xylene** | **1.4** | **J** | 1.7 | 0.16 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Styrene** | **0.65** | **J** | 1.7 | 0.14 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Tetrachloroethene** | **180** | | 2.7 | 0.41 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Tetrahydrofuran | <1.1 | | 29 | 1.1 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Toluene** | **4.9** | | 1.5 | 0.19 | ug/m3 | | | 06/23/19 07:12 | 2 |
| trans-1,2-Dichloroethene | <0.21 | | 1.6 | 0.21 | ug/m3 | | | 06/23/19 07:12 | 2 |
| trans-1,3-Dichloropropene | <0.24 | | 1.8 | 0.24 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Trichloroethene** | **0.62** | **J** | 2.1 | 0.32 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Trichlorofluoromethane** | **1.3** | **J** | 2.2 | 0.51 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Vinyl acetate | <0.58 | | 35 | 0.58 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Vinyl bromide | <0.17 | | 1.7 | 0.17 | ug/m3 | | | 06/23/19 07:12 | 2 |
| Vinyl chloride | <0.13 | | 1.0 | 0.13 | ug/m3 | | | 06/23/19 07:12 | 2 |
| **Xylenes, Total** | **4.4** | | 1.7 | 0.36 | ug/m3 | | | 06/23/19 07:12 | 2 |

## Client Sample ID: VP-2

**Lab Sample ID: 200-49066-2**

**Date Collected: 06/05/19 12:21**
**Matrix: Air**
**Date Received: 06/06/19 09:50**
**Sample Container: Summa Canister 6L**

### Method: TO-15 - Volatile Organic Compounds in Ambient Air

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | <0.15 | | 1.0 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,1,2,2-Tetrachloroethane | <0.17 | | 1.0 | 0.17 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <0.21 | | 1.0 | 0.21 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,1,2-Trichloroethane | <0.19 | | 1.0 | 0.19 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,1-Dichloroethane | <0.14 | | 1.0 | 0.14 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,1-Dichloroethene | <0.050 | | 1.0 | 0.050 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,2,4-Trichlorobenzene | <0.17 | | 10 | 0.17 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **1,2,4-Trimethylbenzene** | **0.73** | **J** | 1.0 | 0.080 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,2-Dibromoethane (EDB) | <0.090 | | 1.0 | 0.090 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | <0.26 | | 1.0 | 0.26 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,2-Dichlorobenzene | <0.090 | | 1.0 | 0.090 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,2-Dichloroethane | <0.26 | | 1.0 | 0.26 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,2-Dichloropropane | <0.18 | | 1.0 | 0.18 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,3,5-Trimethylbenzene | <0.095 | | 1.0 | 0.095 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,3-Dichlorobenzene | <0.10 | | 1.0 | 0.10 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,4-Dichlorobenzene | <0.095 | | 1.0 | 0.095 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 1,4-Dioxane | <0.80 | | 25 | 0.80 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **2-Butanone (MEK)** | **1.1** | **J** | 5.0 | 0.46 | ppb v/v | | | 06/23/19 08:03 | 5 |
| 4-Methyl-2-pentanone (MIBK) | <0.90 | | 2.5 | 0.90 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Acetone** | **22** | **J** | 25 | 3.5 | ppb v/v | | | 06/23/19 08:03 | 5 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

**Client Sample ID: VP-2**
**Date Collected: 06/05/19 12:21**
**Date Received: 06/06/19 09:50**
**Sample Container: Summa Canister 6L**

**Lab Sample ID: 200-49066-2**
**Matrix: Air**

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Benzene** | **0.19** | **J** | 1.0 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Benzyl chloride | <0.090 | | 4.0 | 0.090 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Bromodichloromethane | <0.15 | | 1.0 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Bromoform | <0.13 | | 1.0 | 0.13 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Bromomethane | <0.22 | | 1.0 | 0.22 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Carbon disulfide** | **0.51** | **J** | 2.5 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Carbon tetrachloride | <0.055 | | 1.0 | 0.055 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Chlorobenzene | <0.090 | | 1.0 | 0.090 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Chloroethane | <0.31 | | 4.0 | 0.31 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Chloroform | <0.19 | | 1.0 | 0.19 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Chloromethane | <0.30 | | 2.5 | 0.30 | ppb v/v | | | 06/23/19 08:03 | 5 |
| cis-1,2-Dichloroethene | <0.15 | | 1.0 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| cis-1,3-Dichloropropene | <0.15 | | 1.0 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Cyclohexane | <0.050 | | 2.5 | 0.050 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Dibromochloromethane | <0.10 | | 1.0 | 0.10 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Dichlorodifluoromethane** | **45** | | 2.5 | 0.28 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Ethylbenzene** | **0.21** | **J** | 1.0 | 0.10 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Hexachlorobutadiene | <0.18 | | 10 | 0.18 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Hexane | <0.14 | | 4.0 | 0.14 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Isopropyl alcohol** | **2.0** | **J** | 25 | 0.75 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Isopropylbenzene | <0.095 | | 4.0 | 0.095 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Methyl tert-butyl ether | <0.11 | | 5.0 | 0.11 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Methylene Chloride | <0.60 | | 2.5 | 0.60 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **m-Xylene & p-Xylene** | **0.50** | **J** | 4.0 | 0.13 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Naphthalene** | **0.28** | **J B** | 2.5 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **o-Xylene** | **0.29** | **J** | 1.0 | 0.090 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Styrene** | **0.24** | **J** | 1.0 | 0.080 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Tetrachloroethene** | **100** | | 1.0 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Tetrahydrofuran | <0.90 | | 25 | 0.90 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Toluene** | **0.64** | **J** | 1.0 | 0.13 | ppb v/v | | | 06/23/19 08:03 | 5 |
| trans-1,2-Dichloroethene | <0.14 | | 1.0 | 0.14 | ppb v/v | | | 06/23/19 08:03 | 5 |
| trans-1,3-Dichloropropene | <0.13 | | 1.0 | 0.13 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Trichloroethene | <0.15 | | 1.0 | 0.15 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Trichlorofluoromethane | <0.23 | | 1.0 | 0.23 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Vinyl acetate | <0.42 | | 25 | 0.42 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Vinyl bromide | <0.10 | | 1.0 | 0.10 | ppb v/v | | | 06/23/19 08:03 | 5 |
| Vinyl chloride | <0.13 | | 1.0 | 0.13 | ppb v/v | | | 06/23/19 08:03 | 5 |
| **Xylenes, Total** | **0.79** | **J** | 1.0 | 0.21 | ppb v/v | | | 06/23/19 08:03 | 5 |

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | <0.82 | | 5.5 | 0.82 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,1,2,2-Tetrachloroethane | <1.2 | | 6.9 | 1.2 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <1.6 | | 7.7 | 1.6 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,1,2-Trichloroethane | <1.0 | | 5.5 | 1.0 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,1-Dichloroethane | <0.57 | | 4.0 | 0.57 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,1-Dichloroethene | <0.20 | | 4.0 | 0.20 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,2,4-Trichlorobenzene | <1.3 | | 74 | 1.3 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **1,2,4-Trimethylbenzene** | **3.6** | **J** | 4.9 | 0.39 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,2-Dibromoethane (EDB) | <0.69 | | 7.7 | 0.69 | ug/m3 | | | 06/23/19 08:03 | 5 |

## Client Sample ID: VP-2

**Date Collected: 06/05/19 12:21**
**Date Received: 06/06/19 09:50**
**Sample Container: Summa Canister 6L**

## Lab Sample ID: 200-49066-2

**Matrix: Air**

### Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | <1.8 | | 7.0 | 1.8 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,2-Dichlorobenzene | <0.54 | | 6.0 | 0.54 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,2-Dichloroethane | <1.1 | | 4.0 | 1.1 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,2-Dichloropropane | <0.81 | | 4.6 | 0.81 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,3,5-Trimethylbenzene | <0.47 | | 4.9 | 0.47 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,3-Dichlorobenzene | <0.60 | | 6.0 | 0.60 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,4-Dichlorobenzene | <0.57 | | 6.0 | 0.57 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 1,4-Dioxane | <2.9 | | 90 | 2.9 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **2-Butanone (MEK)** | **3.3** | **J** | 15 | 1.4 | ug/m3 | | | 06/23/19 08:03 | 5 |
| 4-Methyl-2-pentanone (MIBK) | <3.7 | | 10 | 3.7 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Acetone** | **51** | **J** | 59 | 8.2 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Benzene** | **0.60** | **J** | 3.2 | 0.46 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Benzyl chloride | <0.47 | | 21 | 0.47 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Bromodichloromethane | <0.97 | | 6.7 | 0.97 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Bromoform | <1.3 | | 10 | 1.3 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Bromomethane | <0.85 | | 3.9 | 0.85 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Carbon disulfide** | **1.6** | **J** | 7.8 | 0.47 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Carbon tetrachloride | <0.35 | | 6.3 | 0.35 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Chlorobenzene | <0.41 | | 4.6 | 0.41 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Chloroethane | <0.80 | | 11 | 0.80 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Chloroform | <0.93 | | 4.9 | 0.93 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Chloromethane | <0.62 | | 5.2 | 0.62 | ug/m3 | | | 06/23/19 08:03 | 5 |
| cis-1,2-Dichloroethene | <0.59 | | 4.0 | 0.59 | ug/m3 | | | 06/23/19 08:03 | 5 |
| cis-1,3-Dichloropropene | <0.66 | | 4.5 | 0.66 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Cyclohexane | <0.17 | | 8.6 | 0.17 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Dibromochloromethane | <0.85 | | 8.5 | 0.85 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Dichlorodifluoromethane** | **220** | | 12 | 1.4 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Ethylbenzene** | **0.90** | **J** | 4.3 | 0.43 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Hexachlorobutadiene | <1.9 | | 110 | 1.9 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Hexane | <0.49 | | 14 | 0.49 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Isopropyl alcohol** | **4.9** | **J** | 61 | 1.8 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Isopropylbenzene | <0.47 | | 20 | 0.47 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Methyl tert-butyl ether | <0.40 | | 18 | 0.40 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Methylene Chloride | <2.1 | | 8.7 | 2.1 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **m-Xylene & p-Xylene** | **2.2** | **J** | 17 | 0.54 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Naphthalene** | **1.5** | **J B** | 13 | 0.79 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **o-Xylene** | **1.3** | **J** | 4.3 | 0.39 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Styrene** | **1.0** | **J** | 4.3 | 0.34 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Tetrachloroethene** | **710** | | 6.8 | 1.0 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Tetrahydrofuran | <2.7 | | 74 | 2.7 | ug/m3 | | | 06/23/19 08:03 | 5 |
| **Toluene** | **2.4** | **J** | 3.8 | 0.47 | ug/m3 | | | 06/23/19 08:03 | 5 |
| trans-1,2-Dichloroethene | <0.54 | | 4.0 | 0.54 | ug/m3 | | | 06/23/19 08:03 | 5 |
| trans-1,3-Dichloropropene | <0.59 | | 4.5 | 0.59 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Trichloroethene | <0.81 | | 5.4 | 0.81 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Trichlorofluoromethane | <1.3 | | 5.6 | 1.3 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Vinyl acetate | <1.5 | | 88 | 1.5 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Vinyl bromide | <0.44 | | 4.4 | 0.44 | ug/m3 | | | 06/23/19 08:03 | 5 |
| Vinyl chloride | <0.33 | | 2.6 | 0.33 | ug/m3 | | | 06/23/19 08:03 | 5 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

**Client Sample ID: VP-2**
**Date Collected: 06/05/19 12:21**
**Date Received: 06/06/19 09:50**
**Sample Container: Summa Canister 6L**

**Lab Sample ID: 200-49066-2**
**Matrix: Air**

**Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Xylenes, Total | 3.4 | J | 4.3 | 0.89 | ug/m3 | | | 06/23/19 08:03 | 5 |

## Method: TO-15 - Volatile Organic Compounds in Ambient Air

**Lab Sample ID: MB 200-144383/5**
**Matrix: Air**
**Analysis Batch: 144383**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | <0.030 | | 0.20 | 0.030 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.034 | | 0.20 | 0.034 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <0.041 | | 0.20 | 0.041 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,1,2-Trichloroethane | <0.037 | | 0.20 | 0.037 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,1-Dichloroethane | <0.028 | | 0.20 | 0.028 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,1-Dichloroethene | <0.010 | | 0.20 | 0.010 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,2,4-Trichlorobenzene | 0.121 | J | 2.0 | 0.034 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,2,4-Trimethylbenzene | <0.016 | | 0.20 | 0.016 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,2-Dibromoethane (EDB) | 0.0304 | J | 0.20 | 0.018 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | <0.052 | | 0.20 | 0.052 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,2-Dichlorobenzene | 0.0478 | J | 0.20 | 0.018 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,2-Dichloroethane | <0.052 | | 0.20 | 0.052 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,2-Dichloropropane | <0.035 | | 0.20 | 0.035 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,3,5-Trimethylbenzene | <0.019 | | 0.20 | 0.019 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,3-Dichlorobenzene | 0.0626 | J | 0.20 | 0.020 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,4-Dichlorobenzene | 0.0785 | J | 0.20 | 0.019 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 1,4-Dioxane | <0.16 | | 5.0 | 0.16 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 2-Butanone (MEK) | <0.092 | | 1.0 | 0.092 | ppb v/v | | | 06/22/19 16:41 | 1 |
| 4-Methyl-2-pentanone (MIBK) | <0.18 | | 0.50 | 0.18 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Acetone | <0.69 | | 5.0 | 0.69 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Benzene | <0.029 | | 0.20 | 0.029 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Benzyl chloride | 0.0598 | J | 0.80 | 0.018 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Bromodichloromethane | <0.029 | | 0.20 | 0.029 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Bromoform | 0.0287 | J | 0.20 | 0.025 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Bromomethane | <0.044 | | 0.20 | 0.044 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Carbon disulfide | <0.030 | | 0.50 | 0.030 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Carbon tetrachloride | <0.011 | | 0.20 | 0.011 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Chlorobenzene | 0.0309 | J | 0.20 | 0.018 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Chloroethane | <0.061 | | 0.80 | 0.061 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Chloroform | <0.038 | | 0.20 | 0.038 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Chloromethane | <0.060 | | 0.50 | 0.060 | ppb v/v | | | 06/22/19 16:41 | 1 |
| cis-1,2-Dichloroethene | <0.030 | | 0.20 | 0.030 | ppb v/v | | | 06/22/19 16:41 | 1 |
| cis-1,3-Dichloropropene | <0.029 | | 0.20 | 0.029 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Cyclohexane | <0.010 | | 0.50 | 0.010 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Dibromochloromethane | <0.020 | | 0.20 | 0.020 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Dichlorodifluoromethane | <0.056 | | 0.50 | 0.056 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Ethylbenzene | <0.020 | | 0.20 | 0.020 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Hexachlorobutadiene | <0.036 | | 2.0 | 0.036 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Hexane | <0.028 | | 0.80 | 0.028 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Isopropyl alcohol | <0.15 | | 5.0 | 0.15 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Isopropylbenzene | <0.019 | | 0.80 | 0.019 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Methyl tert-butyl ether | <0.022 | | 1.0 | 0.022 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Methylene Chloride | <0.12 | | 0.50 | 0.12 | ppb v/v | | | 06/22/19 16:41 | 1 |
| m-Xylene & p-Xylene | <0.025 | | 0.80 | 0.025 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Naphthalene | 0.0562 | J | 0.50 | 0.030 | ppb v/v | | | 06/22/19 16:41 | 1 |
| o-Xylene | <0.018 | | 0.20 | 0.018 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Styrene | <0.016 | | 0.20 | 0.016 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Tetrachloroethene | <0.030 | | 0.20 | 0.030 | ppb v/v | | | 06/22/19 16:41 | 1 |

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 200-144383/5**
**Matrix: Air**
**Analysis Batch: 144383**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | <0.18 | | 5.0 | 0.18 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Toluene | <0.025 | | 0.20 | 0.025 | ppb v/v | | | 06/22/19 16:41 | 1 |
| trans-1,2-Dichloroethene | <0.027 | | 0.20 | 0.027 | ppb v/v | | | 06/22/19 16:41 | 1 |
| trans-1,3-Dichloropropene | <0.026 | | 0.20 | 0.026 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Trichloroethene | <0.030 | | 0.20 | 0.030 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Trichlorofluoromethane | <0.045 | | 0.20 | 0.045 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Vinyl acetate | <0.083 | | 5.0 | 0.083 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Vinyl bromide | <0.020 | | 0.20 | 0.020 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Vinyl chloride | <0.026 | | 0.20 | 0.026 | ppb v/v | | | 06/22/19 16:41 | 1 |
| Xylenes, Total | <0.041 | | 0.20 | 0.041 | ppb v/v | | | 06/22/19 16:41 | 1 |

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | <0.16 | | 1.1 | 0.16 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,1,2,2-Tetrachloroethane | <0.23 | | 1.4 | 0.23 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | <0.31 | | 1.5 | 0.31 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,1,2-Trichloroethane | <0.20 | | 1.1 | 0.20 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,1-Dichloroethane | <0.11 | | 0.81 | 0.11 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,1-Dichloroethene | <0.040 | | 0.79 | 0.040 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,2,4-Trichlorobenzene | 0.897 | J | 15 | 0.25 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,2,4-Trimethylbenzene | <0.079 | | 0.98 | 0.079 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,2-Dibromoethane (EDB) | 0.233 | J | 1.5 | 0.14 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | <0.36 | | 1.4 | 0.36 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,2-Dichlorobenzene | 0.288 | J | 1.2 | 0.11 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,2-Dichloroethane | <0.21 | | 0.81 | 0.21 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,2-Dichloropropane | <0.16 | | 0.92 | 0.16 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,3,5-Trimethylbenzene | <0.093 | | 0.98 | 0.093 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,3-Dichlorobenzene | 0.377 | J | 1.2 | 0.12 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,4-Dichlorobenzene | 0.472 | J | 1.2 | 0.11 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 1,4-Dioxane | <0.58 | | 18 | 0.58 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 2-Butanone (MEK) | <0.27 | | 2.9 | 0.27 | ug/m3 | | | 06/22/19 16:41 | 1 |
| 4-Methyl-2-pentanone (MIBK) | <0.74 | | 2.0 | 0.74 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Acetone | <1.6 | | 12 | 1.6 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Benzene | <0.093 | | 0.64 | 0.093 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Benzyl chloride | 0.310 | J | 4.1 | 0.093 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Bromodichloromethane | <0.19 | | 1.3 | 0.19 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Bromoform | 0.297 | J | 2.1 | 0.26 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Bromomethane | <0.17 | | 0.78 | 0.17 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Carbon disulfide | <0.093 | | 1.6 | 0.093 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Carbon tetrachloride | <0.069 | | 1.3 | 0.069 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Chlorobenzene | 0.142 | J | 0.92 | 0.083 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Chloroethane | <0.16 | | 2.1 | 0.16 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Chloroform | <0.19 | | 0.98 | 0.19 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Chloromethane | <0.12 | | 1.0 | 0.12 | ug/m3 | | | 06/22/19 16:41 | 1 |
| cis-1,2-Dichloroethene | <0.12 | | 0.79 | 0.12 | ug/m3 | | | 06/22/19 16:41 | 1 |
| cis-1,3-Dichloropropene | <0.13 | | 0.91 | 0.13 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Cyclohexane | <0.034 | | 1.7 | 0.034 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Dibromochloromethane | <0.17 | | 1.7 | 0.17 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Dichlorodifluoromethane | <0.28 | | 2.5 | 0.28 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Ethylbenzene | <0.087 | | 0.87 | 0.087 | ug/m3 | | | 06/22/19 16:41 | 1 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: MB 200-144383/5**
**Matrix: Air**
**Analysis Batch: 144383**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | <0.38 | | 21 | 0.38 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Hexane | <0.099 | | 2.8 | 0.099 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Isopropyl alcohol | <0.37 | | 12 | 0.37 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Isopropylbenzene | <0.093 | | 3.9 | 0.093 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Methyl tert-butyl ether | <0.079 | | 3.6 | 0.079 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Methylene Chloride | <0.42 | | 1.7 | 0.42 | ug/m3 | | | 06/22/19 16:41 | 1 |
| m-Xylene & p-Xylene | <0.11 | | 3.5 | 0.11 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Naphthalene | 0.294 | J | 2.6 | 0.16 | ug/m3 | | | 06/22/19 16:41 | 1 |
| o-Xylene | <0.078 | | 0.87 | 0.078 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Styrene | <0.068 | | 0.85 | 0.068 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Tetrachloroethene | <0.20 | | 1.4 | 0.20 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Tetrahydrofuran | <0.53 | | 15 | 0.53 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Toluene | <0.094 | | 0.75 | 0.094 | ug/m3 | | | 06/22/19 16:41 | 1 |
| trans-1,2-Dichloroethene | <0.11 | | 0.79 | 0.11 | ug/m3 | | | 06/22/19 16:41 | 1 |
| trans-1,3-Dichloropropene | <0.12 | | 0.91 | 0.12 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Trichloroethene | <0.16 | | 1.1 | 0.16 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Trichlorofluoromethane | <0.25 | | 1.1 | 0.25 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Vinyl acetate | <0.29 | | 18 | 0.29 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Vinyl bromide | <0.087 | | 0.87 | 0.087 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Vinyl chloride | <0.066 | | 0.51 | 0.066 | ug/m3 | | | 06/22/19 16:41 | 1 |
| Xylenes, Total | <0.18 | | 0.87 | 0.18 | ug/m3 | | | 06/22/19 16:41 | 1 |

**Lab Sample ID: LCS 200-144383/3**
**Matrix: Air**
**Analysis Batch: 144383**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 10.0 | 10.6 | | ppb v/v | | 106 | 72 - 127 |
| 1,1,2,2-Tetrachloroethane | 10.0 | 10.4 | | ppb v/v | | 104 | 74 - 126 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 10.0 | 10.2 | | ppb v/v | | 102 | 70 - 121 |
| 1,1,2-Trichloroethane | 10.0 | 10.6 | | ppb v/v | | 106 | 75 - 126 |
| 1,1-Dichloroethane | 10.0 | 9.74 | | ppb v/v | | 97 | 66 - 130 |
| 1,1-Dichloroethene | 10.0 | 11.3 | | ppb v/v | | 113 | 68 - 120 |
| 1,2,4-Trichlorobenzene | 10.0 | 11.6 | | ppb v/v | | 116 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 10.0 | 11.4 | | ppb v/v | | 114 | 71 - 129 |
| 1,2-Dibromoethane (EDB) | 10.0 | 11.1 | | ppb v/v | | 111 | 78 - 122 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | 10.0 | 10.2 | | ppb v/v | | 102 | 71 - 141 |
| 1,2-Dichlorobenzene | 10.0 | 10.8 | | ppb v/v | | 108 | 68 - 129 |
| 1,2-Dichloroethane | 10.0 | 10.1 | | ppb v/v | | 101 | 68 - 135 |
| 1,2-Dichloropropane | 10.0 | 10.4 | | ppb v/v | | 104 | 69 - 128 |
| 1,3,5-Trimethylbenzene | 10.0 | 11.1 | | ppb v/v | | 112 | 72 - 126 |
| 1,3-Dichlorobenzene | 10.0 | 10.7 | | ppb v/v | | 107 | 69 - 131 |
| 1,4-Dichlorobenzene | 10.0 | 10.9 | | ppb v/v | | 109 | 67 - 132 |
| 1,4-Dioxane | 10.0 | 10.0 | | ppb v/v | | 100 | 66 - 129 |
| 2-Butanone (MEK) | 10.0 | 10.1 | | ppb v/v | | 101 | 72 - 124 |
| 4-Methyl-2-pentanone (MIBK) | 10.0 | 10.8 | | ppb v/v | | 108 | 58 - 144 |
| Acetone | 10.0 | 9.94 | | ppb v/v | | 99 | 54 - 154 |

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 200-144383/3**
**Matrix: Air**
**Analysis Batch: 144383**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Benzene | 10.0 | 10.7 | | ppb v/v | | 107 | 73 - 119 |
| Benzyl chloride | 10.0 | 12.3 | | ppb v/v | | 123 | 60 - 136 |
| Bromodichloromethane | 10.0 | 10.5 | | ppb v/v | | 105 | 75 - 127 |
| Bromoform | 10.0 | 11.8 | | ppb v/v | | 118 | 53 - 149 |
| Bromomethane | 10.0 | 11.7 | | ppb v/v | | 117 | 72 - 124 |
| Carbon disulfide | 10.0 | 10.5 | | ppb v/v | | 105 | 71 - 138 |
| Carbon tetrachloride | 10.0 | 10.4 | | ppb v/v | | 104 | 71 - 133 |
| Chlorobenzene | 10.0 | 10.5 | | ppb v/v | | 105 | 76 - 119 |
| Chloroethane | 10.0 | 9.94 | | ppb v/v | | 99 | 68 - 130 |
| Chloroform | 10.0 | 9.82 | | ppb v/v | | 98 | 73 - 124 |
| Chloromethane | 10.0 | 9.91 | | ppb v/v | | 99 | 56 - 141 |
| cis-1,2-Dichloroethene | 10.0 | 10.5 | | ppb v/v | | 105 | 72 - 121 |
| cis-1,3-Dichloropropene | 10.0 | 11.3 | | ppb v/v | | 113 | 74 - 125 |
| Cyclohexane | 10.0 | 11.6 | | ppb v/v | | 116 | 76 - 124 |
| Dibromochloromethane | 10.0 | 11.3 | | ppb v/v | | 113 | 73 - 125 |
| Dichlorodifluoromethane | 10.0 | 10.3 | | ppb v/v | | 103 | 61 - 142 |
| Ethylbenzene | 10.0 | 11.2 | | ppb v/v | | 112 | 74 - 122 |
| Hexachlorobutadiene | 10.0 | 11.0 | | ppb v/v | | 110 | 58 - 130 |
| Hexane | 10.0 | 11.1 | | ppb v/v | | 111 | 63 - 138 |
| Isopropyl alcohol | 10.0 | 9.22 | | ppb v/v | | 92 | 53 - 142 |
| Isopropylbenzene | 10.0 | 11.8 | | ppb v/v | | 118 | 73 - 123 |
| Methyl tert-butyl ether | 10.0 | 11.1 | | ppb v/v | | 111 | 70 - 127 |
| Methylene Chloride | 10.0 | 9.86 | | ppb v/v | | 99 | 59 - 137 |
| m-Xylene & p-Xylene | 20.0 | 23.0 | | ppb v/v | | 115 | 76 - 121 |
| Naphthalene | 10.0 | 12.4 | | ppb v/v | | 124 | 50 - 150 |
| o-Xylene | 10.0 | 12.0 | | ppb v/v | | 120 | 73 - 123 |
| Styrene | 10.0 | 12.0 | | ppb v/v | | 120 | 74 - 125 |
| Tetrachloroethene | 10.0 | 11.3 | | ppb v/v | | 113 | 70 - 125 |
| Tetrahydrofuran | 10.0 | 10.2 | | ppb v/v | | 102 | 60 - 149 |
| Toluene | 10.0 | 11.7 | | ppb v/v | | 117 | 75 - 122 |
| trans-1,2-Dichloroethene | 10.0 | 10.3 | | ppb v/v | | 103 | 69 - 137 |
| trans-1,3-Dichloropropene | 10.0 | 11.3 | | ppb v/v | | 113 | 74 - 128 |
| Trichloroethene | 10.0 | 10.6 | | ppb v/v | | 106 | 73 - 122 |
| Trichlorofluoromethane | 10.0 | 10.1 | | ppb v/v | | 101 | 70 - 129 |
| Vinyl acetate | 10.0 | 10.5 | | ppb v/v | | 105 | 59 - 149 |
| Vinyl bromide | 10.0 | 10.7 | | ppb v/v | | 107 | 75 - 125 |
| Vinyl chloride | 10.0 | 8.52 | | ppb v/v | | 85 | 61 - 135 |
| Xylenes, Total | 30.0 | 35.0 | | ppb v/v | | 117 | 75 - 122 |

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | 55 | 57.6 | | ug/m3 | | 106 | 72 - 127 |
| 1,1,2,2-Tetrachloroethane | 69 | 71.7 | | ug/m3 | | 104 | 74 - 126 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 77 | 78.5 | | ug/m3 | | 102 | 70 - 121 |
| 1,1,2-Trichloroethane | 55 | 58.0 | | ug/m3 | | 106 | 75 - 126 |
| 1,1-Dichloroethane | 40 | 39.4 | | ug/m3 | | 97 | 66 - 130 |
| 1,1-Dichloroethene | 40 | 44.7 | | ug/m3 | | 113 | 68 - 120 |
| 1,2,4-Trichlorobenzene | 74 | 85.8 | | ug/m3 | | 116 | 50 - 150 |
| 1,2,4-Trimethylbenzene | 49 | 55.9 | | ug/m3 | | 114 | 71 - 129 |

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 200-144383/3**
**Matrix: Air**
**Analysis Batch: 144383**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 77 | 84.9 | | ug/m3 | | 111 | 78 - 122 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | 70 | 71.6 | | ug/m3 | | 102 | 71 - 141 |
| 1,2-Dichlorobenzene | 60 | 64.9 | | ug/m3 | | 108 | 68 - 129 |
| 1,2-Dichloroethane | 40 | 40.7 | | ug/m3 | | 101 | 68 - 135 |
| 1,2-Dichloropropane | 46 | 48.3 | | ug/m3 | | 104 | 69 - 128 |
| 1,3,5-Trimethylbenzene | 49 | 54.8 | | ug/m3 | | 112 | 72 - 126 |
| 1,3-Dichlorobenzene | 60 | 64.1 | | ug/m3 | | 107 | 69 - 131 |
| 1,4-Dichlorobenzene | 60 | 65.4 | | ug/m3 | | 109 | 67 - 132 |
| 1,4-Dioxane | 36 | 36.1 | | ug/m3 | | 100 | 66 - 129 |
| 2-Butanone (MEK) | 29 | 29.9 | | ug/m3 | | 101 | 72 - 124 |
| 4-Methyl-2-pentanone (MIBK) | 41 | 44.1 | | ug/m3 | | 108 | 58 - 144 |
| Acetone | 24 | 23.6 | | ug/m3 | | 99 | 54 - 154 |
| Benzene | 32 | 34.1 | | ug/m3 | | 107 | 73 - 119 |
| Benzyl chloride | 52 | 63.6 | | ug/m3 | | 123 | 60 - 136 |
| Bromodichloromethane | 67 | 70.4 | | ug/m3 | | 105 | 75 - 127 |
| Bromoform | 100 | 122 | | ug/m3 | | 118 | 53 - 149 |
| Bromomethane | 39 | 45.6 | | ug/m3 | | 117 | 72 - 124 |
| Carbon disulfide | 31 | 32.6 | | ug/m3 | | 105 | 71 - 138 |
| Carbon tetrachloride | 63 | 65.4 | | ug/m3 | | 104 | 71 - 133 |
| Chlorobenzene | 46 | 48.2 | | ug/m3 | | 105 | 76 - 119 |
| Chloroethane | 26 | 26.2 | | ug/m3 | | 99 | 68 - 130 |
| Chloroform | 49 | 48.0 | | ug/m3 | | 98 | 73 - 124 |
| Chloromethane | 21 | 20.5 | | ug/m3 | | 99 | 56 - 141 |
| cis-1,2-Dichloroethene | 40 | 41.6 | | ug/m3 | | 105 | 72 - 121 |
| cis-1,3-Dichloropropene | 45 | 51.4 | | ug/m3 | | 113 | 74 - 125 |
| Cyclohexane | 34 | 39.8 | | ug/m3 | | 116 | 76 - 124 |
| Dibromochloromethane | 85 | 96.2 | | ug/m3 | | 113 | 73 - 125 |
| Dichlorodifluoromethane | 49 | 50.8 | | ug/m3 | | 103 | 61 - 142 |
| Ethylbenzene | 43 | 48.7 | | ug/m3 | | 112 | 74 - 122 |
| Hexachlorobutadiene | 110 | 118 | | ug/m3 | | 110 | 58 - 130 |
| Hexane | 35 | 39.1 | | ug/m3 | | 111 | 63 - 138 |
| Isopropyl alcohol | 25 | 22.7 | | ug/m3 | | 92 | 53 - 142 |
| Isopropylbenzene | 49 | 58.0 | | ug/m3 | | 118 | 73 - 123 |
| Methyl tert-butyl ether | 36 | 40.1 | | ug/m3 | | 111 | 70 - 127 |
| Methylene Chloride | 35 | 34.3 | | ug/m3 | | 99 | 59 - 137 |
| m-Xylene & p-Xylene | 87 | 100 | | ug/m3 | | 115 | 76 - 121 |
| Naphthalene | 52 | 65.1 | | ug/m3 | | 124 | 50 - 150 |
| o-Xylene | 43 | 51.9 | | ug/m3 | | 120 | 73 - 123 |
| Styrene | 43 | 51.0 | | ug/m3 | | 120 | 74 - 125 |
| Tetrachloroethene | 68 | 76.3 | | ug/m3 | | 113 | 70 - 125 |
| Tetrahydrofuran | 29 | 30.0 | | ug/m3 | | 102 | 60 - 149 |
| Toluene | 38 | 44.1 | | ug/m3 | | 117 | 75 - 122 |
| trans-1,2-Dichloroethene | 40 | 40.7 | | ug/m3 | | 103 | 69 - 137 |
| trans-1,3-Dichloropropene | 45 | 51.1 | | ug/m3 | | 113 | 74 - 128 |
| Trichloroethene | 54 | 57.1 | | ug/m3 | | 106 | 73 - 122 |
| Trichlorofluoromethane | 56 | 56.5 | | ug/m3 | | 101 | 70 - 129 |
| Vinyl acetate | 35 | 36.9 | | ug/m3 | | 105 | 59 - 149 |
| Vinyl bromide | 44 | 46.9 | | ug/m3 | | 107 | 75 - 125 |

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

## Method: TO-15 - Volatile Organic Compounds in Ambient Air (Continued)

**Lab Sample ID: LCS 200-144383/3**
**Matrix: Air**
**Analysis Batch: 144383**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---|---|---|---|---|---|---|---|
| Vinyl chloride | 26 | 21.8 | | ug/m3 | | 85 | 61 - 135 |
| Xylenes, Total | 130 | 152 | | ug/m3 | | 117 | 75 - 122 |

# QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

## Air - GC/MS VOA

### Analysis Batch: 144383

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 200-49066-1 | VP-1 | Total/NA | Air | TO-15 | |
| 200-49066-2 | VP-2 | Total/NA | Air | TO-15 | |
| MB 200-144383/5 | Method Blank | Total/NA | Air | TO-15 | |
| LCS 200-144383/3 | Lab Control Sample | Total/NA | Air | TO-15 | |

# Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

## Client Sample ID: VP-1

**Lab Sample ID: 200-49066-1**

**Date Collected: 06/05/19 10:55**

**Matrix: Air**

**Date Received: 06/06/19 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | TO-15 | | 2 | 144383 | 06/23/19 07:12 | K1P | TAL BUR |

## Client Sample ID: VP-2

**Lab Sample ID: 200-49066-2**

**Date Collected: 06/05/19 12:21**

**Matrix: Air**

**Date Received: 06/06/19 09:50**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Analysis | TO-15 | | 5 | 144383 | 06/23/19 08:03 | K1P | TAL BUR |

**Laboratory References:**

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

# Accreditation/Certification Summary

Client: Stantec Consulting Corp.
Job ID: 200-49066-1
Project/Site: BMO Properties - 193706891

## Laboratory: Eurofins TestAmerica, Burlington

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| ANAB | DoD | | L2336 | 02-25-20 |
| Connecticut | State Program | 1 | PH-0751 | 09-30-19 |
| DE Haz. Subst. Cleanup Act (HSCA) | State Program | 3 | NA | 02-01-20 |
| Florida | NELAP | 4 | E87467 | 06-30-19 * |
| Minnesota | NELAP | 5 | 050-999-436 | 12-31-19 |
| New Hampshire | NELAP | 1 | 2006 | 12-18-19 |
| New Jersey | NELAP | 2 | VT972 | 06-30-19 * |
| New York | NELAP | 2 | 10391 | 04-01-20 |
| Pennsylvania | NELAP | 3 | 68-00489 | 04-30-20 |
| Rhode Island | State Program | 1 | LAO00298 | 12-30-19 |
| US Fish & Wildlife | Federal | | LE-058448-0 | 07-31-19 |
| USDA | Federal | | P330-11-00093 | 07-24-20 |
| Vermont | State Program | 1 | VT-4000 | 12-31-19 |
| Virginia | NELAP | 3 | 460209 | 12-14-19 |

## Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

| Authority | Program | EPA Region | Identification Number | Expiration Date |
|---|---|---|---|---|
| Wisconsin | State Program | 5 | 999580010 | 08-31-19 * |

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| TO-15 | Volatile Organic Compounds in Ambient Air | EPA | TAL BUR |

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

# Sample Summary

Client: Stantec Consulting Corp.
Project/Site: BMO Properties - 193706891

Job ID: 200-49066-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---|---|---|---|---|---|
| 200-49066-1 | VP-1 | Air | 06/05/19 10:55 | 06/06/19 09:50 | Air Canister (6-Liter) #5902 |
| 200-49066-2 | VP-2 | Air | 06/05/19 12:21 | 06/06/19 09:50 | Air Canister (6-Liter) #4295 |

**Eurofins TestAmerica, Burlington**
30 Community Drive
Suite 11
South Burlington, VT 05403-6809
phone 802.660.1990 fax 802.660.1919

# Canister Samples Chain of Custody Record

TestAmerica Laboratories, Inc. assumes no liability with respect to the collection and shipment of these samples.

eurofins | Environment Testing TestAmerica

**TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica**

| **Client Contact Information** | **Client Project Manager:** Evan Weber | **Samples Collected By:** Evan Weber | COC No: |
|---|---|---|---|
| Company Name: Stantec | Phone: 920-309-2509 | | 1 of 1 COCs |
| Address: 1165 Scheuring Rd | Email: evan.weber@stantec.com | | |
| City/State/Zip DePere WI 54115 | | | **For Lab Use Only:** |
| Phone: 920-309-2509 | **Site Contact:** | | Walk-in Client: |
| FAX: | **Tel/Fax** | | Lab Sampling: |
| Project Name: BMO Properties | **Analysis Turnaround Time** | | Job / SDG No.: |
| Site/Location: Green Bay, WI | Standard (Specific): 6/17/19 | | (See below for Add'l Items) |
| P O # | Rush (Specifiy): | | |

| Sample Identification | Sample Start Date | Time Start | Sample End Date | Time Stop | Canister Vacuum in Field, "Hg (Start) | Canister Vacuum in Field, "Hg (Stop) | Flow Controller ID | Canister ID | TO-14/15 (Standard / Low Level) | TO-15 SIM | EPA 3C | EPA 25C | ASTM D-1946 | EPA 15/16 | Other (Please specify in notes section) | Sample Type | Indoor Air/Ambient Air | Sub-Slab | Soil Gas | Soil Vapor Extraction (SVE) | Landfill Gas | Other (Please specify in notes section) | Sample Specific Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VP-1 | 6/5/19 | 1024 | 6/5/19 ~~1055~~ | 1055 | -27 | -3 | 4680 | 5902 | X | | | | | | | | | | | | | | |
| VP-2 | 6/5/19 | 1149 | 6/5/19 | 1221 | -28 | -3 | 5829 | 4295 | X | | | | | | | | | | | | | | |

200-49066 Chain of Custody

| Temperature (Fahrenheit) | | | |
|---|---|---|---|
| Start | Interior | Ambient | |
| Stop | | | |

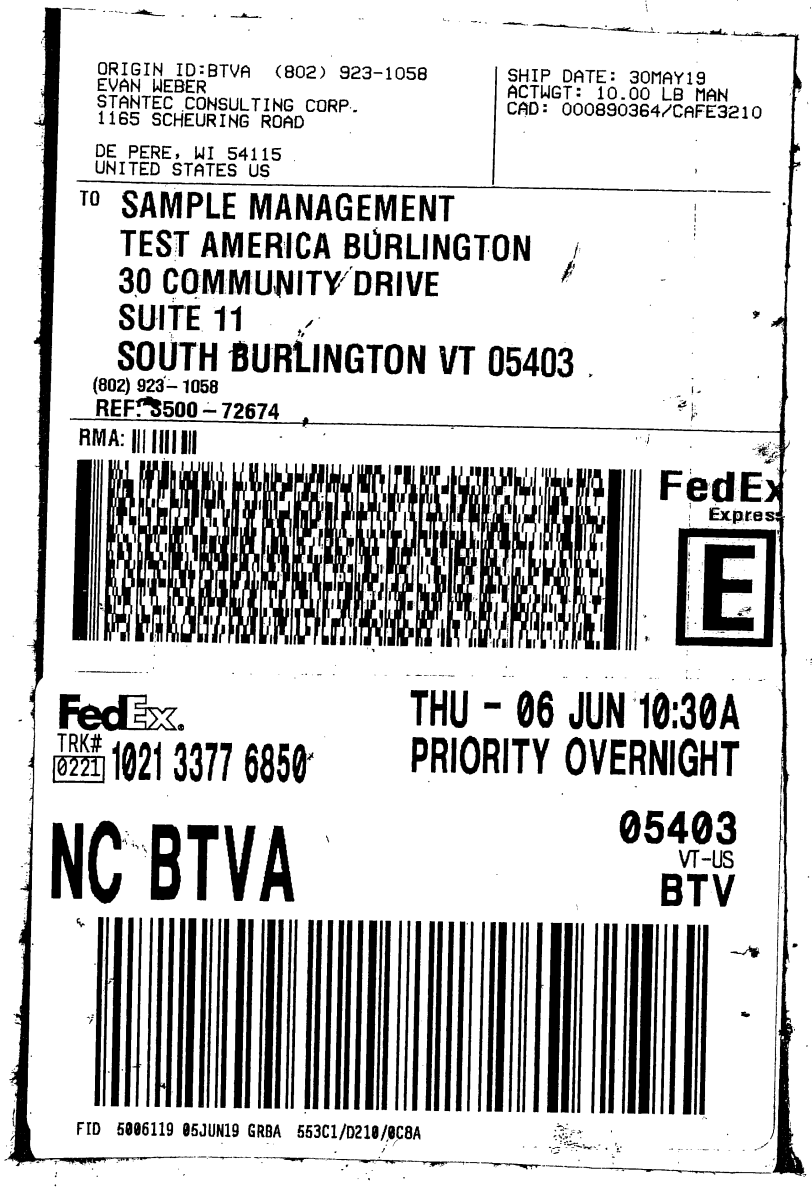
| Pressure (inches of Hg) | | | |
|---|---|---|---|
| Start | Interior | Ambient | |
| Stop | | | |

**Special Instructions/QC Requirements & Comments:** TA project manager = Sandie Fredrick

| | | |
|---|---|---|
| **Samples Shipped by:** Evan Weber (Stantec) | **Date / Time:** 6/5/19 1630 | **Samples Received by:** Taylor Hohn TABURI 6/6/19 0958 |
| **Samples Relinquished by:** | **Date / Time:** | **Received by:** |
| **Relinquished by:** | **Date / Time:** | **Received by:** |

**Lab Use Only:** **Shipper Name:** **Opened by:** **Condition:**

Form No. CA-C-WI-003, Rev. 2.13, dated 4/10/2019



ORIGIN ID:BTVA (802) 923-1058
EVAN WEBER
STANTEC CONSULTING CORP.
1165 SCHEURING ROAD

DE PERE, WI 54115
UNITED STATES US

SHIP DATE: 30MAY19
ACTWGT: 10.00 LB MAN
CAD: 000890364/CAFE3210

TO SAMPLE MANAGEMENT
TEST AMERICA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 923-1058
REF: 3500 – 72674

RMA:

FedEx Express

FedEx
TRK# 0221 1021 3377 6850

THU - 06 JUN 10:30A
PRIORITY OVERNIGHT

NC BTVA

05403
VT-US
BTV

FID 5006119 05JUN19 GRBA 553C1/D210/0C8A

# Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 200-49066-1

**Login Number: 49066**
**List Number: 1**
**Creator: Mohn, Taylor J**

**List Source: Eurofins TestAmerica, Burlington**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= background as measured by a survey meter. | N/A | Lab does not accept radioactive samples. |
| The cooler's custody seal, if present, is intact. | True | Seal present with no number. |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | Thermal preservation not required. |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | N/A | Thermal preservation not required. |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | N/A | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

# Pre-Shipment Clean Canister Certification Report

## Canister Cleaning & Pre-Shipment Leak Test

| System ID | Max DF# | # Cycles | Cleaning Start Date/Time | | System Start Temp(s): | | Technician | Can Size | Certification Type: |
|---|---|---|---|---|---|---|---|---|---|
| Bottom Rack | 1 | 25 | 5/15/2019 | 12:32 | 20 | 20 | SCH | 6 liter | batch |

| Port | Can ID | Initial[1] (psia) | Final (psia) | Diff.[3] | Final ("Hg) | Initial Reading Gauge: | Date: | Time: | Tech: | Temp: | Final Reading Gauge: | Date: | Time: | Tech: | Temp: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2565 | .01 | .05 | .04 | 29.6 | G26 | 5/16/19 | 834 | EE | 21 | G26 | 5/30/19 | 1101 | SCH | 20 |
| 2 | 4012 | " | .05 | .04 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 3 | 5056 | " | .01 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 4 | 2907 | " | .01 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 5 | 6263 | " | .01 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 6 | 5140 | .01 | .01 | 0 | 29.7 | G26 | 5/30/19 | 12:02 | SCH | 20 | G26 | 6/3/19 | 1425 | " | 20.0 |
| 7 | 2678 | .01 | .01 | .00 | 29.6 | G26 | 5/16/19 | 834 | EE | 21 | G26 | 5/30/19 | 1101 | SCH | 20 |
| 8 | 4295 | " | .01 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 9 | 5066 | " | .01 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 10 | 6006 | " | .01 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 11 | 4015 | " | .01 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 12 | 5112 | " | .01 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |

[1] Batch Certification: The reading is taken on the "batch" canister and this value is used as the initial pressure for all canisters in the batch.

[3] Difference = Final Pressure - Initial Pressure . Acceptance Criteria: (1) The difference must be less than or equal to + 0.25psi. (2) Pressure readings must be at least 24 hours apart.

**If time frame was not met, the PM must authorize shipment of canister** **PM Authorization** **Date:**

## Clean Canister Certification Analysis & Authorization of Release to Inventory

**Test Method:** ☑ TO15 Routine ☐ TO15 LL

| Can ID | Date | Sequence | Analyst | Inventory Level 1 | 2 | 3 | 4 | Secondary Review Limited | Review Date | Reviewer |
|---|---|---|---|---|---|---|---|---|---|---|
| 5140 | 5/21/19 | 35988 | GGS | | XXXX | | | | ERT 5/21/19 | |

**Inventory Level 1:** Individual Canister Certification (TO15LL 0.01).

**Inventory Level 2:** Individual or Batch Certification (TO15 0.04 ppbv).

**Inventory Level 3:** Individual or Batch Certification (TO15 0.2 ppbv).

**Inventory Level Limited:** Canisters may only be used for certain projects.

**Dup Tees/Vac gauges (enter IDs if included):**

**Comments:**

5140
Location: Air-Storage
Bottle: Summa Canister 6L
Sampled: 5/15/2019 12:00 AM 200-1284401

200-48768-A-6

Loc: 200
48768
#6
A



6/24/2019

Form ID: FAI023:12
Revision Date: 12/18/2018

TestAmerica Burlington

# Pre-Shipment Clean Canister Certification Report

## Canister Cleaning & Pre-Shipment Leak Test

| System ID | Max DF# | # Cycles | Cleaning Start Date/Time | | System Start Temp(s): | | Technician | Can Size | Certification Type: |
|---|---|---|---|---|---|---|---|---|---|
| Top Rack | 100 | 25 | 5/20/2019 | 1644 | 20 | 20 | TM | 6 liter | batch |

| Port | Can ID | Initial[1] (psia) | Final (psia) | Diff.[3] | Final ("Hg) | Initial Reading Gauge: | Date: | Time: | Tech: | Temp: | Final Reading Gauge: | Date: | Time: | Tech: | Temp: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4469 | .02 | .02 | .00 | 29.6 | G26 | 5/21/19 | 1415 | JL | 21.0 | G26 | 5/30/19 | 1211 | SCH | 20 |
| 2 | 6256 | " | .02 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 3 | 3545 | " | .02 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 4 | 5902 | " | .02 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 5 | 4808 | " | .02 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 6 | 6265 | .02 | .02 | 0 | 29.7 | G26 | 5/30/19 | 1357 | SCH | 20 | G26 | 6/3/19 | 1425 | C | 20.0 |
| 7 | 5962 | .02 | .04 | .02 | 29.6 | G26 | 5/21/19 | 1415 | SML | 21.0 | G26 | 5/30/19 | 1211 | SCH | 20 |
| 8 | 4370 | " | .02 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 9 | 4289 | " | .02 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 10 | 3662 | " | .02 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 11 | 3428 | " | .02 | .00 | " | G26 | " | " | " | " | G26 | " | " | " | " |
| 12 | 5163 | " | .13 | .11 | " | G26 | " | " | " | " | G26 | " | " | " | " |

[1] Batch Certification: The reading is taken on the "batch" canister and this value is used as the initial pressure for all canisters in the batch.

[3] Difference = Final Pressure - Initial Pressure . Acceptance Criteria: (1) The difference must be less than or equal to + 0.25psi. (2) Pressure readings must be at least 24 hours apart.

**If time frame was not met, the PM must authorize shipment of canister** **PM Authorization** **Date:**

## Clean Canister Certification Analysis & Authorization of Release to Inventory

**Test Method:** ☐ TO15 Routine ☐ TO15 LL

| Can ID | Date | Sequence | Analyst | Inventory Level 1 | 2 | 3 | 4 | Secondary Review Limited | Review Date | Reviewer |
|---|---|---|---|---|---|---|---|---|---|---|
| ~~4370~~ 6265 | 5/23/19 | 36031 | BK | | XXX | | | | 5/23/19 | GGG |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

**Inventory Level 1:** Individual Canister Certification (TO15LL 0.01).

**Inventory Level 2:** Individual or Batch Certification (TO15 0.04 ppbv).

**Inventory Level 3:** Individual or Batch Certification (TO15 0.2 ppbv).

**Inventory Level Limited:** Canisters may only be used for certain projects.

**Dup Tees/Vac gauges (enter IDs if included):**

**Comments:**





Form ID: FAI023:12
Revision Date: 12/18/2018

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington  Job No.: 200-48768-1

SDG No.:

Client Sample ID: 5140  Lab Sample ID: 200-48768-6

Matrix: Air  Lab File ID: 35988-24.D

Analysis Method: TO-15  Date Collected: 05/15/2019 00:00

Sample wt/vol: 1000(mL)  Date Analyzed: 05/21/2019 08:20

Soil Aliquot Vol:  Dilution Factor: 0.2

Soil Extract Vol.:  GC Column: RTX-624  ID: 0.32(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 143196  Units: ppb v/v

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | RL |
|---|---|---|---|---|---|
| 115-07-1 | Propylene | 1.0 | U | 1.0 | 1.0 |
| 75-71-8 | Dichlorodifluoromethane | 0.10 | U | 0.10 | 0.10 |
| 75-45-6 | Freon 22 | 0.10 | U | 0.10 | 0.10 |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane | 0.040 | U | 0.040 | 0.040 |
| 74-87-3 | Chloromethane | 0.10 | U | 0.10 | 0.10 |
| 106-97-8 | n-Butane | 0.10 | U | 0.10 | 0.10 |
| 75-01-4 | Vinyl chloride | 0.040 | U | 0.040 | 0.040 |
| 106-99-0 | 1,3-Butadiene | 0.040 | U | 0.040 | 0.040 |
| 74-83-9 | Bromomethane | 0.040 | U | 0.040 | 0.040 |
| 75-00-3 | Chloroethane | 0.10 | U * | 0.10 | 0.10 |
| 593-60-2 | Bromoethene(Vinyl Bromide) | 0.040 | U * | 0.040 | 0.040 |
| 75-69-4 | Trichlorofluoromethane | 0.040 | U | 0.040 | 0.040 |
| 64-17-5 | Ethanol | 1.0 | U | 1.0 | 1.0 |
| 76-13-1 | Freon TF | 0.040 | U | 0.040 | 0.040 |
| 75-35-4 | 1,1-Dichloroethene | 0.040 | U * | 0.040 | 0.040 |
| 67-64-1 | Acetone | 1.0 | U | 1.0 | 1.0 |
| 67-63-0 | Isopropyl alcohol | 1.0 | U | 1.0 | 1.0 |
| 75-15-0 | Carbon disulfide | 0.10 | U | 0.10 | 0.10 |
| 107-05-1 | 3-Chloropropene | 0.10 | U | 0.10 | 0.10 |
| 75-09-2 | Methylene Chloride | 0.10 | U | 0.10 | 0.10 |
| 75-65-0 | tert-Butyl alcohol | 1.0 | U | 1.0 | 1.0 |
| 1634-04-4 | Methyl tert-butyl ether | 0.040 | U * | 0.040 | 0.040 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.040 | U | 0.040 | 0.040 |
| 110-54-3 | n-Hexane | 0.040 | U | 0.040 | 0.040 |
| 75-34-3 | 1,1-Dichloroethane | 0.040 | U | 0.040 | 0.040 |
| 108-05-4 | Vinyl acetate | 1.0 | U | 1.0 | 1.0 |
| 141-78-6 | Ethyl acetate | 1.0 | U | 1.0 | 1.0 |
| 78-93-3 | Methyl Ethyl Ketone | 0.10 | U | 0.10 | 0.10 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.040 | U * | 0.040 | 0.040 |
| 540-59-0 | 1,2-Dichloroethene, Total | 0.080 | U | 0.080 | 0.080 |
| 67-66-3 | Chloroform | 0.040 | U | 0.040 | 0.040 |
| 109-99-9 | Tetrahydrofuran | 1.0 | U | 1.0 | 1.0 |
| 71-55-6 | 1,1,1-Trichloroethane | 0.040 | U | 0.040 | 0.040 |
| 110-82-7 | Cyclohexane | 0.040 | U | 0.040 | 0.040 |
| 56-23-5 | Carbon tetrachloride | 0.040 | U | 0.040 | 0.040 |
| 540-84-1 | 2,2,4-Trimethylpentane | 0.040 | U | 0.040 | 0.040 |

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington  Job No.: 200-48768-1

SDG No.:

Client Sample ID: 5140  Lab Sample ID: 200-48768-6

Matrix: Air  Lab File ID: 35988-24.D

Analysis Method: TO-15  Date Collected: 05/15/2019 00:00

Sample wt/vol: 1000(mL)  Date Analyzed: 05/21/2019 08:20

Soil Aliquot Vol:  Dilution Factor: 0.2

Soil Extract Vol.:  GC Column: RTX-624  ID: 0.32(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 143196  Units: ppb v/v

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | RL |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | 0.040 | U | 0.040 | 0.040 |
| 107-06-2 | 1,2-Dichloroethane | 0.040 | U | 0.040 | 0.040 |
| 142-82-5 | n-Heptane | 0.040 | U | 0.040 | 0.040 |
| 79-01-6 | Trichloroethene | 0.040 | U | 0.040 | 0.040 |
| 80-62-6 | Methyl methacrylate | 0.10 | U | 0.10 | 0.10 |
| 78-87-5 | 1,2-Dichloropropane | 0.040 | U | 0.040 | 0.040 |
| 123-91-1 | 1,4-Dioxane | 1.0 | U | 1.0 | 1.0 |
| 75-27-4 | Bromodichloromethane | 0.040 | U | 0.040 | 0.040 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.040 | U | 0.040 | 0.040 |
| 108-10-1 | methyl isobutyl ketone | 0.10 | U | 0.10 | 0.10 |
| 108-88-3 | Toluene | 0.040 | U | 0.040 | 0.040 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.040 | U | 0.040 | 0.040 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.040 | U | 0.040 | 0.040 |
| 127-18-4 | Tetrachloroethene | 0.040 | U | 0.040 | 0.040 |
| 591-78-6 | Methyl Butyl Ketone (2-Hexanone) | 0.10 | U | 0.10 | 0.10 |
| 124-48-1 | Dibromochloromethane | 0.040 | U | 0.040 | 0.040 |
| 106-93-4 | 1,2-Dibromoethane | 0.040 | U | 0.040 | 0.040 |
| 108-90-7 | Chlorobenzene | 0.040 | U | 0.040 | 0.040 |
| 100-41-4 | Ethylbenzene | 0.040 | U | 0.040 | 0.040 |
| 179601-23-1 | m,p-Xylene | 0.10 | U | 0.10 | 0.10 |
| 95-47-6 | Xylene, o- | 0.040 | U * | 0.040 | 0.040 |
| 1330-20-7 | Xylene (total) | 0.14 | U | 0.14 | 0.14 |
| 100-42-5 | Styrene | 0.040 | U * | 0.040 | 0.040 |
| 75-25-2 | Bromoform | 0.040 | U | 0.040 | 0.040 |
| 98-82-8 | Cumene | 0.040 | U * | 0.040 | 0.040 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.040 | U | 0.040 | 0.040 |
| 103-65-1 | n-Propylbenzene | 0.040 | U | 0.040 | 0.040 |
| 622-96-8 | 4-Ethyltoluene | 0.040 | U | 0.040 | 0.040 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.040 | U | 0.040 | 0.040 |
| 95-49-8 | 2-Chlorotoluene | 0.040 | U | 0.040 | 0.040 |
| 98-06-6 | tert-Butylbenzene | 0.040 | U | 0.040 | 0.040 |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.040 | U | 0.040 | 0.040 |
| 135-98-8 | sec-Butylbenzene | 0.040 | U | 0.040 | 0.040 |
| 99-87-6 | 4-Isopropyltoluene | 0.040 | U | 0.040 | 0.040 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.040 | U | 0.040 | 0.040 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.040 | U | 0.040 | 0.040 |

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington  Job No.: 200-48768-1

SDG No.:

Client Sample ID: 5140  Lab Sample ID: 200-48768-6

Matrix: Air  Lab File ID: 35988-24.D

Analysis Method: TO-15  Date Collected: 05/15/2019 00:00

Sample wt/vol: 1000(mL)  Date Analyzed: 05/21/2019 08:20

Soil Aliquot Vol:  Dilution Factor: 0.2

Soil Extract Vol.:  GC Column: RTX-624  ID: 0.32(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 143196  Units: ppb v/v

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | RL |
|---|---|---|---|---|---|
| 100-44-7 | Benzyl chloride | 0.040 | U | 0.040 | 0.040 |
| 104-51-8 | n-Butylbenzene | 0.040 | U | 0.040 | 0.040 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.040 | U | 0.040 | 0.040 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.10 | U | 0.10 | 0.10 |
| 87-68-3 | Hexachlorobutadiene | 0.040 | U | 0.040 | 0.040 |
| 91-20-3 | Naphthalene | 0.10 | U | 0.10 | 0.10 |

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\chromna\Burlington\ChromData\CHX.i\20190520-35988.b\35988-24.D
Lims ID: 200-48768-A-6
Client ID: 5140
Sample Type: Client
Inject. Date: 21-May-2019 08:20:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 200.000 mL Dil. Factor: 0.2000
Sample Info: 200-0035988-024
Misc. Info.: 48768-6
Operator ID: ert Instrument ID: CHX.i

Method: \\chromna\Burlington\ChromData\CHX.i\20190520-35988.b\TO15_MasterMethod_X.m.m
Limit Group: AI_TO15_ICAL
Last Update: 21-May-2019 15:37:32 Calib Date: 09-May-2019 02:08:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Burlington\ChromData\CHX.i\20190508-35841.b\35841-11.D

Column 1 : RTX-624 ( 0.32 mm) Det: MS SCAN
Process Host: CTX0307

First Level Reviewer: guazzonig Date: 21-May-2019 15:37:59

| | Compound | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ppb v/v | Flags |
|---|---|---|---|---|---|---|---|---|---|
| | 1 Propene | 41 | | 4.083 | | | | ND | |
| | 2 Dichlorodifluoromethane | 85 | | 4.169 | | | | ND | |
| | 3 Chlorodifluoromethane | 51 | | 4.238 | | | | ND | |
| | 4 1,2-Dichloro-1,1,2,2-tetra | 85 | | 4.506 | | | | ND | |
| | 5 Chloromethane | 50 | | 4.693 | | | | ND | |
| | 6 Butane | 43 | | 4.918 | | | | ND | |
| | 7 Vinyl chloride | 62 | | 4.971 | | | | ND | |
| | 8 Butadiene | 54 | | 5.062 | | | | ND | |
| | 10 Bromomethane | 94 | | 5.854 | | | | ND | |
| | 11 Chloroethane | 64 | | 6.111 | | | | ND | |
| | 13 Vinyl bromide | 106 | | 6.533 | | | | ND | |
| | 14 Trichlorofluoromethane | 101 | | 6.624 | | | | ND | |
| | 17 Ethanol | 45 | 7.202 | 7.202 | 0.000 | 16 | 316 | 0.0943 | |
| | 20 1,1,2-Trichloro-1,2,2-trif | 101 | | 7.710 | | | | ND | |
| | 21 1,1-Dichloroethene | 96 | | 7.774 | | | | ND | |
| | 22 Acetone | 43 | | 8.015 | | | | ND | |
| | 23 Carbon disulfide | 76 | | 8.197 | | | | ND | |
| | 24 Isopropyl alcohol | 45 | | 8.288 | | | | ND | |
| | 25 3-Chloro-1-propene | 41 | | 8.577 | | | | ND | |
| | 27 Methylene Chloride | 49 | | 8.882 | | | | ND | |
| | 28 2-Methyl-2-propanol | 59 | | 9.074 | | | | ND | |
| | 29 Methyl tert-butyl ether | 73 | | 9.272 | | | | ND | |
| | 31 trans-1,2-Dichloroethene | 61 | | 9.326 | | | | ND | |
| S | 30 1,2-Dichloroethene, Total | 61 | | 9.665 | | | | ND | |
| | 33 Hexane | 57 | | 9.706 | | | | ND | |
| | 34 1,1-Dichloroethane | 63 | | 10.230 | | | | ND | |
| | 35 Vinyl acetate | 43 | | 10.283 | | | | ND | |
| | 37 cis-1,2-Dichloroethene | 96 | | 11.348 | | | | ND | |
| | 38 2-Butanone (MEK) | 72 | | 11.385 | | | | ND | |
| | 39 Ethyl acetate | 88 | | 11.412 | | | | ND | |
| * | 40 Chlorobromomethane | 128 | 11.814 | 11.813 | 0.001 | 68 | 252618 | 10.0 | |

| | Compound | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ppb v/v | Flags |
|---|---|---|---|---|---|---|---|---|---|
| | 41 Tetrahydrofuran | 42 | | 11.813 | | | | ND | |
| | 42 Chloroform | 83 | | 11.926 | | | | ND | |
| | 43 Cyclohexane | 84 | | 12.172 | | | | ND | |
| | 44 1,1,1-Trichloroethane | 97 | | 12.199 | | | | ND | |
| | 45 Carbon tetrachloride | 117 | | 12.439 | | | | ND | |
| | 46 Isooctane | 57 | | 12.824 | | | | ND | |
| | 47 Benzene | 78 | | 12.883 | | | | ND | |
| | 48 1,2-Dichloroethane | 62 | | 13.060 | | | | ND | |
| | 49 n-Heptane | 43 | | 13.178 | | | | ND | |
| * | 50 1,4-Difluorobenzene | 114 | 13.648 | 13.648 | 0.000 | 90 | 1140117 | 10.0 | |
| | 53 Trichloroethene | 95 | | 14.087 | | | | ND | |
| | 54 1,2-Dichloropropane | 63 | | 14.595 | | | | ND | |
| | 55 Methyl methacrylate | 69 | | 14.713 | | | | ND | |
| | 56 1,4-Dioxane | 88 | | 14.788 | | | | ND | |
| | 57 Dibromomethane | 174 | | 14.836 | | | | ND | |
| | 58 Dichlorobromomethane | 83 | | 15.093 | | | | ND | |
| | 60 cis-1,3-Dichloropropene | 75 | | 15.943 | | | | ND | |
| | 61 4-Methyl-2-pentanone (MIBK | 43 | | 16.189 | | | | ND | |
| | 65 Toluene | 92 | | 16.489 | | | | ND | |
| | 66 trans-1,3-Dichloropropene | 75 | | 17.045 | | | | ND | |
| | 67 1,1,2-Trichloroethane | 83 | | 17.404 | | | | ND | |
| | 68 Tetrachloroethene | 166 | | 17.511 | | | | ND | |
| | 69 2-Hexanone | 43 | | 17.810 | | | | ND | |
| | 71 Chlorodibromomethane | 129 | | 18.137 | | | | ND | |
| | 72 Ethylene Dibromide | 107 | | 18.404 | | | | ND | |
| * | 74 Chlorobenzene-d5 | 117 | 19.260 | 19.255 | 0.005 | 79 | 1006692 | 10.0 | |
| | 75 Chlorobenzene | 112 | | 19.314 | | | | ND | |
| | 76 Ethylbenzene | 91 | | 19.447 | | | | ND | |
| S | 73 Xylenes, Total | 106 | | 19.600 | | | | ND | |
| | 78 m-Xylene & p-Xylene | 106 | | 19.688 | | | | ND | |
| | 79 o-Xylene | 106 | | 20.496 | | | | ND | |
| | 80 Styrene | 104 | | 20.544 | | | | ND | |
| | 81 Bromoform | 173 | | 20.951 | | | | ND | |
| | 82 Isopropylbenzene | 105 | | 21.127 | | | | ND | |
| | 84 1,1,2,2-Tetrachloroethane | 83 | | 21.753 | | | | ND | |
| | 85 N-Propylbenzene | 91 | | 21.812 | | | | ND | |
| | 88 4-Ethyltoluene | 105 | | 21.994 | | | | ND | |
| | 89 2-Chlorotoluene | 91 | | 22.010 | | | | ND | |
| | 90 1,3,5-Trimethylbenzene | 105 | | 22.090 | | | | ND | |
| | 92 tert-Butylbenzene | 119 | | 22.566 | | | | ND | |
| | 93 1,2,4-Trimethylbenzene | 105 | | 22.657 | | | | ND | |
| | 94 sec-Butylbenzene | 105 | | 22.882 | | | | ND | |
| | 95 4-Isopropyltoluene | 119 | | 23.074 | | | | ND | |
| | 96 1,3-Dichlorobenzene | 146 | | 23.117 | | | | ND | |
| | 97 1,4-Dichlorobenzene | 146 | | 23.251 | | | | ND | |
| | 98 Benzyl chloride | 91 | | 23.449 | | | | ND | |
| | 100 n-Butylbenzene | 91 | | 23.647 | | | | ND | |
| | 101 1,2-Dichlorobenzene | 146 | | 23.791 | | | | ND | |
| | 103 1,2,4-Trichlorobenzene | 180 | | 26.332 | | | | ND | |
| | 104 Hexachlorobutadiene | 225 | | 26.514 | | | | ND | |
| | 105 Naphthalene | 128 | | 26.830 | | | | ND | |

## Reagents:

ATTO15XISs_00002 Amount Added: 20.00 Units: mL Run Reagent

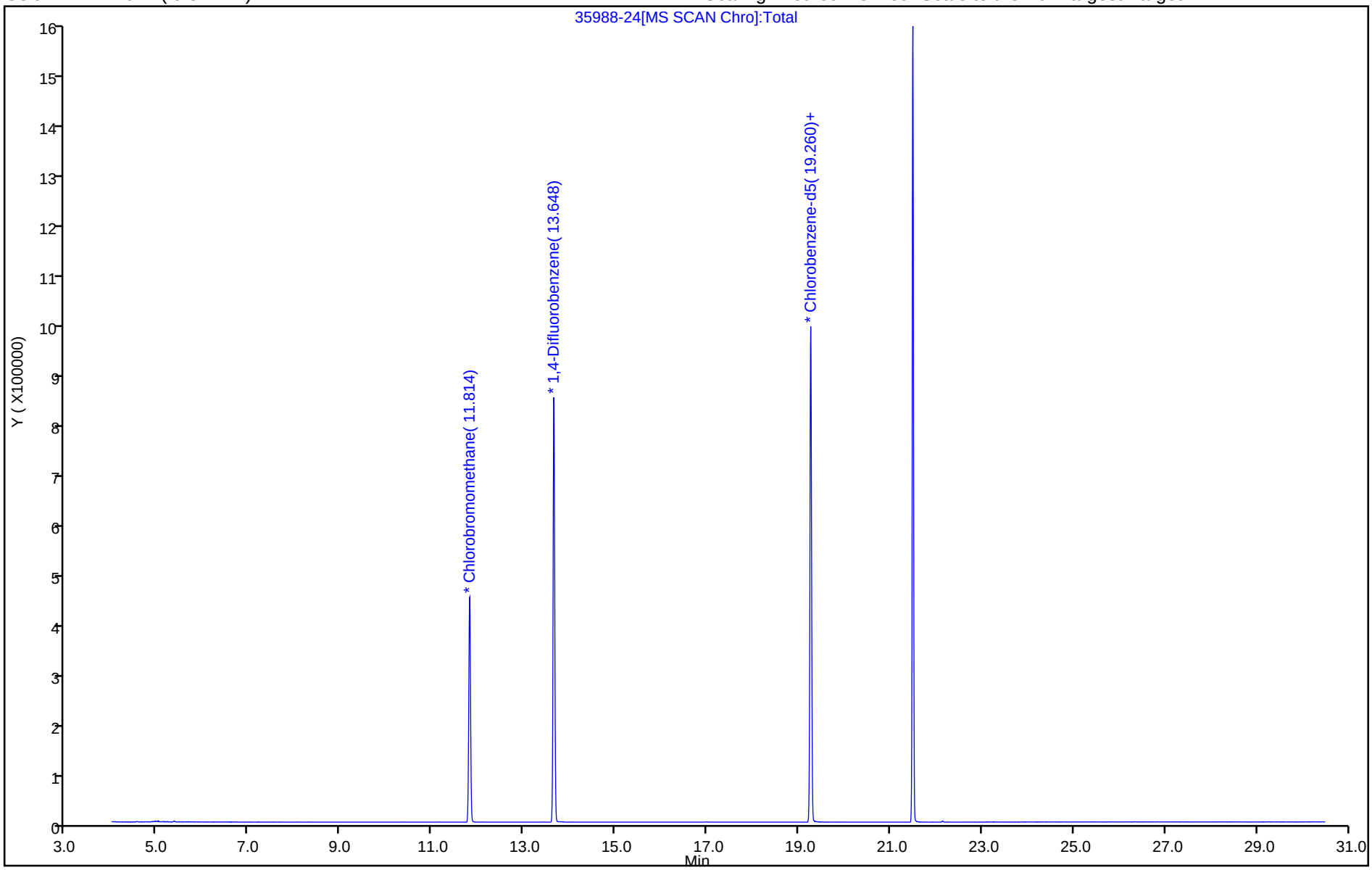
Report Date: 21-May-2019 15:39:00 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Burlington

Data File: \\chromna\Burlington\ChromData\CHX.i\20190520-35988.b\35988-24.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 21-May-2019 08:20:30 | Instrument ID: | CHX.i | Operator ID: | ert |
| Lims ID: | 200-48768-A-6 | Lab Sample ID: | 200-48768-6 | Worklist Smp#: | 24 |
| Client ID: | 5140 | | | | |
| Purge Vol: | 200.000 mL | Dil. Factor: | 0.2000 | ALS Bottle#: | 23 |
| Method: | TO15_MasterMethod_X.m | Limit Group: | AI_TO15_ICAL | | |

Column: RTX-624 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington  Job No.: 200-48843-1

SDG No.:

Client Sample ID: 6265  Lab Sample ID: 200-48843-6

Matrix: Air  Lab File ID: 200-36031-027.D

Analysis Method: TO-15  Date Collected: 05/20/2019 00:00

Sample wt/vol: 1000(mL)  Date Analyzed: 05/23/2019 08:05

Soil Aliquot Vol:  Dilution Factor: 0.2

Soil Extract Vol.:  GC Column: RTX-624  ID: 0.32(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 143289  Units: ppb v/v

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | RL |
|---|---|---|---|---|---|
| 115-07-1 | Propylene | 1.0 | U | 1.0 | 1.0 |
| 75-71-8 | Dichlorodifluoromethane | 0.10 | U | 0.10 | 0.10 |
| 75-45-6 | Freon 22 | 0.10 | U | 0.10 | 0.10 |
| 76-14-2 | 1,2-Dichlorotetrafluoroethane | 0.040 | U | 0.040 | 0.040 |
| 74-87-3 | Chloromethane | 0.10 | U | 0.10 | 0.10 |
| 106-97-8 | n-Butane | 0.10 | U | 0.10 | 0.10 |
| 75-01-4 | Vinyl chloride | 0.040 | U | 0.040 | 0.040 |
| 106-99-0 | 1,3-Butadiene | 0.040 | U | 0.040 | 0.040 |
| 74-83-9 | Bromomethane | 0.040 | U | 0.040 | 0.040 |
| 75-00-3 | Chloroethane | 0.10 | U | 0.10 | 0.10 |
| 593-60-2 | Bromoethene(Vinyl Bromide) | 0.040 | U | 0.040 | 0.040 |
| 75-69-4 | Trichlorofluoromethane | 0.040 | U | 0.040 | 0.040 |
| 64-17-5 | Ethanol | 1.0 | U | 1.0 | 1.0 |
| 76-13-1 | Freon TF | 0.040 | U | 0.040 | 0.040 |
| 75-35-4 | 1,1-Dichloroethene | 0.040 | U | 0.040 | 0.040 |
| 67-64-1 | Acetone | 1.0 | U | 1.0 | 1.0 |
| 67-63-0 | Isopropyl alcohol | 1.0 | U | 1.0 | 1.0 |
| 75-15-0 | Carbon disulfide | 0.10 | U | 0.10 | 0.10 |
| 107-05-1 | 3-Chloropropene | 0.10 | U | 0.10 | 0.10 |
| 75-09-2 | Methylene Chloride | 0.10 | U | 0.10 | 0.10 |
| 75-65-0 | tert-Butyl alcohol | 1.0 | U | 1.0 | 1.0 |
| 1634-04-4 | Methyl tert-butyl ether | 0.040 | U | 0.040 | 0.040 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.040 | U | 0.040 | 0.040 |
| 110-54-3 | n-Hexane | 0.040 | U | 0.040 | 0.040 |
| 75-34-3 | 1,1-Dichloroethane | 0.040 | U | 0.040 | 0.040 |
| 108-05-4 | Vinyl acetate | 1.0 | U | 1.0 | 1.0 |
| 141-78-6 | Ethyl acetate | 1.0 | U | 1.0 | 1.0 |
| 78-93-3 | Methyl Ethyl Ketone | 0.10 | U | 0.10 | 0.10 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.040 | U | 0.040 | 0.040 |
| 540-59-0 | 1,2-Dichloroethene, Total | 0.080 | U | 0.080 | 0.080 |
| 67-66-3 | Chloroform | 0.040 | U | 0.040 | 0.040 |
| 109-99-9 | Tetrahydrofuran | 1.0 | U | 1.0 | 1.0 |
| 71-55-6 | 1,1,1-Trichloroethane | 0.040 | U | 0.040 | 0.040 |
| 110-82-7 | Cyclohexane | 0.040 | U | 0.040 | 0.040 |
| 56-23-5 | Carbon tetrachloride | 0.040 | U | 0.040 | 0.040 |
| 540-84-1 | 2,2,4-Trimethylpentane | 0.040 | U | 0.040 | 0.040 |

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington  Job No.: 200-48843-1

SDG No.:

Client Sample ID: 6265  Lab Sample ID: 200-48843-6

Matrix: Air  Lab File ID: 200-36031-027.D

Analysis Method: TO-15  Date Collected: 05/20/2019 00:00

Sample wt/vol: 1000(mL)  Date Analyzed: 05/23/2019 08:05

Soil Aliquot Vol:  Dilution Factor: 0.2

Soil Extract Vol.:  GC Column: RTX-624  ID: 0.32(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 143289  Units: ppb v/v

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | RL |
|---|---|---|---|---|---|
| 71-43-2 | Benzene | 0.040 | U | 0.040 | 0.040 |
| 107-06-2 | 1,2-Dichloroethane | 0.040 | U | 0.040 | 0.040 |
| 142-82-5 | n-Heptane | 0.040 | U | 0.040 | 0.040 |
| 79-01-6 | Trichloroethene | 0.040 | U | 0.040 | 0.040 |
| 80-62-6 | Methyl methacrylate | 0.10 | U | 0.10 | 0.10 |
| 78-87-5 | 1,2-Dichloropropane | 0.040 | U | 0.040 | 0.040 |
| 123-91-1 | 1,4-Dioxane | 1.0 | U | 1.0 | 1.0 |
| 75-27-4 | Bromodichloromethane | 0.040 | U | 0.040 | 0.040 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.040 | U | 0.040 | 0.040 |
| 108-10-1 | methyl isobutyl ketone | 0.10 | U | 0.10 | 0.10 |
| 108-88-3 | Toluene | 0.040 | U | 0.040 | 0.040 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.040 | U | 0.040 | 0.040 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.040 | U | 0.040 | 0.040 |
| 127-18-4 | Tetrachloroethene | 0.040 | U | 0.040 | 0.040 |
| 591-78-6 | Methyl Butyl Ketone (2-Hexanone) | 0.10 | U | 0.10 | 0.10 |
| 124-48-1 | Dibromochloromethane | 0.040 | U | 0.040 | 0.040 |
| 106-93-4 | 1,2-Dibromoethane | 0.040 | U | 0.040 | 0.040 |
| 108-90-7 | Chlorobenzene | 0.040 | U | 0.040 | 0.040 |
| 100-41-4 | Ethylbenzene | 0.040 | U | 0.040 | 0.040 |
| 179601-23-1 | m,p-Xylene | 0.10 | U | 0.10 | 0.10 |
| 95-47-6 | Xylene, o- | 0.040 | U | 0.040 | 0.040 |
| 1330-20-7 | Xylene (total) | 0.14 | U | 0.14 | 0.14 |
| 100-42-5 | Styrene | 0.040 | U | 0.040 | 0.040 |
| 75-25-2 | Bromoform | 0.040 | U | 0.040 | 0.040 |
| 98-82-8 | Cumene | 0.040 | U | 0.040 | 0.040 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.040 | U | 0.040 | 0.040 |
| 103-65-1 | n-Propylbenzene | 0.040 | U | 0.040 | 0.040 |
| 622-96-8 | 4-Ethyltoluene | 0.040 | U | 0.040 | 0.040 |
| 108-67-8 | 1,3,5-Trimethylbenzene | 0.040 | U | 0.040 | 0.040 |
| 95-49-8 | 2-Chlorotoluene | 0.040 | U | 0.040 | 0.040 |
| 98-06-6 | tert-Butylbenzene | 0.040 | U | 0.040 | 0.040 |
| 95-63-6 | 1,2,4-Trimethylbenzene | 0.040 | U | 0.040 | 0.040 |
| 135-98-8 | sec-Butylbenzene | 0.040 | U | 0.040 | 0.040 |
| 99-87-6 | 4-Isopropyltoluene | 0.040 | U | 0.040 | 0.040 |
| 541-73-1 | 1,3-Dichlorobenzene | 0.040 | U | 0.040 | 0.040 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.040 | U | 0.040 | 0.040 |

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington  Job No.: 200-48843-1

SDG No.:

Client Sample ID: 6265  Lab Sample ID: 200-48843-6

Matrix: Air  Lab File ID: 200-36031-027.D

Analysis Method: TO-15  Date Collected: 05/20/2019 00:00

Sample wt/vol: 1000(mL)  Date Analyzed: 05/23/2019 08:05

Soil Aliquot Vol:  Dilution Factor: 0.2

Soil Extract Vol.:  GC Column: RTX-624  ID: 0.32(mm)

% Moisture:  Level: (low/med) Low

Analysis Batch No.: 143289  Units: ppb v/v

| CAS NO. | COMPOUND NAME | RESULT | Q | RL | RL |
|---|---|---|---|---|---|
| 100-44-7 | Benzyl chloride | 0.040 | U | 0.040 | 0.040 |
| 104-51-8 | n-Butylbenzene | 0.040 | U | 0.040 | 0.040 |
| 95-50-1 | 1,2-Dichlorobenzene | 0.040 | U | 0.040 | 0.040 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.10 | U | 0.10 | 0.10 |
| 87-68-3 | Hexachlorobutadiene | 0.040 | U | 0.040 | 0.040 |
| 91-20-3 | Naphthalene | 0.10 | U | 0.10 | 0.10 |

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\chromna\Burlington\ChromData\CHG.i\20190522-36031.b\200-36031-027.D
Lims ID: 200-48843-A-6
Client ID: 6265
Sample Type: Client
Inject. Date: 23-May-2019 08:05:30 ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 200.000 mL Dil. Factor: 0.2000
Sample Info: 200-0036031-027
Misc. Info.: 48843-6
Operator ID: ert Instrument ID: CHG.i

Method: \\chromna\Burlington\ChromData\CHG.i\20190522-36031.b\TO15_MasterMethod_(v1)_G.m
Limit Group: AI_TO15_ICAL
Last Update: 23-May-2019 06:46:01 Calib Date: 17-May-2019 04:34:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Burlington\ChromData\CHG.i\20190516-35960.b\200-35960-014.D

Column 1 : RTX-624 ( 0.32 mm) Det: MS SCAN
Process Host: CTX0336

First Level Reviewer: guazzonig Date: 23-May-2019 11:17:15

| Compound | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ppb v/v | Flags |
|---|---|---|---|---|---|---|---|---|
| 1 Propene | 41 | | 3.055 | | | | ND | |
| 2 Dichlorodifluoromethane | 85 | | 3.108 | | | | ND | |
| 3 Chlorodifluoromethane | 51 | | 3.140 | | | | ND | |
| 4 1,2-Dichloro-1,1,2,2-tetra | 85 | | 3.301 | | | | ND | |
| 5 Chloromethane | 50 | | 3.408 | | | | ND | |
| 6 Butane | 43 | | 3.552 | | | | ND | |
| 7 Vinyl chloride | 62 | | 3.584 | | | | ND | |
| 8 Butadiene | 54 | | 3.638 | | | | ND | |
| 10 Bromomethane | 94 | | 4.141 | | | | ND | |
| 11 Chloroethane | 64 | | 4.306 | | | | ND | |
| 13 Vinyl bromide | 106 | | 4.601 | | | | ND | |
| 14 Trichlorofluoromethane | 101 | | 4.676 | | | | ND | |
| 17 Ethanol | 45 | | 5.104 | | | | ND | |
| 20 1,1,2-Trichloro-1,2,2-trif | 101 | | 5.510 | | | | ND | |
| 21 1,1-Dichloroethene | 96 | | 5.564 | | | | ND | |
| 22 Acetone | 43 | | 5.740 | | | | ND | |
| 23 Carbon disulfide | 76 | | 5.911 | | | | ND | |
| 24 Isopropyl alcohol | 45 | | 5.976 | | | | ND | |
| 25 3-Chloro-1-propene | 41 | | 6.195 | | | | ND | |
| 27 Methylene Chloride | 49 | | 6.441 | | | | ND | |
| 28 2-Methyl-2-propanol | 59 | | 6.639 | | | | ND | |
| 29 Methyl tert-butyl ether | 73 | | 6.810 | | | | ND | |
| 31 trans-1,2-Dichloroethene | 61 | | 6.831 | | | | ND | |
| 33 Hexane | 57 | | 7.174 | | | | ND | |
| 34 1,1-Dichloroethane | 63 | | 7.596 | | | | ND | |
| 35 Vinyl acetate | 43 | | 7.661 | | | | ND | |
| 37 cis-1,2-Dichloroethene | 96 | | 8.597 | | | | ND | |
| 38 2-Butanone (MEK) | 72 | | 8.645 | | | | ND | |
| 39 Ethyl acetate | 88 | | 8.688 | | | | ND | |
| * 40 Chlorobromomethane | 128 | 9.009 | 9.009 | 0.000 | 72 | 281112 | 10.0 | |
| 41 Tetrahydrofuran | 42 | | 9.068 | | | | ND | |

| | Compound | Sig | RT (min.) | Adj RT (min.) | Dlt RT (min.) | Q | Response | OnCol Amt ppb v/v | Flags |
|---|---|---|---|---|---|---|---|---|---|
| | 42 Chloroform | 83 | | 9.132 | | | | ND | |
| | 43 Cyclohexane | 84 | | 9.394 | | | | ND | |
| | 44 1,1,1-Trichloroethane | 97 | | 9.399 | | | | ND | |
| | 45 Carbon tetrachloride | 117 | | 9.635 | | | | ND | |
| S | 30 1,2-Dichloroethene, Total | 61 | | 9.665 | | | | ND | |
| | 46 Isooctane | 57 | | 10.052 | | | | ND | |
| | 47 Benzene | 78 | | 10.068 | | | | ND | |
| | 48 1,2-Dichloroethane | 62 | | 10.229 | | | | ND | |
| | 49 n-Heptane | 43 | | 10.426 | | | | ND | |
| * | 50 1,4-Difluorobenzene | 114 | 10.860 | 10.854 | 0.006 | 92 | 1433816 | | 10.0 |
| | 53 Trichloroethene | 95 | | 11.325 | | | | ND | |
| | 54 1,2-Dichloropropane | 63 | | 11.849 | | | | ND | |
| | 55 Methyl methacrylate | 69 | | 12.042 | | | | ND | |
| | 57 Dibromomethane | 174 | | 12.101 | | | | ND | |
| | 56 1,4-Dioxane | 88 | | 12.106 | | | | ND | |
| | 58 Dichlorobromomethane | 83 | | 12.395 | | | | ND | |
| | 60 cis-1,3-Dichloropropene | 75 | | 13.315 | | | | ND | |
| | 61 4-Methyl-2-pentanone (MIBK | 43 | | 13.620 | | | | ND | |
| | 65 Toluene | 92 | | 13.904 | | | | ND | |
| | 66 trans-1,3-Dichloropropene | 75 | | 14.492 | | | | ND | |
| | 67 1,1,2-Trichloroethane | 83 | | 14.856 | | | | ND | |
| | 68 Tetrachloroethene | 166 | | 14.984 | | | | ND | |
| | 69 2-Hexanone | 43 | | 15.337 | | | | ND | |
| | 71 Chlorodibromomethane | 129 | | 15.616 | | | | ND | |
| | 72 Ethylene Dibromide | 107 | | 15.878 | | | | ND | |
| * | 74 Chlorobenzene-d5 | 117 | 16.787 | 16.792 | -0.005 | 83 | 1482188 | | 10.0 |
| | 75 Chlorobenzene | 112 | | 16.851 | | | | ND | |
| | 76 Ethylbenzene | 91 | | 17.023 | | | | ND | |
| | 78 m-Xylene & p-Xylene | 106 | | 17.263 | | | | ND | |
| | 79 o-Xylene | 106 | | 18.119 | | | | ND | |
| | 80 Styrene | 104 | | 18.178 | | | | ND | |
| | 81 Bromoform | 173 | | 18.617 | | | | ND | |
| | 82 Isopropylbenzene | 105 | | 18.884 | | | | ND | |
| S | 73 Xylenes, Total | 106 | | 19.600 | | | | ND | |
| | 84 1,1,2,2-Tetrachloroethane | 83 | | 19.623 | | | | ND | |
| | 85 N-Propylbenzene | 91 | | 19.708 | | | | ND | |
| | 89 2-Chlorotoluene | 91 | | 19.911 | | | | ND | |
| | 88 4-Ethyltoluene | 105 | | 19.922 | | | | ND | |
| | 90 1,3,5-Trimethylbenzene | 105 | | 20.040 | | | | ND | |
| | 92 tert-Butylbenzene | 119 | | 20.575 | | | | ND | |
| | 93 1,2,4-Trimethylbenzene | 105 | | 20.676 | | | | ND | |
| | 94 sec-Butylbenzene | 105 | | 20.928 | | | | ND | |
| | 95 4-Isopropyltoluene | 119 | | 21.147 | | | | ND | |
| | 96 1,3-Dichlorobenzene | 146 | | 21.153 | | | | ND | |
| | 97 1,4-Dichlorobenzene | 146 | | 21.297 | | | | ND | |
| | 98 Benzyl chloride | 91 | | 21.506 | | | | ND | |
| | 100 n-Butylbenzene | 91 | | 21.741 | | | | ND | |
| | 101 1,2-Dichlorobenzene | 146 | | 21.837 | | | | ND | |
| | 103 1,2,4-Trichlorobenzene | 180 | | 24.197 | | | | ND | |
| | 104 Hexachlorobutadiene | 225 | | 24.389 | | | | ND | |
| | 105 Naphthalene | 128 | | 24.630 | | | | ND | |

## Reagents:

ATTO15GIS_00015 Amount Added: 20.00 Units: mL Run Reagent

Report Date: 23-May-2019 11:19:41 Chrom Revision: 2.3 03-May-2019 15:52:00

Eurofins TestAmerica, Burlington

Data File: \\chromna\Burlington\ChromData\CHG.i\20190522-36031.b\200-36031-027.D

| | | | | | |
|---|---|---|---|---|---|
| Injection Date: | 23-May-2019 08:05:30 | Instrument ID: | CHG.i | Operator ID: | ert |
| Lims ID: | 200-48843-A-6 | Lab Sample ID: | 200-48843-6 | Worklist Smp#: | 27 |
| Client ID: | 6265 | | | | |
| Purge Vol: | 200.000 mL | Dil. Factor: | 0.2000 | ALS Bottle#: | 26 |
| Method: | TO15_MasterMethod_(v1)_G | Limit Group: | AI_TO15_ICAL | | |

Column: RTX-624 ( 0.32 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 1