2022 Annual Groundwater Quality Monitoring Report

Trenton Commercial Park, Civic No. 34 Power Plant Road, Trenton, Nova Scotia

Build Nova Scotia
Final Report

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Executive Summary

At the request of Build Nova Scotia, Englobe Corp. (Englobe) conducted groundwater sampling events in April and October 2022 including the sampling and testing of seven (7) specified groundwater monitor wells with interpretation of the analytical results in an annual report. Toxicity testing of surface water collected at three (3) locations adjacent to the facility was also carried out in April 2022. This work was completed as per details outlined in portions of Section 10 (Groundwater Monitoring), Section 7 (Surface Water) and Section 12 (Reporting) of the Nova Scotia Environment and Climate Change (NSE) Industrial Approval No. 2020-2690529-00, dated September 21, 2020.

Based on the field observations and analytical results obtained, we make the following conclusions and statements on the identification of any groundwater or surface water discharge impacts as a result of site activities completed by Englobe during the 2022 calendar year:

- Concentrations of modified TPH and BTEX in groundwater samples collected from the seven monitoring wells did not exceed the NSE Tier I EQS of 20 mg/L for all parameters.
- Conductivity in the wells ranged from 270 µS/cm (MW6) to 3,800 µS/cm (MW1) in April 2022, and 300 µS/cm (MW1) to 5,500 µS/cm (MW9 and MW11) in October 2022.
- No pH values were reported outside the range of the available NSE Tier II PSS.
- Concentrations of arsenic, lead and zinc in groundwater samples collected from the seven monitoring wells did not exceed the NSE Tier II PSS for groundwater discharging to surface water during either the April or October 2022 sampling events.
- Concentrations of manganese in groundwater samples collected from MW1 in April and October 2022 exceeded the NSE Tier II PSS for groundwater discharging to freshwater surface water. It should be noted that the default criteria for manganese was adjusted via a calculation involving hardness and pH for the 2022 analytical program. MacGregor (June 2013) reported similar manganese concentrations at these locations dating back to at least April 2003, suggesting that elevated manganese concentrations may be the result of historic buried fill materials on site.
- Concentrations of VOCs in groundwater samples collected from MW6 were reported below NSE Tier I EQS.
- For all three surface water sampling locations (TW1, TW3 and TW4) where toxicity testing was completed in April 2022, the laboratory reported 0% Mortality (Pass).

Groundwater exceedances of the NSE Tier I EQS (modified TPH) or Tier II PSS (iron and manganese) identified in 2022 were consistent with concentrations identified during previous monitoring events conducted at the site.

Englobe recommends continuing the monitoring program at the site in April and October 2023 following the same sampling methodology and laboratory analytical program conducted for the 2022 monitoring events.

Property and Confidentiality

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APPENDICES

1 Introduction

Englobe Corp. (Englobe) was retained by Build Nova Scotia to undertake semi-annual groundwater monitoring and annual toxicity testing for the Trenton Commercial Park in Trenton, Nova Scotia. The purpose of the work herein by Englobe is to satisfy requirements set out by Nova Scotia Environment and Climate Change (NSE) in their Approval 2020-2690529-00 (dated September 21, 2020). The groundwater program includes semi-annual sampling of seven (7) existing groundwater monitoring wells, laboratory testing for predetermined parameters, interpretation of results and publishing of the data with recommendations as required in an annual report as per Section 10 (Groundwater Monitoring – subsection 10(a), 10(b) and 10(f)). The annual toxicity testing includes the collection of surface water samples from three (3) pre-assigned locations as per Section 7 (subsection 7(b) - toxicity testing only, and 7(c)) of the NSE Approval (Approval 2020-2690529-00, dated September 21, 2020). Site plans showing the Trenton Commercial Park site, monitor well locations and toxicity sample locations are provided in Appendix A.

The Trenton Commercial Park site is located at Civic No. 34 Power Plant Road on the eastern bank of the East River of Pictou County in Trenton, Nova Scotia. It has an approximate area of 0.4 square kilometres and extends almost 1.6 kilometers from end to end. The site is located on the west side of Main Street and the main Canadian National Railway (CNR) rail line and extends adjacent to the waters of the East River. The site slopes downward toward the west-northwest in the southern portion of the site, and toward the northeast in the northern reaches.

Trenton Commercial Park has a history of industrial operations from 1872 until 2016 including steel mill and forge operations, shipbuilding, and wind tower production. The site has operated under several names throughout the years including Hope Iron Works, Nova Scotia Steel Company, Eastern Car Company, DOSCO, Hawker Siddeley Canada Inc., Trenton Works Lavalin Inc., TrentonWorks, and Daewoo Shipbuilding and Marine Engineering (DSME) Trenton; however, the collective legacy industrial lands inhabiting all of these former operations is currently named Trenton Commercial Park. There have been significant changes at the site throughout recent history including the closure of site operations in 2008, and the Industrial Approval for operation of a wind turbine manufacturing facility in 2010; the wind turbine facility ceased operations in February 2016.

2 Background

As discussed by MacGregor and Associates (MacGregor) in their Data Report: Groundwater and Discharge Monitoring - May 2013 - DSTN DSME TRENTON report (dated June 25, 2013), the property at 34 Power Plant Road was used as a railcar manufacturing facility operated by numerous owners from 1875 to May 2007. Between May 2007 and July 2010, the site was closed due to bankruptcy and managed by Ernst Young of Halifax, and in July 2010 DSME Trenton acquired the property from the Province of Nova Scotia. Since then, closure of the Nova Forge site, which shared a portion of the former TrentonWorks property with DSME Trenton, due to a large fire on January 24, 2012, was announced in December 2012. DSME Trenton obtained an Industrial Approval from NSE for ‘operating a Windmill Manufacturing Facility where an anodizing process will be carried out’ (effective January 1, 2013 and expiry February 27, 2018). We understand that, although the wind turbine facility is no longer in operation and the site was acquired by Build Nova Scotia (then identified as Nova Scotia Lands Inc.), Build Nova Scotia is now responsible for fulfilling the monitoring requirements of the

original NSE Approval. The Approval was reissued by NSE under Approval No. 2020-2690526-00 on September 21, 2020 and is valid through September 21, 2030.

Monthly discharge and semi-annual groundwater monitoring have been conducted on the site since 1996. Previous monitoring at the site has been largely conducted by MacGregor, and their annual reports have been provided to the property owner and to NSE. Since the mid-2000s, Englobe has reviewed many of these historical reports and has been provided the report from MacGregor (June 2013) for our files. Englobe completed the 2014 annual groundwater quality monitoring report for DSME Trenton, which contained data from the 2013 groundwater and toxicity sampling (dated February 4, 2014) and included the MacGregor report as an appendix in the report.

The June 2013 MacGregor report also included analytical results and discussion of effluent sampling at TW1, TW3 and TW4 (April and May 2013) as well as annual toxicity monitoring. These results were required as per Sections 5(c) and 5(d) of the original NSE Approval and were provided in Appendix 2 of the 2013 MacGregor report. However, additional monitoring of TW1, TW3 and TW4 had reportedly been conducted by DSME Trenton personnel and, apart from the annual toxicity testing results, are not included in this 'Groundwater Quality Monitoring' report by Englobe.

Englobe has completed annual groundwater quality monitoring and reporting from 2014 to 2022 (with the exception of 2019) for the former property owner, DSME Trenton, and Build Nova Scotia. The annual groundwater sampling events have historically been conducted in April and October and included the sampling and testing of seven specified groundwater monitor wells with interpretation of the analytical results in an annual report. Toxicity testing of surface water collected at TW1, TW3 and TW4 has also been carried out during the April events. The work was completed to satisfy Section 4 (Groundwater Monitoring) of DSME Trenton's NSE Industrial Approval No. 2010-072182-R02.

Based on the field observations and analytical results obtained during the previous year of monitoring in 2021, the following conclusions and statements on the identification of any groundwater or surface water discharge impacts as a result of site activities during the 2021 calendar year were made (see Englobe's 2021 Annual groundwater Quality Monitoring Report dated April 12, 2022):

- Concentrations of modified total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and xylenes (BTEX) in groundwater samples collected from the seven monitoring wells did not exceed the NSE Tier I *Environmental Quality Standards* (EQS) of 20 mg/L for all parameters.
- Concentrations of modified TPH in groundwater collected from MW1, MW9 and MW11 exceeded the NSE Tier II *Pathway-Specific Standards* (PSS) for groundwater discharging to both freshwater and marine surface water.
- Conductivity in the wells ranged from 190 µS/cm (MW6) to 3,400 µS/cm (MW1) in April 2021, and 220 µS/cm (MW6) to 4,000 µS/cm (MW1) in October 2021.
- No pH values were reported outside the range of the available NSE Tier II PSS.
- Concentrations of arsenic, lead and zinc in groundwater samples collected from the seven monitoring wells did not exceed the NSE Tier II PSS for groundwater discharging to surface water during either the April or October 2021 sampling events.
- Concentrations of iron in groundwater samples collected from MW1 and MW11 in April and from MW1, MW3 and MW6 in October 2021 exceeded the NSE Tier II PSS for groundwater discharging to freshwater surface water (no PSS exists for iron in groundwater discharging to marine surface water).
- Concentrations of manganese in groundwater samples collected from MW1 and MW4 in April and October 2021 exceeded the NSE Tier II PSS for groundwater discharging to freshwater surface water. It should be noted that the default criteria for manganese can be adjusted via a calculation involving hardness and pH, should that data be available. MacGregor (June 2013) reported similar manganese concentrations at these locations dating back to at least April 2003, suggesting that elevated manganese concentrations may be the result of historic buried fill materials on site.

— Concentrations of volatile organic compounds (VOCs) in groundwater samples collected from MW6 were reported below NSE Tier I EQS and Tier II PSS for groundwater discharging to surface water.

In conclusion, the annual groundwater sampling from 2021 did not identify any impacts resulting from on-site activities. Groundwater exceedances of the NSECC Tier I EQS (modified TPH) or Tier II PSS (iron and manganese) identified in 2021 were consistent with concentrations identified during previous monitoring events conducted at the site.

It was recommended that hardness be added to the list of analysis for groundwater samples for the 2022 monitoring program so the NSE Tier II PSS for lead, manganese and zinc can be adjusted according to the available calculation. Minor repairs to the monitor wells (e.g., adjustments to the well covers, replacement of damaged or missing j-plugs, etc.) were also recommended. In addition, ground surface elevations for MW11 and MW14 were not provided in previous investigations and are unknown. It was recommended that they be determined to more accurately assess groundwater flow direction.

3 Scope of Work

The purpose of the current work by Englobe is to satisfy requirements set out by NSE in Section 10 (Groundwater Monitoring – subsections 10(a), 10(b) and 10(f)) and Section 7 (subsection 7(b) – toxicity testing only, and 7(c)) of the Approval 2020-2690529-00 (dated September 21, 2020). In the Request for Proposals from Build Nova Scotia, it specified that seven (7) groundwater monitoring wells and three (3) surface water (effluent) locations are to be sampled, followed by laboratory testing for the predetermined parameters on the samples collected from those locations. Interpretation of the analytical results are to be provided in an annual report as per details outlined in selected portions of Section 10 and Section 7 of the Industrial Approval from the NSE (Approval 2020-2690529-00, dated September 21, 2020).

Section 10 of the NSE Approval specifies that seven (7) groundwater monitoring stations identified as MW1, MW3, MW4, MW6, MW9, MW11 and MW14 shall be monitored twice annually, April and October, for the following parameters (as listed in Section 10 subsection (a) of the NSE Industrial Approval):

— Conductivity and pH;

— Total petroleum hydrocarbons (TPH); and

— Metals parameters including iron, zinc, manganese, lead, and arsenic.

According to MacGregor (2013), the groundwater monitoring location identified as MW2 was decommissioned with the approval of NSE in the summer of 2011. Therefore, monitoring well MW2 has not been sampled as part of Englobe's monitoring events since April 2014.

Section 7 of the NSE Approval specifies that acute toxicity shall be monitored on an annual basis during the month of April at the following locations:

— TW-1 (North Weir Discharge);

— TW-3 (Outfall at East River); and

— TW-4 (Theilacker Crane Discharge).

The annual report shall summarize and interpret the groundwater monitoring data and identify any impacts as a result of site activities (during the previous calendar year).

Halocarbons, a class of VOC, were reported by the laboratory in both groundwater samples collected from monitoring well MW6 in 2013. Additional VOC analysis at MW6 was recommended in 2014 but

was not approved. TPH and BTEX testing from both events in 2014 and 2015 did not report any halocarbon detections in the groundwater. VOCs were detected in the groundwater at MW6 during the October 2016 sampling event and the spring and fall sampling events in 2017, 2018, 2020, and 2021; the concentrations identified during these events satisfied the NSE Tier I EQS. VOC assessment in groundwater at MW6 was continued in 2022.

Several items were added to the monitoring program for 2022 based on recommendations made in the Englobe 2021 annual monitoring report, including:

- Analysis of groundwater samples for hardness, which will allow for the adjustment of the NSE Tier II PSS for select metals parameters.
- Conducting minor repairs to the monitor wells (e.g., adjustments to the well covers, replacement of damaged or missing J-plugs, etc.) during the April 2022 event.
- Surveying the ground surface elevations of all monitor wells (including MW11 and MW14, which were not provided in previous investigation reports and are currently unknown).

4 Regulatory Framework

Considering current land use, future use of the site and knowledge of local geology, the site has been classified as a commercial site with coarse-grained soil. The site and surrounding area are serviced with municipal water and sewer. Therefore, groundwater results were compared to non-potable guidelines. Site groundwater generally flows west toward East River; this is considered by Englobe to be a freshwater environment that discharges to a marine environment.

In August 2021, NSE provided comments to Build Nova Scotia on Englobe's annual report for the 2020 monitoring program. NSE requested that the results of the 2021 monitoring program be compared to the current and relevant NSE EQS. NSE also indicated that "there are currently discussions underway as to whether the receiving water (East River) is fresh or marine"; as such, comparison to the applicable criteria for groundwater discharging to both freshwater and marine water has been provided.

4.1 TPH/BTEX

Analytical results for petroleum hydrocarbons in groundwater are compared to:

- 2021 NSE Tier I EQS for groundwater at a non-potable site with coarse-grained soil and commercial land use.

4.2 Conductivity and pH

There are no available guidelines for conductivity in groundwater. Analytical results for pH in groundwater are compared to:

- 2021 NSE PSS for groundwater discharging to freshwater surface water (>10m) (no PSS exist for pH in groundwater discharging to marine surface water).

4.3 Metals

Analytical results for metals in groundwater are compared to:

— 2021 NSE PSS for groundwater discharging to freshwater surface water (>10m); and,

— 2021 NSE PSS for groundwater discharging to marine surface water (>10m).

4.4 Volatile Organic Compounds

Analytical results for VOCs in groundwater are compared to:

— 2021 NSE Tier I EQS for groundwater at a non-potable site with coarse-grained soil and commercial land use.

5 Methodology

Figures 1 and 2 (Appendix A) show the monitor well and surface water sampling locations. Figure 1 shows the calculated groundwater flow gradient and hydraulic gradient for the April 2022 event; Figure 2 shows the same information for the October 2022 event.

5.1 Groundwater Sampling

On April 28 and October 17, 2022 Englobe personnel conducted monitoring of the specified groundwater wells for static water level and accessed each well for the purpose of sampling for laboratory testing.

Static water levels were measured and the presence of free product was checked using a Testwell electronic product interface probe. Wells were purged of three well volumes (with Waterra tubing, which was located in some wells, or a new, factory wrapped groundwater bailer) and left to recover. For collection of the water samples for laboratory testing, a 1-litre (1.5” diameter) clear dedicated polyvinyl chloride (PVC) bailer was installed in each well to retrieve the groundwater samples.

In accordance with laboratory protocols, groundwater samples were collected for select metals, conductivity, hardness, pH, TPH/BTEX (Atlantic Partners in RBCA Implementation (PIRI) methodology), and VOC (at MW6 only) analysis.

Water samples were collected in laboratory-supplied containers, placed in cool storage and transported to the Bureau Veritas (BV) laboratory in Bedford, NS for analysis. Metals samples were field-filtered and preserved and petroleum hydrocarbon samples were methanol preserved.

Due to the presence of free product (resembling lube oil) measured in MW11 during the April/October 2014, June/November 2015, and April/October 2016 monitoring events, samples from MW11 were not collected during those events. Samples were collected from this well during the 2017, 2018, 2020, 2021 and 2022 sampling events as there was no longer free product observed in this well.

5.2 Surface Water Sampling

On April 28, 2022 samples were collected from the three specified surface water (effluent) locations for the purpose of toxicity testing. For collection of the water samples, 20-litre buckets and liners (supplied by the laboratory) were used. The samples were delivered in the same day as they were collected to Harris Industrial Testing Service Ltd. in Waverley, NS for toxicity testing (96-hour single concentration acute lethality test using method EPS 1/RM/13 2nd Edition Dec. 2000 with Feb. 2016 Amendments).

5.3 Quality Assurance / Quality Control

During the collection, handling and transport of all quality assurance/quality control (QA/QC) samples the same protocols and best practices employed during sample collection were used.

Field duplicates were collected for groundwater (DUP1) (equivalent to approximately 10% of the samples collected). Field duplicates were collected at the same time as the corresponding primary samples.

Equipment blanks were collected by swirling the interface probe in a newly opened container of distilled water and pouring the water into laboratory supplied containers. Trip blanks consisted of sample bottles prefilled with distilled deionized water provided by BV and transported with the site samples. All Englobe QA/QC samples were blind labelled prior to submission to the laboratory. The results of the QA/QC program are discussed in Section 7.3

Table 5-1 shows the duplicates collected, their collection location and analyses conducted.

Table 5-1: Summary of QA/QC Program Samples

Sample ID	Duplicate ID	SAMPLE DATE	Parameter
MW11	DUP1	28 April 2022	TPH/BTEX, metals, conductivity, hardness, pH
DUP1	Dup1 Lab-Dup	28 April 2022	Conductivity, pH
Equipment Blank	-	28 April 2022	TPH/BTEX, metals, conductivity, hardness, pH
Trip Blank	-	28 April 2022	TPH/BTEX, metals, conductivity, hardness, pH
MW11	DUP1	17 October 2022	TPH/BTEX, metals, conductivity, hardness, pH
Equipment Blank	-	17 October 2022	TPH/BTEX, metals, conductivity, hardness, pH
Trip Blank	-	17 October 2022	TPH/BTEX, metals, conductivity, hardness, pH

6 Field Observations

During the site work, all monitoring wells appeared to be in good condition. Groundwater levels measured and observations made at each location (current and historical) are provided in Table B-1, Appendix B. It should be noted that the top of casing (TOC) elevations for MW11 and MW14 were not recorded in the Stantec Phase II ESA. Therefore, only the groundwater level below TOC is provided.

During the April and October 2022 sampling events, all monitor wells were observed to be protected against tampering with locked covers, as per the NSE Approval Section 10 (g). During the April event, minor monitor well repairs were undertaken at MW6 and MW14 and consisted of pushing the top of the PVC risers down and replacing broken J-plugs.

Free product was not detected in any of the monitor wells.

7 Analytical Results

7.1 Groundwater Analytical Results

Groundwater analytical results are compared with the guidelines as listed in section 4. PHCs for each monitoring well are presented in Tables 1A through 7A (Appendix C). General chemistry results (pH, hardness and conductivity) and select metals parameters (iron, zinc, manganese, lead and arsenic) are presented in Tables 1B through 7B (Appendix C). VOC analytical results (for MW6 only) are presented in Table 4C (Appendix C). Where ranges of concentrations are stated in the report, the highest of the sample result or its duplicate (if applicable) is included.

The tables include both the April and October 2022 analytical results (collected and reported by Englobe) as well as the historical results from previous sampling events completed by others (2010 and 2013) and Englobe (2014 to 2021). Copies of the laboratory certificates for the 2022 sampling events are provided in Appendix D.

7.1.1 TPH/BTEX

Concentrations of modified TPH in groundwater collected from MW4, MW6 and MW14 were reported as below the laboratory detection limit (0.090 mg/L) and below the NSE Tier I EQS during both the April and October 2022 sampling events.

Concentrations of modified TPH in groundwater collected from MW1, MW3, MW9 and MW11 ranged from 0.2 mg/L (MW3 in October) to 15 mg/L (MW1 in April).

Modified TPH concentrations in all groundwater samples collected from the seven monitoring wells were below the NSE Tier I EQS of 20 mg/L.

Concentrations of modified TPH in groundwater samples collected from MW3 in October 2022 were reported above the laboratory detection limits but at concentrations below the NSE Tier I EQS.

Concentrations of BTEX in groundwater samples collected from MW3, MW4, MW6, MW9, MW11, and MW14 were reported as below the laboratory detection limits (0.0010 or 0.0020 mg/L) and below the NSE Tier I EQS during both the April and October 2022 sampling events.

BTEX concentrations in the samples collected from MW1 in April and October 2022 were reported above the laboratory detection limits but below the NSE Tier I EQS.

7.1.2 Conductivity and pH

There are no available and applicable guidelines for conductivity in groundwater. Conductivity in the wells ranged from 270 µS/cm (MW6) to 3,800 µS/cm (MW1) in April 2022, and 300 µS/cm (MW1) to 5,500 µS/cm (MW9 and MW11) in October 2022.

There are no NSE Tier I EQS for pH in groundwater. The NSE Tier II PSS for groundwater discharging to freshwater surface water range for pH is 6.5 to 9.0. In April 2022 pH ranged from 7.16 (MW4) to 7.75 (MW9), while in October 2022, the pH ranged from 7.11 (MW11) to 7.84 (MW1). No pH values were reported outside the range of the available NSE Tier II PSS.

7.1.3 Metals

There are no NSE Tier I EQS for metals in groundwater at non-potable sites. Groundwater results for arsenic, iron, lead, manganese and zinc have been compared to NSE Tier II PSS for groundwater discharging to both freshwater surface water and marine surface water. These results are tabulated in Tables 1B through 7B (Appendix C) and discussed below.

7.1.3.1 Arsenic

In April 2022, arsenic was reported at less than laboratory detection limits (<1.0 µg/L) in groundwater collected from MW3, MW6, MW9 and MW14. Arsenic was reported at 1.0 µg/L at MW11, 1.4 µg/L at MW4 and 3.8 µg/L at MW1.

In October 2022, arsenic was reported as less than laboratory detection limits (<1.0 µg/L) in groundwater collected from MW9, MW11 and MW14. Arsenic ranged from 1.8 µg/L (MW6) to 17.0 µg/L (MW3).

Concentrations of arsenic in groundwater samples collected from the seven monitoring wells were below the NSE Tier II PSS for groundwater discharging to freshwater (50 µg/L) and marine surface water (125 µg/L) during the April and October 2022 sampling events.

7.1.3.2 Iron

In April 2022, iron was reported as less than laboratory detection limits (<50 µg/L) in groundwater collected from MW6 and MW14. Detected concentrations of iron in groundwater samples collected in April 2022 ranged from 230 µg/L (MW9) to 22,000 µg/L (MW1).

In October 2022, iron was reported as less than laboratory detection limits (<50 µg/L) in groundwater collected from MW4 and MW14. Detected concentrations of iron in groundwater samples collected in October 2022 ranged from 310 µg/L (MW9) to 49,000 µg/L (MW6 and MW11).

Concentrations of iron in groundwater samples collected from MW1 and MW11 in April and MW1, MW3, MW6 and MW11 in October exceeded the NSE Tier II PSS for groundwater discharging to freshwater surface water of 3,000 µg/L (no PSS exists for iron in groundwater discharging to marine surface water).

7.1.3.3 Lead

Concentrations of lead in all groundwater samples collected from the seven monitoring wells in April 2022 were reported as less than laboratory detection limits (<0.50 µg/L).

In October 2022, lead was reported at less than laboratory detection limits (<0.50 µg/L) in groundwater collected from MW1, MW4, MW9, MW11 and MW14. Lead was reported at 0.5 µg/L at MW3 and 1.1 µg/L at MW6.

Concentrations of lead in all groundwater samples take in both April and October were below the NSE Tier II PSS for groundwater discharging to freshwater (10-70 µg/L) and marine surface water (20 µg/L) during both the April and October 2022 sampling events. It should be noted that the default criteria for lead in groundwater discharging to freshwater was adjusted via a calculation involving hardness and pH for the 2022 analytical program.

7.1.3.4 Manganese

Concentrations of manganese in groundwater samples collected in April 2022 ranged from 2.1 µg/L (MW6) to 22,000 µg/L (MW1).

Concentrations of manganese in groundwater samples collected in October 2022 ranged from 76 µg/L (MW9 and MW11) to 12,000 µg/L (MW1).

Concentrations of manganese in groundwater samples collected from MW1 in April and October 2022 exceeded the NSE Tier II PSS for groundwater discharging to freshwater surface water (4,300 µg/L). It should be noted that the default criteria for manganese was adjusted via a calculation involving hardness and pH for the 2022 analytical program.

7.1.3.5 Zinc

In April 2022, zinc was reported as less than laboratory detection limits (<5 µg/L) in groundwater collected from MW1, MW6 and MW11. Detected concentrations of zinc in groundwater samples collected in April 2022 ranged from 5.6 µg/L (MW9) to 54 µg/L (MW4).

In October 2022, zinc was reported as less than laboratory detection limits (<5 µg/L) in groundwater collected from MW1 and MW6. Detected concentrations of manganese in groundwater samples collected in October 2022 ranged from 6.7 µg/L (MW11) to 38 µg/L (MW4).

Concentrations of zinc in groundwater samples collected from the seven monitoring wells were below the NSE Tier II PSS for groundwater discharging to freshwater (70 µg/L) and marine surface water (100 µg/L) during both the April and October 2022 sampling events. It should be noted that the default criteria for zinc in groundwater discharging to freshwater was adjusted via a calculation involving hardness and pH for the 2022 analytical program.

7.1.4 VOCs

Concentrations of VOCs in groundwater samples collected from MW6 were reported as below laboratory detection limits with the exception of cis-1,2-dichloroethylene (2.0 µg/L in April and 9.3 µg/L in October, both below the NSE Tier I EQS of 4,600 µg/L, trichloroethylene (12 µg/L in April and 39 µg/L in October, both below the NSE Tier I EQS of 110 µg/L), and vinyl chloride (5.0 µg/L in October, below the NSE Tier 1 EQS of 99 µg/L.

7.1.5 Trends Discussion for Exceedances

7.1.5.1 Modified TPH (Exceeding NSE Tier I EQS)

Concentrations at MW1 were similar to those reported in previous sampling, with a slight overall downward trend observed from a high of 35 mg/L in 2010 to the 15 and 12 mg/L observed in April and October 2022.

At MW9, concentrations of modified TPH were similar to those reported during all monitoring programs from 2013 to 2021. Modified TPH concentrations at MW9 have consistently been significantly lower (i.e., ranging from 0.11 to 2.6 mg/L) than the maximum concentration of 68 mg/L documented in 2010.

At MW11, free product was observed in groundwater during all monitoring events from 2013 to 2016. Concentrations of modified TPH identified in 2022 were slightly lower than those reported since 2017.

7.1.5.2 Iron (Exceeding NSE Tier II PSS)

Concentrations of iron in groundwater at MW1, MW3 and MW11 have fluctuated somewhat during monitoring events at the site but have generally been above the NSE Tier II PSS (discharge to freshwater). Results obtained in 2022 are consistent with those of most of the previous monitoring events. At MW6, iron has historically been reported as less than the detection limit (i.e., <50 µg/L), but was reported to be 49,000 µg/L in the groundwater sample collected in October 2022, which exceeded the NSE Tier II PSS (discharge to freshwater) of 3,000 µg/L. Field observations recorded for this sample were similar to those recorded for previous sampling events (i.e., no notable observations that would indicate an elevated iron concentration).

7.1.5.3 Manganese (Exceeding NSE Tier II PSS)

Concentrations of manganese in groundwater at MW1 and MW4 have fluctuated somewhat during monitoring events at the site. Manganese has consistently exceeded the NSE Tier II PSS (discharge to freshwater) at MW1 and has mostly exceeded the PSS at MW4. Results obtained in 2022 are consistent with those of most of the previous monitoring events, although no exceedances were identified for 2022 due to the default criteria for manganese being adjusted via a calculation involving hardness and pH for the 2022 analytical program.

7.2 Toxicity Testing Results

The NSE Approval indicates that samples collected for toxicity must “Pass” a 96-hour static fish toxicity test.

For all three locations tested (TW1, TW3 and TW4) in April 2022, the laboratory reported 0% Mortality (Pass). The laboratory certificates are provided in Appendix D.

7.3 Quality Assurance/Quality Control results

BV conducts their own internal QA/QC programs consistent with relevant standards and requirements for laboratory certification. The measured values and recoveries are compared to acceptable lower and upper limits. Englobe reviewed the results to verify that the sample result was representative of the QA/QC sample result.

Englobe also reviewed the results of the QA/QC blind field duplicate samples to verify that results were within the acceptable relative percent difference (RPD) ranges. RPD is defined as:

$$RPD = \frac{(\text{sample result} - \text{duplicate result})}{(\text{sample result} + \text{duplicate result})/2} x100$$

The laboratories have established criteria for performing QA/QC on field collected samples and states that no field duplicate pair should have an RPD greater than:

— 40% for general chemistry parameters in water

— 40% for individual metals in water

— 40% for other organic compounds (TPH/BTEX) in water

Tables 8A to 8C (Appendix C) provide a summary of the RPD results for the field and laboratory duplicate samples collected for analysis; it should be noted that RPDs are not calculated in instances where the analyzed parameters in the primary sample, the field duplicate, or both were found to be below the reportable detection limit (RDL) of the laboratory or less than five times the RDL. RPD values were within of the acceptable range in all field duplicates analyzed.

Tables 9 and 10 (Appendix C) provide a summary of the results for the equipment and trip blank samples analysed by BV. BV quality assurance reports were also reviewed for all analyses performed. Method blank, matrix spike and spiked blank results were within accepted laboratory limits.

8 Conclusions

Based on the field observations and analytical results obtained, we make the following conclusions and statements on the identification of any groundwater or surface water discharge impacts as a result of site activities completed by Englobe during the 2022 calendar year:

- Concentrations of modified TPH and BTEX in groundwater samples collected from the seven monitoring wells did not exceed the NSE Tier I EQS of 20 mg/L for all parameters.
- Conductivity in the wells ranged from 270 µS/cm (MW6) to 3,800 µS/cm (MW1) in April 2022, and 300 µS/cm (MW1) to 5,500 µS/cm (MW9 and MW11) in October 2022.
- No pH values were reported outside the range of the available NSE Tier II PSS.
- Concentrations of arsenic, lead and zinc in groundwater samples collected from the seven monitoring wells did not exceed the NSE Tier II PSS for groundwater discharging to surface water during either the April or October 2022 sampling events.
- Concentrations of manganese in groundwater samples collected from MW1 in April and October 2022 exceeded the NSE Tier II PSS for groundwater discharging to freshwater surface water. It should be noted that the default criteria for manganese was adjusted via a calculation involving hardness and pH for the 2022 analytical program. MacGregor (June 2013) reported similar manganese concentrations at these locations dating back to at least April 2003, suggesting that elevated manganese concentrations may be the result of historic buried fill materials on site.
- Concentrations of VOCs in groundwater samples collected from MW6 were reported below NSE Tier I EQS.
- For all three surface water sampling locations (TW1, TW3 and TW4) where toxicity testing was completed in April 2022, the laboratory reported 0% Mortality (Pass).

Groundwater exceedances of the NSE Tier I EQS (modified TPH) or Tier II PSS (iron and manganese) identified in 2022 were consistent with concentrations identified during previous monitoring events conducted at the site.

9 Recommendations

Englobe recommends continuing the monitoring program at the site in April and October 2023 following the same sampling methodology and laboratory analytical program conducted for the 2022 monitoring events.

10 Report Use and Conditions

This report was prepared for the exclusive use of Build Nova Scotia and is based on data and information obtained during site visits by Englobe Corp., personnel in April and October 2022 for the purpose of collection of groundwater samples from seven existing monitoring wells and surface water discharge from three sampling locations. The report is based solely upon the condition of the property

on the dates of such site visits, supplemented by information obtained and described herein including tabulation and interpretation of selected laboratory groundwater and surface water toxicity analyses.

The scope of the services performed may not be appropriate to satisfy the needs of third parties. Any use which a third party makes of this report, or any reliance on or decisions made based on it, is the sole responsibility of the third party. Englobe Corp. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The statements and conclusions presented in this report are professional opinions based upon visual observations made during the scope of work identified herein.

Environmental conditions are dynamic in nature and changing circumstances in the environment and in the use of the property can alter radically the conclusions and information contained herein.

Appendix A
Site Figures

ENGLOBE

Build Nova Scotia

2022 Annual Groundwater Quality Monitoring Report
Trenton Commercial Park, Civic No. 34 Power
Plant Road, Trenton, Nova Scotia

Figure 1

Groundwater Elevations (April 28, 2022)

Sources :

Base : Topographic Map, © 2014 DigitalGlobe Image courtesy os USGS
Mapping : Englobe

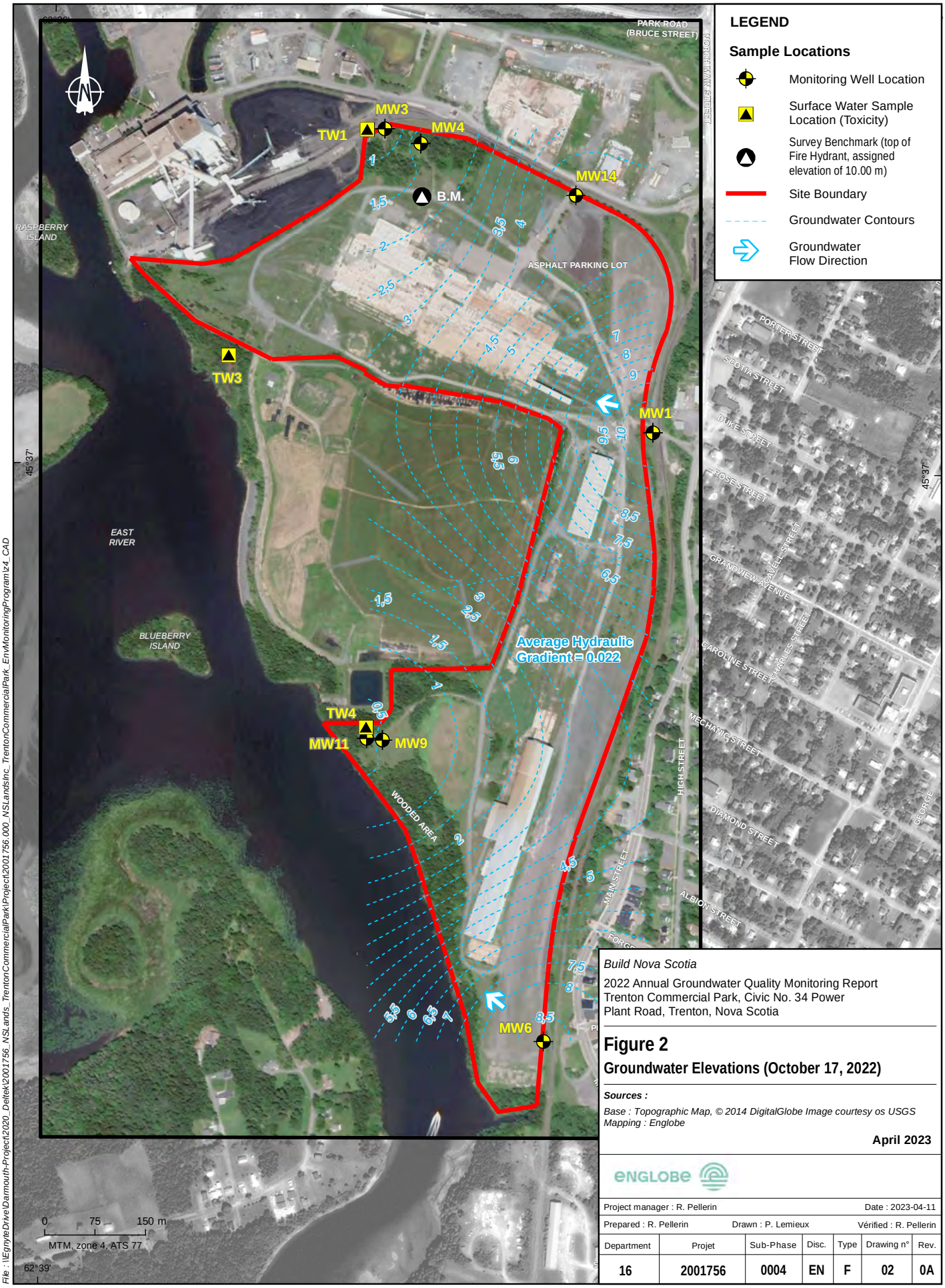
April 2022

ENGLOBE

Project manager : R. Pellerin					Date : 2023-04-11
Prepared : R. Pellerin	Drawn : P. Lemieux				Vérified : R. Pellerin

Department	Projet	Sub-Phase	Disc.	Type	Drawing n°	Rev.
16	2001756	0004	EN	F	01	0A

File : \\EgnyteDrive\Dartmouth-Project\2020_Deltek\2001756_NSLands_TrentonCommercialPark\Project\2001756.000_NSLandsInc_TrentonCommercialPark_EnvMonitoringProgram\24_CAD



Build Nova Scotia

2022 Annual Groundwater Quality Monitoring Report
Trenton Commercial Park, Civic No. 34 Power
Plant Road, Trenton, Nova Scotia

Figure 2

Groundwater Elevations (October 17, 2022)

Sources :

Base : Topographic Map, © 2014 DigitalGlobe Image courtesy os USGS
Mapping : Englobe

April 2023

ENGLOBE

Project manager : R. Pellerin					Date : 2023-04-11
Prepared : R. Pellerin	Drawn : P. Lemieux				Vérified : R. Pellerin

Department	Projet	Sub-Phase	Disc.	Type	Drawing n°	Rev.
16	2001756	0004	EN	F	02	0A

File : \\EgnyteDrive\Dartmouth-Project\2020_Deltek\2001756_NSLands_TrentonCommercialPark\Project\2001756.000_NSLandsInc_TrentonCommercialPark_EnvMonitoringProgram\24_CAD

Appendix B
Groundwater Field Observations

ENGLOBE

TABLE B-1: Groundwater Field Observations
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.004

Date	Field Observations						
	Location						
	MW1	MW3	MW4	MW6	MW9	MW11	MW14
May 21, 2013	-	-	-	-	-	-	-
October 25, 2013	Gasoline odour, light grey in colour, minor sediment	Dark grey in colour, silty, groundwater was light grey upon sampling	Light brown in colour, silty, light brown upon sampling	Clear, minor sediment noted	Petroleum sheen present, brown in colour, abundant iron flocculants, groundwater clear upon sampling	Free product (10mm)	Light brown in colour, silty, clear upon sampling
April 23, 2014	Dark grey to black, PHC odour and sheen	Dark grey to black, minor silt, no sheen	Light brown, silty, no sheen	Mostly clear	Red-brown, PHC odour and sheen, iron flocculants present	Free product (20mm)	Light brown, silty, no sheen
October 30, 2014	Dark grey to black, PHC odour and sheen	Dark grey to black, minor silt, no sheen	Light brown, silty, no sheen	Mostly clear	Red-brown, PHC odour and sheen, iron flocculants present	Free product (5mm)	Light brown, silty, no sheen
June 24, 2015	Mild PHC odour in sample	Discolored sample (Grey/black)	Discolored sample (Brown/red), heavy silt	Clear sample	Clear sample	Free product (1-2mm)	Clear sample
November 12, 2015	Strong PHC odour in sample	Significant sediment visible	Significant sediment visible	Clear sample	Clear sample, sulphur odour	Free product (2mm)	Clear sample
April 26, 2016	-	-	-	-	-	Free product (1-2mm)	-
October 24, 2016	-	-	-	-	-	Free product (1-2mm)	-
April 24, 2017	PHC odour	Silty	Silty	-	-	-	-
October 12, 2017	PHC odour	Silty	Silty	-	-	-	-
April 9, 2018	PHC odour	Silty	Silty	-	-	-	-
October 11, 2018	PHC odour	Silty	Silty	-	-	-	-
May 28, 2020	PHC odour	Silty	Silty	Sheen	Silty	PHC odour, sheen	-
October 28, 2020	PHC odour	Silty	Silty	-	PHC odour	PHC odour, sheen	-
April 28, 2021	Strong PHC odour	Black, organic odour	Light brown	Slight sheen	Light brown	PHC sheen	-
October 20, 2021	PHC odour and sheen	Sheen	Silty	-	PHC odour	PHC odour, sheen	-
April 28, 2022	Strong PHC odour, sheen, grey colour, strace silt.	Black, organic odour, silty. Area flooded in early spring	Brown, very silty.	Silty. PVC hammered down below steel casing.	PHC odour, heavy sheen, silty. Clear on sampling.	Black substance in MW, floating solids, clear to orange in colour. No PVC in well?	Brown, silty. PVC hammered down and flushmount reinstalled.
October 17, 2022	PHC odour, grey colour, silty	Brown, silty	Brown, silty	Brown, silty	Brown, silty	Floating solids, clear	Black, silty

TABLE B-2: Groundwater Levels
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.004

Date	Measurement	Location						
		MW1	MW3	MW4	MW6	MW9	MW11	MW14
Ground Surface Elevation (masl) [1]		13.51	1.84	4.27	10.23	3.47	2.11	7.75
Top of Casing Elevation (masl) [1]		14.01	2.35	5.10	11.31	3.97	2.94	7.65
April 19, 2010	Depth to GW	2.63	1.71	3.76	2.88	2.84	-	2.77
	GW Elevation	11.38	0.64	1.34	8.43	1.13	-	4.88
May 21, 2013	Depth to GW	-	-	-	-	-	-	-
	GW Elevation	-	-	-	-	-	-	-
October 25, 2013	Depth to GW	3.91	1.66	3.39	2.52	2.86	2.74	2.77
	GW Elevation	10.10	0.69	1.70	8.79	1.11	0.20	4.89
April 23, 2014	Depth to GW	2.10	1.67	3.29	2.60	2.96	2.52	2.23
	GW Elevation	11.91	0.68	1.81	8.71	1.01	0.42	5.42
October 30, 2014	Depth to GW	4.87	1.50	3.37	2.47	3.01	2.75	2.87
	GW Elevation	9.14	0.85	1.73	8.84	0.96	0.19	4.78
June 24, 2015	Depth to GW	2.45	1.41	3.07	2.33	2.00	2.47	2.20
	GW Elevation	11.56	0.93	2.02	8.98	1.97	0.48	5.45
November 12, 2015	Depth to GW	4.60	1.68	3.41	2.64	3.22	2.88	2.99
	GW Elevation	9.41	0.67	1.69	8.67	0.75	0.06	4.66
April 26, 2016	Depth to GW	1.89	1.64	3.23	2.52	2.90	2.60	2.17
	GW Elevation	12.12	0.71	1.87	8.79	1.07	0.34	5.48
October 24, 2016	Depth to GW	3.00	3.22	1.44	2.38	2.67	2.58	2.85
	GW Elevation	11.01	-0.87	3.66	8.93	1.30	0.36	4.80
April 24, 2017	Depth to GW	2.29	1.59	3.42	2.67	3.15	2.73	2.73
	GW Elevation	11.72	0.76	1.68	8.64	0.82	0.21	4.92
October 12, 2017	Depth to GW	4.01	1.66	3.43	2.64	3.25	2.87	3.15
	GW Elevation	10.00	0.69	1.67	8.67	0.72	0.07	4.50
April 9, 2018	Depth to GW	2.83	1.15	2.98	2.57	2.64	2.68	2.51
	GW Elevation	11.18	1.20	2.12	8.74	1.33	0.26	5.14
October 11, 2018	Depth to GW	4.00	1.66	3.44	2.75	3.23	2.93	3.09
	GW Elevation	10.01	0.69	1.66	8.56	0.74	0.01	4.56
May 28, 2020	Depth to GW	2.58	2.56	3.52	2.66	4.2	2.66	2.59
	GW Elevation	11.43	-0.21	1.58	8.65	-0.23	0.28	5.06
October 28, 2020	Depth to GW	4.58	1.63	3.50	2.92	3.99	3.08	3.18
	GW Elevation	9.43	0.72	1.60	8.39	-0.02	-0.14	4.47
April 28, 2021	Depth to GW	2.64	1.57	3.28	2.67	3.09	2.44	2.45
	GW Elevation	11.37	0.78	1.82	8.64	0.88	0.50	5.20
October 20, 2021	Depth to GW	3.91	1.57	3.36	2.43	2.96	2.65	2.81
	GW Elevation	10.10	0.78	1.74	8.88	1.02	0.29	4.84
April 28, 2022	Depth to GW	1.30	0.30	2.11	1.32	2.39	1.62	2.19
	GW Elevation	12.71	2.05	2.99	9.99	1.58	1.32	5.46
October 17, 2022	Depth to GW	3.66	1.78	3.48	2.71	3.25	2.85	2.87
	GW Elevation	10.35	0.57	1.62	8.60	0.73	0.10	4.79

Notes:
masl - meters above sea level
Depth to Groundwater - meters below top of casing (mbTOC)
[1] Ground surface and Top of Casing elevations (masl) acquired by Englobe on October 17, 2022.

Appendix C
Analytical Tables

ENGLOBE

TABLE 1A: PETROLEUM HYDROCARBON COMPOUNDS in Groundwater (MW1)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter		Units	NSE Tier I EQS[1]	MW1											
				2010	2013		20014		2015		2016		2017		
				16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	Lab-Dup	12-Oct-17
BTEX	Benzene	mg/L	6.3	<0.001	0.016	<0.025	<0.025	0.03	0.01	0.028	<0.010	0.012	<0.010	-	<0.050
	Toluene	mg/L	20	0.23	0.1	0.1	0.071	0.085	0.039	0.06	0.043	0.029	0.024	-	<0.050
	Ethylbenzene	mg/L	20	4.0	2.3	2.2	1.9	1.8	2.0	1.7	1.8	0.99	1.5	-	1.4
	Xylenes	mg/L	20	8.9	3.6	3.3	2.7	2.7	1.7	2.3	2.0	1.3	1.5	-	2.0
Modified TPH	Gas Range	mg/L	-	31	17	18	15	15	16	15	14	12	13	-	14
	Fuel Range (C10-C16)	mg/L	-	4.1	2.4	1.9	2.5	2.3	1.9	2.3	2.8	3.0	2.7	2.7	4.1
	Fuel Range (>C16-C21)	mg/L	-		0.066	<0.050	<0.050	<0.050	0.054	<0.050	<0.050	<0.050	<0.050	<0.050	0
	Lube Range (>C21-C32)	mg/L	-	<0.1	0.5	<0.10	<0.10	<0.10	0.15	<0.10	0.13	<0.10	<0.10	<0.10	0.28
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	*35*	20	20	17	17	19	17	17	15	15	-	19
Product Resemblance		-	-	One product in the gas/fuel oil range.	Gasoline fraction. Lube oil fraction.	Gasoline fraction.	One product in the gasoline range.	One product in the gas/fuel oil range.	One product in the gas/fuel oil range.	One product in the gas/fuel oil range.	One product in the gas/fuel oil range.	Gasoline fraction.	One product in the gasoline range.	-	One product in the gas/fuel oil range

Parameter		Units	NSE Tier I EQS[1]	MW1									
				2018			2020		2021			2022	
				9-Apr-18	Lab-Dup	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	MW-DUP	28-Apr-22	17-Oct-22
BTEX	Benzene	mg/L	6.3	<0.025	-	<0.010	<0.0030	0.009	<0.0040	<0.0050	0.0063	<0.0030	<0. 0060
	Toluene	mg/L	20	<0.025	-	0.02	0.0089	0.014	0.009	0.012	0.016	0.0073	0.019
	Ethylbenzene	mg/L	20	0.86	-	0.89	0.79	0.87	0.81	0.68	0.82	0.77	0.62
	Xylenes	mg/L	20	1.0	-	1.2	0.79	1.0	0.77	0.72	0.89	0.72	0.73
Modified TPH	Gas Range	mg/L	-	7.6	-	12	10	12	9.4	9	8.7	11	8.8
	Fuel Range (C10-C16)	mg/L	-	2.3	2.3	2.4	2.5	2.7	2.2	2.8	2.5	3.5	2.7
	Fuel Range (>C16-C21)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.055	0.050
	Lube Range (>C21-C32)	mg/L	-	<0.10	<0.10	0.17	0.092	0.11	0.14	<0.090	0.093	0.10	<0.090
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	9.9	-	15	13	14	12	12	11	15	12
Product Resemblance		-	-	One product in the gasoline/fuel range.	-	One product in the gas/fuel oil range. Possible lube oil fraction.	One product in the gas/fuel oil range. Possible lube oil fraction.	One product in the gas/fuel oil range. Unidentified compound(s) in lube oil fraction.	One product in the gas/fuel oil range. Possible lube oil fraction.	One product in the gas/fuel oil range.	One product in the gas/fuel oil range.	One product in the gas/fuel oil range.	One product in the gas/fuel oil range.

Notes:

value	- exceeds NSE EQS
-	- no guideline

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.

TABLE 1B: CONDUCTIVITY, pH and METALS in Groundwater (MW1)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW1										
			Freshwater [2]	Marine Water [3]	2010	2013		2014		2015		2016		2017	
					16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17
Laboratory Conductivity	µS/cm	-	-	-	-	3100	2300	4100	3500	4800	4300	4600	3500	3,500.00	3100
Field Conductivity	µS/cm														-
Laboratory pH	Units	-	6.5-9.0	-	-	7.37	7.30	6.97	7.23	7.16	7.17	7.06	7.04	7.02	7.43
Field pH	Units	-	6.5-9.0	-	-	-	-	7.07	-	-	-	-	-	-	-
Hardness	mg/L													-	-
Metals															
Dissolved Arsenic (As)	ug/L	-	50	125	-	<1.0	17	3.2	14	1.8	22	2.4	18	3	3.2
Dissolved Iron (Fe)	ug/L	-	3000	-	-	<50	***6500***	***24000***	***10000***	***29000***	***24000***	***31000***	***17000***	***17000***	***11000***
Dissolved Lead (Pb)	ug/L	-	10*	20	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	4300*	-	-	***37200***	***21000***	***61000***	***30000***	***53000***	***37000***	***46000***	***22000***	***26000***	***17000***
Dissolved Zinc (Zn)	ug/L	-	70*	100	-	<5.0	<5.0	5.2	<5.0	20	<5.0	9.5	7.2	<5.0	<5.0

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW1								
			Freshwater [2]	Marine Water [3]	2018		2020		2021			2022	
					9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	MW-DUP	28-Apr-22	17-Oct-22
Laboratory Conductivity	µS/cm	-	-	-	3300	3800	4100	3300	3400	4000	3900	3800	3000
Field Conductivity	µS/cm	-	-	-								4790	3040
Laboratory pH	Units	-	6.5-9.0	-	7.11	6.89	7.01	7.03	7.23	7.21	7.27	7.65	7.84
Field pH	Units	-	6.5-9.0	-	-	-	-	-	-	-	-	6.88	7.01
Hardness	mg/L	-	-	-	-	-	-	-	-	-	-	160	95
Metals													
Dissolved Arsenic (As)	ug/L	-	50	125	6.5	21	1.0	3.1	2.3	3.7	14	3.8	11
Dissolved Iron (Fe)	ug/L	-	3000	-	***14000***	***19000***	***24000***	***14000***	***20000***	***20000***	***19000***	***22000***	***11000***
Dissolved Lead (Pb)	ug/L	-	10-70*	20	0.76	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	5600-14000	-	***23000***	***29000***	***31000***	***15000***	***23000***	***21000***	***21000***	***22000***	***12000***
Dissolved Zinc (Zn)	ug/L	-	70-950*	100	23	<5.0	7.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for fresh water
value	- exceeds NSE PSS for marine water
-	- no guideline
*	- guidelines have been adjusted via a calculation involving hardness and pH for the 2022 analytical program.

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.
[2] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to freshwater surface water (>10m)
[3] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to marine surface water (>10m)

TABLE 2A: PETROLEUM HYDROCARBON COMPOUNDS in Groundwater (MW3)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter		Units	NSE Tier I EQS[1]	MW3										
				2010	2013		2014		2015		2016		2017	
				16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17
BTEX	Benzene	mg/L	6.3	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	0.01	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	0.01	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Fuel Range (C10-C16)	mg/L	-	<0.05	0.16	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-		0.16	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	-	<0.1	0.40	<0.10	<0.10	<0.10	<0.10	<0.10	0.1	<0.10	0.11	0.13
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.1	<0.10	0.11	0.13
Product Resemblance		-	-	-	One product in fuel oil range. Lube oil fraction.	-	-	-	-	-	Possible lube oil fraction.	-	Lube oil fraction.	Possible lube oil fraction

Parameter		Units	NSE Tier I EQS[1]	MW3							
				2018		2020		2021		2022	
				9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.010	<0.010	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.051
	Lube Range (>C21-C32)	mg/L	-	<0.10	<0.10	<0.090	<0.090	<0.090	<0.090	<0.090	0.15
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	<0.10	<0.10	<0.090	<0.090	<0.090	<0.090	<0.090	0.2
Product Resemblance		-	-	-	-	-	-	-	-	-	Possible lube oil fraction.

Notes:

value	- exceeds NSE EQS
-	- no guideline

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.

TABLE 2B: CONDUCTIVITY, pH and METALS in Groundwater (MW3)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW3											
			Freshwater [2]	Marine Water [3]	2010	2013		2014		2015			2016		2017	
					16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	Lab-Dup	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17
Laboratory Conductivity	µS/cm	-	-	-	590	640	560	510	440	520	610	-	620	520.00	620	570
Field Conductivity	µS/cm				-	-	-	-	-	-	-	-	-	-	-	-
Laboratory pH	Units	-	6.5-9.0	-	6.65	6.99	6.82	6.77	6.92	7.40	6.97	-	7.28	7.02	6.92	6.95
Field pH	Units	-	6.5-9.0	-	-	-	-	7.11	6.79	-	-	-	-	-	-	-
Hardness	mg/L				-	-	-	-	-	-	-	-	-	-	-	-
Metals																
Dissolved Arsenic (As)	ug/L	-	50	125	5	<1.0	8.9	2.2	1.6	1.6	2.7	2.6	1.5	1.9	3.3	4.4
Dissolved Iron (Fe)	ug/L	-	3000	-	***8300***	<50	2400	880	2100	***3700***	***6400***	***6300***	***3500***	***4200***	***8400***	***8300***
Dissolved Lead (Pb)	ug/L	-	10*	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	4300*	-	2800	3270	3400	2800	1500	2400	2700	2700	2300	2000	2900	2900
Dissolved Zinc (Zn)	ug/L	-	70*	100	20	42	11	16	20	37	38	39	17	15	28	11

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW3							
			Freshwater [2]	Marine Water [3]	2018		2020		2021		2022	
					9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
Laboratory Conductivity	µS/cm	-	-	-	700	630	820	680	870	480	940	740
Field Conductivity	µS/cm				-	-	-	-	-	-	1535	790
Laboratory pH	Units	-	6.5-9.0	-	7.02	6.77	6.99	6.91	6.97	7.28	7.51	7.42
Field pH	Units	-	6.5-9.0	-	-	-	-	-	-	-	6.86	6.67
Hardness	mg/L				-	-	-	-	-	-	96	130
Metals												
Dissolved Arsenic (As)	ug/L	-	50	125	2.3	4.3	3.7	2.0	1.4	2.3	<1.0	17
Dissolved Iron (Fe)	ug/L	-	3000	-	***7400***	***9200***	<50	***9400***	***4400***	***3100***	1500	***7400***
Dissolved Lead (Pb)	ug/L	-	10-70*	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.5
Dissolved Manganese (Mn)	ug/L	-	5600-14000	-	3200	3200	***4500***	***5700***	3600	3300	1400	3000
Dissolved Zinc (Zn)	ug/L	-	70-950*	100	17	6.3	24	<5.0	14	7.8	16	8.6

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for fresh water
value	- exceeds NSE PSS for marine water
-	- no guideline
*	- guidelines have been adjusted via a calculation involving hardness and pH for the 2022 analytical program.

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.
[2] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to freshwater surface water (>10m)
[3] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to marine surface water (>10m)

TABLE 3A: PETROLEUM HYDROCARBON COMPOUNDS in Groundwater (MW4)
Client: Nova Scotia Lands Inc.
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter		Units	NSE Tier I EQS[1]	MW4										
				2010	2013		2014		2015		2016		2017	
				16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17
BTEX	Benzene	mg/L	6.3	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Fuel Range (C10-C16)	mg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Product Resemblance		-	-	-	-	-	-	-	-	-	-	-	-	-

Parameter		Units	NSE Tier I EQS[1]	MW4							
				2018		2020		2021		2022	
				9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	4-Oct-21	28-Apr-22	17-Oct-22
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.010	<0.010	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	-	<0.10	<0.10	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	<0.10	<0.10	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Product Resemblance		-	-	-	-	-	-	-	-	-	-

Notes:

value	- exceeds NSE EQS
-	- no guideline

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.

TABLE 3B: CONDUCTIVITY, pH and METALS in Groundwater (MW4)
Client: Nova Scotia Lands Inc.
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW4										
			Freshwater [2]	Marine Water [3]	2010	2013		2014		2015		2016		2017	
					16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17
Laboratory Conductivity	µS/cm	-	-	-	-	710	420	380	400	400	380	370	340	340	340
Field Conductivity	µS/cm				-	-	-	-	-	-	-	-	-	-	-
Laboratory pH	Units	-	6.5-9.0	-	-	7.71	6.53	6.56	6.72	6.87	6.79	6.89	6.75	6.50	6.55
Field pH	Units	-	6.5-9.0	-	-	-	-	7.05	6.45	-	-	-	-	-	-
Hardness	mg/L					-	-	-	-	-	-	-	-	-	-
Metals															
Dissolved Arsenic (As)	ug/L	-	50	125	-	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.10	<1.0
Dissolved Iron (Fe)	ug/L	-	3000	-	-	<50	130	82	50	<50	<50	<50	<50	<50	<50
Dissolved Lead (Pb)	ug/L	-	10*	20	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	4300*	-	-	4240	3600	2700	***4800***	***4700***	***4900***	4100	***5100***	***5100***	***4500***
Dissolved Zinc (Zn)	ug/L	-	70*	100	-	<5.0	59	***82***	47	64	37	***72***	45	54	56

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW4							
			Freshwater [2]	Marine Water [3]	2018		2020		2021		2022	
					9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
Laboratory Conductivity	µS/cm	-	-	-	350	340	330	330	330	400	340	360
Field Conductivity	µS/cm				-	-	-	-	-	-	1581	362
Laboratory pH	Units	-	6.5-9.0	-	6.69	6.77	6.59	6.57	6.65	6.97	7.16	7.23
Field pH	Units	-	6.5-9.0	-	-	-	-	-	-	-	6.64	6.62
Hardness	mg/L				-	-	-	-	-	-	76	370
Metals												
Dissolved Arsenic (As)	ug/L	-	50	125	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	1.4	<1.0
Dissolved Iron (Fe)	ug/L	-	3000	-	<50	<50	<50	<50	<50	57	330	<50
Dissolved Lead (Pb)	ug/L	-	10-70*	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	5600-14000	-	***4800***	***4900***	***5600***	4200	***5600***	***4400***	5200	7300
Dissolved Zinc (Zn)	ug/L	-	70-950*	100	64	50	55	47	49	54	54	38

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for fresh water
value	- exceeds NSE PSS for marine water
-	- no guideline
*	- guidelines have been adjusted via a calculation involving hardness and pH for the 2022 analytical program.

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.
[2] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to freshwater surface water (>10m)
[3] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to marine surface water (>10m)

TABLE 4A: PETROLEUM HYDROCARBON COMPOUNDS in Groundwater (MW6)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter		Units	NSE Tier I EQS[1]	MW6												
				2010	2013		2014		2015		2016		2017		2018	
				16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17	9-Apr-18	11-Oct-18
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.010	0.018*	0.024	<0.010	<0.010	<0.010	<0.010	0.012	0.03*	0.017	0.035	0.0162	0.0352
	Fuel Range (C10-C16)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-		0.052	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	-	<0.10	0.74	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	<0.10	0.81	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Product Resemblance		-	-	-	Lube oil fraction.	-	-	-	-	-	-	-	-	-	-	-

Parameter		Units	NSE Tier I EQS[1]	MW6					
				2020		2021		2022	
				28-May-20	28-Oct-20	28-Apr-21	22-Oct-21	28-Apr-22	17-Oct-22
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	-	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Product Resemblance		-	-	-	-	-	-	-	-

Notes:

value	- exceeds NSE EQS
-	- no guideline

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.

TABLE 4B: CONDUCTIVITY, pH and METALS in Groundwater (MW6)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW6												
			Freshwater [2]	Marine Water [3]	2010	2013		2014		2015			2016		2017		2018
					16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	Lab-Dup	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17	9-Apr-18
Laboratory Conductivity	µS/cm	-	-	-	-	230	400	240	420	190	210	-	160	220.00	200	190	210
Field Conductivity	µS/cm					-	-	-	-	-	-	-	-	-	-	-	-
Laboratory pH	Units	-	6.5-9.0	-	-	6.71	6.97	6.70	7.21	6.77	6.79	-	6.68	6.83	6.54	6.55	6.62
Field pH	Units	-	6.5-9.0	-	-	-	-	7.21	6.84	-	-	-	-	-	-	-	-
Hardness	mg/L					-	-	-	-	-	-	-	-	-	-	-	-
Metals																	
Dissolved Arsenic (As)	ug/L	-	50	125	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	-	3000	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Dissolved Lead (Pb)	ug/L	-	10*	20	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	4300*	-	-	2.8	170	23	190	4.5	41	40	2.7	24	6.9	13	8.4
Dissolved Zinc (Zn)	ug/L	-	70*	100	-	<5.0	6.1	5.5	5.1	9.2	<5.0	<5.0	8.8	9.8	7.2	17	5.8

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW6							
			Freshwater [2]	Marine Water [3]	2018		2020		2021		2022	
					9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	22-Oct-21	28-Apr-22	17-Oct-22
Laboratory Conductivity	µS/cm	-	-	-	210	190	140	210	190	220	270	370
Field Conductivity	µS/cm			-	-	-	-	-	-	-	NR	347
Laboratory pH	Units	-	6.5-9.0	-	6.62	6.52	6.65	6.40	6.57	7.46	7.49	7.5
Field pH	Units	-	6.5-9.0	-	-	-	-	-	-	-	6.89	6.73
Hardness	mg/L			-	-	-	-	-	-	-	99	1100
Metals												
Dissolved Arsenic (As)	ug/L	-	50	125	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8
Dissolved Iron (Fe)	ug/L	-	3000	-	<50	<50	<50	<50	<50	<50	<50	***49000***
Dissolved Lead (Pb)	ug/L	-	10-70*	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1
Dissolved Manganese (Mn)	ug/L	-	5600-14000	-	8.4	17	6.4	37	12	44	2.1	4700
Dissolved Zinc (Zn)	ug/L	-	70-950*	100	5.8	10	7.4	7.4	5.1	6.1	<5.0	<5.0

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for fresh water
value	- exceeds NSE PSS for marine water
-	- no guideline
*	- guidelines have been adjusted via a calculation involving hardness and pH for the 2022 analytical program.

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.
[2] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to freshwater surface water (>10m)
[3] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to marine surface water (>10m)

TABLE 4C: VOLATILE ORGANIC COMPOUNDS (VOCs) COMPOUNDS in Groundwater

Client: Build Nova Scotia

Site Location: Civic No. 34 Power Plant Road, Trenton, NS

Englobe Project No.: 2001756.000

Parameter	Units	NSE Tier I EQS[1]	MW6												
			2016	2017			2018		2020			2021		2022	
			24-Oct-16	24-Apr-17	Lab-Dup	12-Oct-17	9-Apr-18	11-Oct-18	28-May-20	Lab-Dup	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
Chlorobenzenes															
1,2-Dichlorobenzene	ug/L	64000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	ug/L	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-Dichlorobenzene	ug/L	2600	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzene	ug/L	180	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Volatile Organics															
1,1,1-Trichloroethane	ug/L	13000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	ug/L	630	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/L	910	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethane	ug/L	6600	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-Dichloroethylene	ug/L	5600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	ug/L	130	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane	ug/L	330	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	ug/L	6300	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	ug/L	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	ug/L	84000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	ug/L	33	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride (Tetrachloromethane)	ug/L	6.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroethane	ug/L	-	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chloroform	ug/L	380	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	ug/L	-	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
cis-1,2-Dichloroethylene	ug/L	4600	10	6.3	6.2	8.8	6.9	11	2.5	2.5	8.6	6.2	12	2.0	9.3
cis-1,3-Dichloropropene	ug/L	100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromochloromethane	ug/L	10000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	ug/L	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylene Dibromide	ug/L	51	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl t-butyl ether (MTBE)	ug/L	4300	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methylene Chloride(Dichloromethane)	ug/L	43000	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
o-Xylene	ug/L	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
p+m-Xylene	ug/L		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	26000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethylene	ug/L	1200	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	ug/L	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Trihalomethanes	ug/L	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Xylenes	ug/L	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethylene	ug/L	4900	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	ug/L	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	ug/L	110	31	25	24	40	22	44	19	19	34	25	33	12	29
Trichlorofluoromethane (FREON 11)	ug/L	-	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Vinyl Chloride	ug/L	99	3.8	<0.50	<0.50	1.9	<0.50	2.4	<0.50	<0.50	2.3	<0.50	<8.1	<8.1	5

Notes:

value	- exceeds NSE EQS
-	- no guideline

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.

TABLE 5A: PETROLEUM HYDROCARBON COMPOUNDS in Groundwater (MW9)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter		Units	NSE Tier I EQS[1]	MW9											
				2010	2013		2014		2015		2016		2017		2018
				16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17	9-Apr-18
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Fuel Range (C10-C16)	mg/L	-	5.7	0.051	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-		0.32	0.05	0.053	<0.050	0.05	0.12	0.09	0.43	0.19	0.16	0.089
	Lube Range (>C21-C32)	mg/L	-	63	2.3	0.33	0.26	0.11	0.37	0.76	0.54	3.4	1.6	1.4	0.69
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	*68*	2.6	0.38	0.31	0.11	0.42	0.88	0.63	3.8	1.8	1.5	0.78
Product Resemblance		-	-	Lube oil fraction	Lube oil fraction	Lube oil fraction	Lube oil fraction	Lube oil fraction.	Lube oil fraction	Lube oil fraction.	Lube oil fraction	Lube oil fraction	Lube oil fraction.	Lube oil fraction	Lube oil fraction.

Parameter		Units	NSE Tier I EQS[1]	MW9							
				2018		2020		2021		2022	
				9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.010	<0.010	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	-	<0.050	<0.050	<0.050	0.051	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-	0.089	0.090	0.079	0.21	0.2	0.2	0.075	0.15
	Lube Range (>C21-C32)	mg/L	-	0.69	0.64	0.58	1.3	1.7	1.6	0.58	0.93
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	0.78	0.73	0.66	1.5	1.9	1.8	0.66	1.1
Product Resemblance		-	-	Lube oil fraction.	Lube oil fraction.	Lube oil fraction.	Lube oil fraction.	Lube oil fraction.	Lube oil fraction.	Lube oil fraction.	Lube oil fraction.

Notes:

value	- exceeds NSE EQS
-	- no guideline

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.

TABLE 5B: CONDUCTIVITY, pH and METALS in Groundwater (MW9)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW9											
			Freshwater [2]	Marine Water [3]	2010	2013		2014		2015		2016		2017		
					16-Apr-10	21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	Lab-Dup	12-Oct-17
Laboratory Conductivity	µS/cm	-	-	-	-	820	660	650	690	500	670	560	560	460	-	630
Field Conductivity	µS/cm				-	-	-	-	-	-	-	-	-	-	-	-
Laboratory pH	Units	-	6.5-9.0	-	-	7.17	7.16	7.11	7.30	7.55	7.42	7.53	7.41	7.34	-	7.37
Field pH	Units	-	6.5-9.0	-	-	-	-	7.28	-	-	-	-	-	-	-	-
Hardness	mg/L				-	-	-	-	-	-	-	-	-	-	-	-
Metals																
Dissolved Arsenic (As)	ug/L	-	50	125	-	<1.0	<1.0	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	-	3000	-	-	<50	640	370	550	<50	890	220	260	480	470	820
Dissolved Lead (Pb)	ug/L	-	10*	20	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	4300*	-	-	592	490	320	600	47	940	300	170	520	520	1000
Dissolved Zinc (Zn)	ug/L	-	70*	100	-	10	5.2	9.5	12	12	<5.0	8.6	8.2	<5.0	<5.0	<5.0

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW9								
			Freshwater [2]	Marine Water [3]	2018			2020		2021		2022	
					9-Apr-18	Lab-Dup	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
Laboratory Conductivity	µS/cm	-	-	-	520	-	630	540	700	530	640	510	5500
Field Conductivity	µS/cm				-	-	-	-	-	-	-	964	760
Laboratory pH	Units	-	6.5-9.0	-	7.33	-	7.25	7.52	7.39	7.14	7.40	7.75	7.79
Field pH	Units	-	6.5-9.0	-	-	-	-	-	-	-	-	6.90	6.93
Hardness	mg/L				-	-	-	-	-	-	-	240	790
Metals													
Dissolved Arsenic (As)	ug/L	-	50	125	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	-	3000	-	69	470	620	220	1500	160	230	230	310
Dissolved Lead (Pb)	ug/L	-	10-70*	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	5600-14000	-	300	520	850	780	1400	360	330	260	76
Dissolved Zinc (Zn)	ug/L	-	70-950*	100	9.3	<5.0	<5.0	8.1	5.9	8.5	6.2	5.6	9

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for fresh water
value	- exceeds NSE PSS for marine water
-	- no guideline
*	- guidelines have been adjusted via a calculation involving hardness and pH for the 2022 analytical program.

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.
[2] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to freshwater surface water (>10m)
[3] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to marine surface water (>10m)

TABLE 6A: PETROLEUM HYDROCARBON COMPOUNDS in Groundwater (MW11)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter		Units	NSE Tier I EQS[1]	MW11											
				2013		2014		2015		2016		2017		2018	
				21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17	9-Apr-18	11-Oct-18
BTEX	Benzene	mg/L	6.3	<0.0010	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	-	-	-	-	-	-	-	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.010	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010
	Fuel Range (C10-C16)	mg/L	-	0.37	-	-	-	-	-	-	-	0.21	0.16	0.21	0.21
	Fuel Range (>C16-C21)	mg/L	-	3.1	-	-	-	-	-	-	-	0.41	0.34	0.39	0.32
	Lube Range (>C21-C32)	mg/L	-	39	-	-	-	-	-	-	-	2.7	2.5	2.3	2.1
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	42	Free Product Detected	Free Product Detected	Free Product Detected	Free Product Detected	Free Product Detected	Free Product Detected	Free Product Detected	3.3	2.9	2.9	2.7
Product Resemblance		-	-	Lube oil fraction	Lube oil fraction	-	-	-	-	-	-	One propduct in fuel / lube oil range. Lube oil fraction.	One propduct in fuel / lube oil range. Lube oil fraction.	One propduct in fuel oil range. Lube oil fraction.	One product in fuel oil range. Lube oil fraction.

Parameter		Units	NSE Tier I EQS[1]	MW11							
				2020		2021		2022			
				28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	DUP1	17-Oct-22	DUP1
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	-	0.17	0.24	0.099	0.15	0.15	0.15	0.073	0.078
	Fuel Range (>C16-C21)	mg/L	-	0.47	0.76	0.32	0.62	0.57	0.51	0.14	0.16
	Lube Range (>C21-C32)	mg/L	-	4.2	7.7	3.7	6.2	4.9	4.3	1.1	1.3
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	4.8	8.7	4.1	7.0	5.7	5.0	1.3	1.5
Product Resemblance		-	-	Lube oil fraction.	One product in fuel oil range. Lube oil fraction.	Lube oil fraction.	Lube oil fraction.	One product in fuel / lube range. Lube oil fraction.	One product in fuel / lube range. Lube oil fraction.	Lube oil fraction.	Lube oil fraction.

Notes:

value	- exceeds NSE EQS
-	- no guideline

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.

TABLE 6B: CONDUCTIVITY, pH and METALS in Groundwater (MW11)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW11												
			Freshwater [2]	Marine Water [3]	2013		2014		2015		2016		2017			2018	
					21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	Lab-Dup	12-Oct-17	9-Apr-18	Lab-Dup
Laboratory Conductivity	µS/cm	-	-	-	680	-	-	-	-	-	-	-	540	540	610	610	540
Field Conductivity	µS/cm				-	-	-	-	-	-	-	-	-	-	-	-	-
Laboratory pH	Units	-	6.5-9.0	-	7.38	-	-	-	-	-	-	-	7.31	7.34	7.49	7.42	7.34
Field pH	Units	-	6.5-9.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardness	mg/L				-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																	
Dissolved Arsenic (As)	ug/L	-	50	125	<1.0	-	-	-	-	-	-	-	1.3	-	2.8	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	-	3000	-	<50	-	-	-	-	-	-	-	***8200***	-	***9100***	<50	<50
Dissolved Lead (Pb)	ug/L	-	10*	20	<0.50	-	-	-	-	-	-	-	<0.50	-	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	4300*	-	1590	-	-	-	-	-	-	-	1600	-	1600	1800	1800
Dissolved Zinc (Zn)	ug/L	-	70*	100	<5.0	-	-	-	-	-	-	-	<5.0	-	<5.0	<5.0	<5.0

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW11												
			Freshwater [2]	Marine Water [3]	2018			2020		2021			2022				
					9-Apr-18	Lab-Dup	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	Lab-Dup	28-Apr-22	DUP1	Lab-Dup	17-Oct-22	DUP1
Laboratory Conductivity	µS/cm	-	-	-	610	540	610	600	640	610	690	700	490	480	490	5500	5500
Field Conductivity	µS/cm				-	-	-	-	-	-	-	-	1614	-	-	5600	-
Laboratory pH	Units	-	6.5-9.0	-	7.42	7.34	7.60	7.11	7.38	7.00	7.27	7.28	7.47	7.58	7.54	7.11	7.26
Field pH	Units	-	6.5-9.0	-	-	-	-	-	-	-	-	-	6.88	-	-	6.85	-
Hardness	mg/L				-	-	-	-	-	-	-	-	230	230	-	100	1100
Metals																	
Dissolved Arsenic (As)	ug/L	-	50	125	<1.0	<1.0	2.6	1.8	1.3	<1.0	1.6	1.6	1.0	<1.0	-	<1.0	1.8
Dissolved Iron (Fe)	ug/L	-	3000	-	<50	<50	***9100***	***20000***	***4900***	***20000***	***18000***	***18000***	***16000***	***16000***	-	<50	***49000***
Dissolved Lead (Pb)	ug/L	-	10-70*	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	5600-14000	-	1800	1800	1600	1600	1500	1500	1600	1600	1400	1400	-	76	76
Dissolved Zinc (Zn)	ug/L	-	70-950*	100	<5.0	<5.0	<5.0	5.9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-	9	6.7

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for fresh water
value	- exceeds NSE PSS for marine water
-	- no guideline
*	- guidelines have been adjusted via a calculation involving hardness and pH for the 2022 analytical program.

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.
[2] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to freshwater surface water (>10m)
[3] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to marine surface water (>10m)

TABLE 7A: PETROLEUM HYDROCARBON COMPOUNDS in Groundwater (MW14)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter		Units	NSE Tier I EQS[1]	MW14											
				2013		2014		2015		2016		2017		2018	
				21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17	9-Apr-18	11-Oct-18
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	Fuel Range (C10-C16)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	-	0.19	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	<0.10	<0.10
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	0.19	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	<0.10	<0.10
Product Resemblance		-	-	Lube oil fraction	-	-	-	-	-	-	-	Lube oil fraction.	-	-	-

Parameter		Units	NSE Tier I EQS[1]	MW14								
				2020				2021			2022	
				28-May-20	Lab-Dup	28-Oct-20	Lab-Dup	28-Apr-21	Duplicate	20-Oct-21	28-Apr-22	17-Oct-22
BTEX	Benzene	mg/L	6.3	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	20	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	-	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	-	0.074	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	-	0.096	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	-	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Total Modified TPH - Tier 1		mg/L	20 as gas 20 as fuel oil 20 as lube oil	0.17	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Product Resemblance		-	-	-	-	-	-	-	-	-	-	-

Notes:

value	- exceeds NSE EQS
-	- no guideline

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.

TABLE 7B: CONDUCTIVITY, pH and METALS in Groundwater (MW14)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.000

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW14										
			Freshwater [2]	Marine Water [3]	2013		2014		2015			2016		2017	
					21-May-13	25-Oct-13	23-Apr-14	30-Oct-14	24-Jun-15	12-Nov-15	Lab-Dup	26-Apr-16	24-Oct-16	24-Apr-17	12-Oct-17
Laboratory Conductivity	µS/cm	-	-	-	720	800	670	780	690	840	840	710	760	630	740
Field Conductivity	µS/cm														
Laboratory pH	Units	-	6.5-9.0	-	7.01	6.74	6.57	6.93	7.00	6.83	6.81	6.91	6.92	6.54	6.58
Field pH	Units	-	6.5-9.0	-	-	-	6.74	6.78	-	-	-	-	-	-	-
Hardness	mg/L														
Metals															
Dissolved Arsenic (As)	ug/L	-	50	125	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	-	3000	-	<50	840	110	140	96	89	-	<50	<50	<50	<50
Dissolved Lead (Pb)	ug/L	-	10*	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	4300*	-	2810	2700	2900	2700	2300	3300	-	2200	1800	2000	1900
Dissolved Zinc (Zn)	ug/L	-	70*	100	31.2	29	29	35	43	44	-	42	32	35	37

Parameter	Units	NSE Tier I EQS[1]	NSE Tier II PSS groundwater discharging to surface water (>10m)		MW14											
			Freshwater [2]	Marine Water [3]	2018		2020				2021				2022	
					9-Apr-18	11-Oct-18	28-May-20	Lab-Dup	28-Oct-20	Lab-Dup	28-Apr-21	Duplicate	Lab-Dup	20-Oct-21	28-Apr-22	17-Oct-22
Laboratory Conductivity	µS/cm	-	-	-	660	720	530	550	630	640	570	560	570	600	550	660
Field Conductivity	µS/cm														1614	601
Laboratory pH	Units	-	6.5-9.0	-	6.78	6.86	6.71	6.63	6.58	6.63	6.79	6.65	6.59	6.98	7.27	7.26
Field pH	Units	-	6.5-9.0	-	-	-	-	-	-	-	-	-	-	-	6.57	6.69
Hardness	mg/L														130	150
Metals																
Dissolved Arsenic (As)	ug/L	-	50	125	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	-	3000	-	<50	<50	<50	<50	<50	<50	<50	<50	-	<50	<50	<50
Dissolved Lead (Pb)	ug/L	-	10-70*	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	-	5600-14000	-	1800	2300	1300	1300	1900	2000	1800	1800	-	1900	1400	1800
Dissolved Zinc (Zn)	ug/L	-	70-950*	100	54	48	***160***	***160***	56	56	29	28	-	37	24	28

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for fresh water
value	- exceeds NSE PSS for marine water
-	- no guideline
*	- guidelines have been adjusted via a calculation involving hardness and pH for the 2022 analytical program.

[1] 2021 (October 2022 revisions) Nova Scotia Environment and Climate Change (NSE)Tier I Environmental Quality Standards (EQS) at a commercial site with non-potable groundwater and coarse-grained soil.
[2] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to freshwater surface water (>10m)
[3] 2021 Nova Scotia Environment and Climate Change (NSE) Tier II Pathway-Specific Standards (PSS) for groundwater discharging to marine surface water (>10m)

TABLE 8A: Field and Laboratory Duplicate QA/QC - PHC
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.004

Parameter		Units	RPD Limit	MW1										MW14									
				RDL	RDL x5	2017		RPD	RDL	RDL x5	2018		RPD	RDL	RDL x5	2020		RPD	RDL	RDL x5	2020		RPD
						24-Apr-17	Lab-Dup				9-Apr-18	Lab-Dup				28-May-20	MW-DUP				28-Oct-20	MW-DUP	
BTEX	Benzene	mg/L	40%	0.010	0.050	<0.010	-	-	0.025	0.125	<0.025	-	-	0.0010	0.0050	<0.0010	<0.0010	NC	0.0010	0.0050	<0.0010	<0.0010	NC
	Toluene	mg/L	40%	0.010	0.05	0.024	-	-	0.025	0.13	<0.025	-	-	0.0010	0.0050	<0.0010	<0.0010	NC	0.0010	0.0050	<0.0010	<0.0010	NC
	Ethylbenzene	mg/L	40%	0.025	0.13	1.5	-	-	0.025	0.13	0.86	-	-	0.0010	0.0050	<0.0010	<0.0010	NC	0.0010	0.0050	<0.0010	<0.0010	NC
	Xylenes	mg/L	40%	0.020	0.10	1.5	-	-	0.050	0.25	1.0	-	-	0.0020	0.010	<0.0020	<0.0020	NC	0.0020	0.010	<0.0020	<0.0020	NC
Modified TPH	Gas Range	mg/L	40%	0.25	1.25	13	-	-	0.25	1.25	7.6	-	-	0.090	0.450	<0.090	<0.090	NC	0.090	0.450	<0.090	<0.090	NC
	Fuel Range (C10-C16)	mg/L	40%	0.050	0.25	2.7	2.7	0	0.050	0.25	2.3	2.3	0	0.050	0.250	0.074	<0.050	NC	0.050	0.250	<0.050	<0.050	NC
	Fuel Range (>C16-C21)	mg/L	40%	0.050	0.25	<0.050	<0.050	NC	0.050	0.25	<0.050	<0.050	NC	0.050	0.250	0.096	<0.050	NC	0.050	0.250	<0.050	<0.050	NC
	Lube Range (>C21-C32)	mg/L	40%	0.10	0.50	<0.10	<0.10	NC	0.1	0.50	<0.10	<0.10	NC	0.090	0.450	<0.090	<0.090	NC	0.090	0.450	<0.090	<0.090	NC
Total Modified TPH - Tier 1		mg/L	40%	0.25	1.25	15	-	-	0.25	1.25	***9.9***	-	-	0.090	0.450	0.17	<0.090	NC	0.090	0.450	<0.090	<0.090	NC

Parameter		Units	RPD Limit	MW14					MW1					MW11					MW11				
				RDL	RDL x5	2021		RPD	RDL	RDL x5	2021		RPD	RDL	RDL x5	2022		RPD	RDL	RDL x5	2022		RPD
						28-Apr-21	MW-DUP				20-Oct-21	MW-DUP				28-Apr-22	DUP1				17-Oct-22	DUP1	
BTEX	Benzene	mg/L	40%	0.0010	0.0050	<0.0010	<0.0010	NC	0.0050	0.0250	<0.0050	0.0063	NC	0.0010	0.0050	<0.0010	<0.0010	NC	0.0010	0.0050	<0.0010	<0.0010	NC
	Toluene	mg/L	40%	0.0010	0.0050	<0.0010	<0.0010	NC	0.0010	0.0050	0.012	0.016	29	0.0010	0.0050	<0.0010	<0.0010	NC	0.0010	0.0050	<0.0010	<0.0010	NC
	Ethylbenzene	mg/L	40%	0.0010	0.0050	<0.0010	<0.0010	NC	0.0010	0.0050	0.68	0.82	19	0.0010	0.0050	<0.0010	<0.0010	NC	0.0010	0.0050	<0.0010	<0.0010	NC
	Xylenes	mg/L	40%	0.0020	0.010	<0.0020	<0.0020	NC	0.0020	0.010	0.72	0.89	21	0.0020	0.010	<0.0020	<0.0020	NC	0.0020	0.010	<0.0020	<0.0020	NC
Modified TPH	Gas Range	mg/L	40%	0.090	0.450	<0.090	<0.090	NC	0.090	0.450	9	8.7	3	0.090	0.450	<0.090	<0.090	NC	0.090	0.450	<0.090	<0.090	NC
	Fuel Range (C10-C16)	mg/L	40%	0.050	0.250	<0.050	<0.050	NC	0.050	0.250	2.8	2.5	11	0.050	0.250	0.15	0.15	NC	0.050	0.250	0.073	<0.078	NC
	Fuel Range (>C16-C21)	mg/L	40%	0.050	0.250	<0.050	<0.050	NC	0.050	0.250	<0.050	<0.050	NC	0.050	0.250	0.57	0.51	11	0.050	0.250	0.14	<0.16	NC
	Lube Range (>C21-C32)	mg/L	40%	0.090	0.450	<0.090	<0.090	NC	0.090	0.450	<0.090	0.093	NC	0.090	0.450	4.9	4.3	13	0.090	0.450	1.1	1.3	NC
Total Modified TPH - Tier 1		mg/L	40%	0.090	0.450	<0.090	<0.090	NC	0.0900	0.450	***12***	***11***	9	0.090	0.450	***5.7***	***5.0***	13	0.090	0.450	1.3	1.5	NC

Notes:

value	- RDP outside of acceptable range
RPD	- Relative Percent Difference
RDL	- Reportable Detection Limit
NC	- Non-calculable

RPD is considered non-calculable where concentrations are less than five times the laboratory detection limit.
RPD results of within 40% are considered to be acceptable.
Where RPD is non-calculable, results are considered acceptable where the difference between concentrations is less than the laboratory detection limit.

TABLE 8B: Field and Laboratory Duplicate QA/QC - CONDUCTIVITY, pH and METALS
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.004

Parameter	Units	RPD Limit	MW3					MW6					MW14					MW11					MW9				
			RDL	RDL x5	2015		RPD	RDL	RDL x5	2015		RPD	RDL	RDL x5	2015		RPD	RDL	RDL x5	2017		RPD	RDL	RDL x5	2018		RPD
					12-Nov-15	Lab-Dup				12-Nov-15	Lab-Dup				12-Nov-15	Lab-Dup				24-Apr-17	Lab-Dup				9-Apr-18	Lab-Dup	
Laboratory Conductivity	µS/cm	40%	1.0	5.0	610	-	-	1.0	5.0	610	-	-	1.0	5.0	840	840	0	1.0	5.0	540	540	0	1.0	5.0	520	-	-
Laboratory pH	Units	40%	-	-	6.97	-	-	-	-	6.97	-	-	-	-	6.83	6.81	0	-	-	7.31	7.34	0	-	-	7.33	-	-
Hardness	mg/L	40%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																											
Dissolved Arsenic (As)	ug/L	40%	1.0	5.0	2.7	2.6	NC	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	-	-	1.0	5.0	<1.0	-	-	1.0	5.0	<1.0	<1.0	NC
Dissolved Iron (Fe)	ug/L	40%	50	250	***6400***	***6300***	2	50	250	<50	<50	NC	50	250	89	-	-	50	250	<50	-	-	50	250	69	470	149
Dissolved Lead (Pb)	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	-	-	0.50	2.5	<0.50	-	-	0.50	2.5	<0.50	<0.50	NC
Dissolved Manganese (Mn)	ug/L	40%	2.0	10	2700	2700	0	2.0	10	41	40	2	2.0	10	3300	-	-	2.0	10	41	-	-	2.0	10	300	520	54
Dissolved Zinc (Zn)	ug/L	40%	5.0	25	38	39	3	5.0	25	<5.0	<5.0	NC	5.0	25	44	-	-	5.0	25	<5.0	-	-	5.0	25	9.3	<5.0	NC

Parameter	Units	RPD Limit	MW11					MW14																			
			RDL	RDL x5	2018		RPD	RDL	RDL x5	2020		RPD	RDL	RDL x5	2020		RPD	RDL	RDL x5	2021		RPD	RDL	RDL x5	2021		RPD
					9-Apr-18	Lab-Dup				28-May-20	MW-DUP				28-Oct-20	MW-DUP				28-Apr-21	MW-DUP				MW-DUP	Lab-Dup	
Laboratory Conductivity	µS/cm	40%	1.0	5.0	540	540	0	1.0	5.0	530	550	4	1.0	5.0	630	640	2	1.0	5.0	570	560	2	1.0	5.0	560	570	2
Laboratory pH	Units	40%	-	-	7.31	7.34	0	-	-	6.71	6.63	1	-	-	6.58	6.63	1	-	-	6.79	6.65	2	-	-	6.65	6.59	1
Hardness	mg/L	40%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																											
Dissolved Arsenic (As)	ug/L	40%	1.0	5.0	<1.0	-	-	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	-	-
Dissolved Iron (Fe)	ug/L	40%	50	250	<50	-	-	50	250	<50	<50	NC	50	250	<50	<50	NC	50	250	<50	<50	NC	50	250	<50	-	-
Dissolved Lead (Pb)	ug/L	40%	0.50	2.5	<0.50	-	-	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	-	-
Dissolved Manganese (Mn)	ug/L	40%	2.0	10	41	-	-	2.0	10	1300	1300	0	2.0	10	1900	2000	5	2.0	10	1800	1800	0	2.0	10	1800	-	-
Dissolved Zinc (Zn)	ug/L	40%	5.0	25	<5.0	-	-	5.0	25	***160***	***160***	0	5.0	25	56	56	0	5.0	25	29	28	4	5.0	25	28	-	-

Parameter	Units	RPD Limit	MW11										MW11														
			RDL	RDL x5	2022		RPD	RDL	RDL x5	2022		RPD	RDL	RDL x5	2022		RPD	RDL	RDL x5	2022		RPD	RDL	RDL x5			RPD
					28-Apr-22	DUP1				DUP1	Lab-Dup				17-Oct-22	DUP1				DUP1	Lab-Dup						
Laboratory Conductivity	µS/cm	40%	1.0	5.0	490	480	2	1.0	5.0	480	490	2	-	-	5500	5500	0	-	-	5500	5500	0	-	-			#####
Laboratory pH	Units	40%	-	-	7.47	7.58	1	-	-	7.58	7.54	1	-	-	7.11	7.26	2	-	-	7.26	7.26	0	-	-			#####
Hardness	mg/L	40%	1.0	5.0	230	230	0	1.0	5.0	230	-	-	-	-	100	1100	-	-	-	1100	-	-	-	-			-
Metals																											
Dissolved Arsenic (As)	ug/L	40%	1.0	5.0	1.0	<1.0	NC	1.0	5.0	<1.0	-	-	1.0	5.0	<1.0	1.8	NC	1.0	5.0	1.8	-	-	1.0	5.0			-
Dissolved Iron (Fe)	ug/L	40%	50	250	***16000***	***16000***	0	50	250	***16000***	-	-	50	250	<50	49000	NC	50	250	***49000***	-	-	50	250			-
Dissolved Lead (Pb)	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	-	-	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	-	-	0.50	2.5			-
Dissolved Manganese (Mn)	ug/L	40%	2.0	10	***1400***	***1400***	0	2.0	10	***1400***	-	-	2.0	10	76	4700	194	2.0	10	4700	-	-	2.0	10			-
Dissolved Zinc (Zn)	ug/L	40%	5.0	25	<5.0	<5.0	NC	5.0	25	<5.0	-	-	5.0	25	6.7	<5.0	NC	5.0	25	<5.0	-	-	5.0	25			-

Notes:

value	- RDP outside of acceptable range
RPD	- Relative Percent Difference
RDL	- Reportable Detection Limit
NC	- Non-calculable

RPD is considered non-calculable where concentrations are less than five times the laboratory detection limit.
RPD results of within 40% are considered to be acceptable.
Where RPD is non-calculable, results are considered acceptable where the difference between concentrations is less than the laboratory detection limit.

TABLE 8C: Field and Laboratory Duplicate QA/QC - VOCs

Client: Build Nova Scotia

Site Location: Civic No. 34 Power Plant Road, Trenton, NS

Englobe Project No.: 2001756.004

Parameter	Units	RPD Limit	MW6													
			RDL	RDL x5	2017		RPD	RDL	RDL x5	2020		RPD				
					24-Apr-17	Lab-Dup				28-May-20	Lab-Dup					
Chlorobenzenes																
1,2-Dichlorobenzene	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
1,3-Dichlorobenzene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
1,4-Dichlorobenzene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Chlorobenzene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Volatile Organics																
1,1,1-Trichloroethane	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
1,1,2,2-Tetrachloroethane	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
1,1,2-Trichloroethane	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
1,1-Dichloroethane	ug/L	40%	2.0	10	<2.0	<2.0	NC	2.0	10	<2.0	<2.0	<2.0				
1,1-Dichloroethylene	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
1,2-Dichloroethane	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
1,2-Dichloropropane	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
Benzene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Bromodichloromethane	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Bromoform	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Bromomethane	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
Carbon Tetrachloride (Tetrachlorometha	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
Chloroethane	ug/L	40%	8.0	40	<8.0	<8.0	NC	8.0	40	<8.0	<8.0	<8.0				
Chloroform	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Chloromethane	ug/L	40%	1.0	5.0	<8.0	<8.0	NC	1.0	5.0	<8.0	<8.0	<8.0				
cis-1,2-Dichloroethylene	ug/L	40%	0.50	2.5	6.3	6.2	2	0.50	2.5	2.5	2.5	6.2				
cis-1,3-Dichloropropene	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
Dibromochloromethane	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Ethylbenzene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Ethylene Dibromide	ug/L	40%	0.20	1.0	<0.20	<0.20	NC	0.20	1.0	<0.20	<0.20	<0.20				
Methyl t-butyl ether (MTBE)	ug/L	40%	2.0	10	<2.0	<2.0	NC	2.0	10	<2.0	<2.0	<2.0				
Methylene Chloride(Dichloromethane)	ug/L	40%	3.0	15	<3.0	<3.0	NC	3.0	15	<3.0	<3.0	<3.0				
o-Xylene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
p+m-Xylene	ug/L	40%	2.0	10	<2.0	<2.0	NC	2.0	10	<2.0	<2.0	<2.0				
Styrene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Tetrachloroethylene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Toluene	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Total Trihalomethanes	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
Total Xylenes	ug/L	40%	1.0	5.0	<1.0	<1.0	NC	1.0	5.0	<1.0	<1.0	<1.0				
trans-1,2-Dichloroethylene	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
trans-1,3-Dichloropropene	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				
Trichloroethylene	ug/L	40%	1.0	5.0	25	24	4	1.0	5.0	19	19	24				
Trichlorofluoromethane (FREON 11)	ug/L	40%	8.0	40	<8.0	<8.0	NC	8.0	40	<8.0	<8.0	<8.0				
Vinyl Chloride	ug/L	40%	0.50	2.5	<0.50	<0.50	NC	0.50	2.5	<0.50	<0.50	<0.50				

Notes:

value	- RDP outside of acceptable range
RPD	- Relative Percent Difference
RDL	- Reportable Detection Limit
NC	- Non-calculable

RPD is considered non-calculable where concentrations are less than five times the laboratory detection limit.

RPD results of within 40% are considered to be acceptable.

Where RPD is non-calculable, results are considered acceptable where the difference between concentrations is less than the laboratory detection limit.

TABLE 9A: PETROLEUM HYDROCARBON COMPOUNDS (Equipment Blank)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.004

Parameter		Units	EQUIPMENT BLANK					
			2020		2021		2022	
			28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
BTEX	Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	<0.010	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	0.098	<0.090	<0.090	<0.090	<0.090	<0.090
Total Modified TPH - Tier 1		mg/L	0.098	<0.090	<0.090	<0.090	<0.090	<0.090
Product Resemblance		-	Possible lube oil fraction.	-	-	-	-	-

Notes:

value - detection in blank

The Equipment Blank was filled by englobe in the field following rinsing the interface probe in laboratory supplied water.

TABLE 9B: CONDUCTIVITY, pH and METALS (Equipment Blank)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.004

Parameter	Units	EQUIPMENT BLANK					
		2020		2021		2022	
		28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
Laboratory Conductivity	µS/cm	1.2	17	17	1.1	1.0	1.5
Laboratory pH	Units	6.06	6.62	6.62	6.31	6.21	6.09
Hardness	mg/L	-	-	-	-	<1.0	<1.0
Metals							
Dissolved Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	<50	<50	<50	<50	<50	<50
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	3.1	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

Notes:

value - detection in blank

The Equipment Blank was filled by englobe in the field following rinsing the interface probe in laboratory supplied water.

TABLE 10A: PETROLEUM HYDROCARBON COMPOUNDS (Trip Blank)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.004

Parameter		Units	TRIP BLANK					
			2020		2021		2022	
			28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
BTEX	Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Modified TPH	Gas Range	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Fuel Range (>C16-C21)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Total Modified TPH - Tier 1		mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Product Resemblance		-	-	-	-	-	-	-

Notes:

value - detection in blank

The Trip Blank was prefilled by the laboratory and transported with the field samples.

TABLE 10B: CONDUCTIVITY, pH and METALS (Trip Blank)
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.004

Parameter	Units	TRIP BLANK					
		2020		2021		2022	
		28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22
Laboratory Conductivity	µS/cm	<1.0	<1.0	1.0	1.1	1.0	18
Laboratory pH	Units	6.14	5.99	6.01	6.41	5.98	6.79
Hardness	mg/L	-	-	-	-	<1.0	<1.0
Metals							
Dissolved Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	<50	<50	<50	<50	<50	<50
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Manganese (Mn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	5.2

Notes:

value - detection in blank

The Trip Blank was prefilled by the laboratory and transported with the field samples.

Appendix D
Laboratory Certificates

ENGLOBE

Your Project #: 2001756.004
Your C.O.C. #: 875559-01-01

Attention: Ryan Pellerin

Englobe Corp
97 Troop Ave
Dartmouth, NS
CANADA B3B 2A7

Report Date: 2022/06/02
Report #: R7149072
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2B5986
Received: 2022/04/29, 09:17

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Conductance - water	10	N/A	2022/05/04	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	8	2022/05/03	2022/05/03	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	2	2022/05/03	2022/05/04	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	10	N/A	2022/05/05	ATL SOP 00048	Auto Calc
Metals Water Diss. MS (as rec'd)	7	N/A	2022/05/04	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	3	N/A	2022/05/05	ATL SOP 00058	EPA 6020B R2 m
pH (1)	10	N/A	2022/05/04	ATL SOP 00003	SM 23 4500-H+ B m
ModTPH (T1) Calc. for Water	10	N/A	2022/05/04	N/A	Atl. RBCA v3 m
Volatile Organic Compounds in Water	1	N/A	2022/05/04	ATL SOP 00133	EPA 8260D R4 m
VPH in Water (PIRI)	10	N/A	2022/05/03	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Your Project #: 2001756.004
Your C.O.C. #: 875559-01-01

Attention: Ryan Pellerin

Englobe Corp
97 Troop Ave
Dartmouth, NS
CANADA B3B 2A7

Report Date: 2022/06/02
Report #: R7149072
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C2B5986
Received: 2022/04/29, 09:17

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Keri Mackay, Customer Experience Team Lead
Email: Keri.MACKAY@bureauveritas.com
Phone# (902)420-0203 Ext:294
==========
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.bvlabs.com

Bureau Veritas Job #: C2B5986
Report Date: 2022/06/02

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

RBCA HYDROCARBONS IN WATER (WATER)

Bureau Veritas ID		SMR323		SMR324	SMR325	SMR326	SMR327		
Sampling Date		2022/04/28 12:30		2022/04/28 11:40	2022/04/28 10:30	2022/04/28 15:50	2022/04/28 14:55		
COC Number		875559-01-01		875559-01-01	875559-01-01	875559-01-01	875559-01-01		
Sample #		MW1		MW3	MW4	MW6	MW9		
	UNITS	**MW1**	**RDL**	**MW3**	**MW4**	**MW6**	**MW9**	**RDL**	**QC Batch**
Petroleum Hydrocarbons									
Benzene	mg/L	<0.0030 (1)	0.0030	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7972490
Toluene	mg/L	0.0073	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7972490
Ethylbenzene	mg/L	0.77	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7972490
Total Xylenes	mg/L	0.72	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7972490
C6 - C10 (less BTEX)	mg/L	11	0.090	<0.090	<0.090	<0.090	<0.090	0.090	7972490
>C10-C16 Hydrocarbons	mg/L	3.5	0.050	<0.050	<0.050	<0.050	<0.050	0.050	7972736
>C16-C21 Hydrocarbons	mg/L	0.055	0.050	<0.050	<0.050	<0.050	0.075	0.050	7972736
>C21-<C32 Hydrocarbons	mg/L	0.10	0.090	<0.090	<0.090	<0.090	0.58	0.090	7972736
Modified TPH (Tier1)	mg/L	15	0.090	<0.090	<0.090	<0.090	0.66	0.090	7970193
Reached Baseline at C32	mg/L	Yes	N/A	NA	NA	NA	Yes	N/A	7972736
Hydrocarbon Resemblance	mg/L	COMMENT (2)	N/A	NA	NA	NA	COMMENT (3)	N/A	7972736
Surrogate Recovery (%)									
Isobutylbenzene - Extractable	%	83		86	91	89	91		7972736
n-Dotriacontane - Extractable	%	68 (4)		73	84 (5)	77 (5)	109		7972736
Isobutylbenzene - Volatile	%	102		103	106	102	101		7972490

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated VPH RDL(s) due to matrix interference.
(2) One product in the gas/fuel oil range.
(3) Lube oil fraction.
(4) TEH surrogate(s) not within acceptance limits. Insufficient sample to repeat.
(5) TEH sample contained sediment.

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Bureau Veritas Job #: C2B5986
Report Date: 2022/06/02

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

RBCA HYDROCARBONS IN WATER (WATER)

Bureau Veritas ID		SMR328	SMR329	SMR330	SMR331	SMR332		
Sampling Date		2022/04/28 14:40	2022/04/28 13:20	2022/04/28	2022/04/28	2022/04/28 16:30		
COC Number		875559-01-01	875559-01-01	875559-01-01	875559-01-01	875559-01-01		
Sample #		MW11	MW14	DUP1	TRIP BLANK	EQUIPMENT BLANK		
	UNITS	**MW11**	**MW14**	**DUP1**	**Trip Blank**	**Equipment Blank**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7972490
Toluene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7972490
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	7972490
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	7972490
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	<0.090	<0.090	0.090	7972490
>C10-C16 Hydrocarbons	mg/L	0.15	<0.050	0.15	<0.050	<0.050	0.050	7972736
>C16-C21 Hydrocarbons	mg/L	0.57	<0.050	0.51	<0.050	<0.050	0.050	7972736
>C21-<C32 Hydrocarbons	mg/L	4.9	<0.090	4.3	<0.090	<0.090	0.090	7972736
Modified TPH (Tier1)	mg/L	5.7	<0.090	5.0	<0.090	<0.090	0.090	7970193
Reached Baseline at C32	mg/L	No	NA	No	NA	NA	N/A	7972736
Hydrocarbon Resemblance	mg/L	COMMENT (1)	NA	COMMENT (1)	NA	NA	N/A	7972736
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	92	93	97	101	98		7972736
n-Dotriacontane - Extractable	%	73	86	71	106	104		7972736
Isobutylbenzene - Volatile	%	102	104	104	101	103		7972490

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) One product in fuel / lube range. Lube oil fraction.

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Report Date: 2022/06/02

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

ATLANTIC VOCS - NON-CHLORINATED WATER (WATER)

Bureau Veritas ID		SMR326		
Sampling Date		2022/04/28 15:50		
COC Number		875559-01-01		
Sample #		MW6		
	UNITS	**MW6**	**RDL**	**QC Batch**
Volatile Organics				
1,1-Dichloroethane	ug/L	<2.0	2.0	7972415
1,1-Dichloroethylene	ug/L	<0.50	0.50	7972415
1,1,1-Trichloroethane	ug/L	<1.0	1.0	7972415
1,1,2-Trichloroethane	ug/L	<1.0	1.0	7972415
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	7972415
Ethylene Dibromide	ug/L	<0.20	0.20	7972415
1,2-Dichlorobenzene	ug/L	<0.50	0.50	7972415
1,2-Dichloroethane	ug/L	<1.0	1.0	7972415
cis-1,2-Dichloroethylene	ug/L	2.0	0.50	7972415
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	7972415
1,2-Dichloropropane	ug/L	<0.50	0.50	7972415
1,3-Dichlorobenzene	ug/L	<1.0	1.0	7972415
cis-1,3-Dichloropropene	ug/L	<0.50	0.50	7972415
trans-1,3-Dichloropropene	ug/L	<0.50	0.50	7972415
1,4-Dichlorobenzene	ug/L	<1.0	1.0	7972415
Benzene	ug/L	<1.0	1.0	7972415
Bromodichloromethane	ug/L	<1.0	1.0	7972415
Bromoform	ug/L	<1.0	1.0	7972415
Bromomethane	ug/L	<0.50	0.50	7972415
Carbon Tetrachloride	ug/L	<0.50	0.50	7972415
Chlorobenzene	ug/L	<1.0	1.0	7972415
Chloroethane	ug/L	<8.0	8.0	7972415
Chloroform	ug/L	<1.0	1.0	7972415
Chloromethane	ug/L	<8.0	8.0	7972415
Dibromochloromethane	ug/L	<1.0	1.0	7972415
Methylene Chloride(Dichloromethane)	ug/L	<3.0	3.0	7972415
Ethylbenzene	ug/L	<1.0	1.0	7972415
Methyl t-butyl ether (MTBE)	ug/L	<2.0	2.0	7972415
Styrene	ug/L	<1.0	1.0	7972415
Tetrachloroethylene	ug/L	<1.0	1.0	7972415
Toluene	ug/L	<1.0	1.0	7972415
Trichloroethylene	ug/L	12	1.0	7972415
Trichlorofluoromethane (FREON 11)	ug/L	<8.0	8.0	7972415
Vinyl Chloride	ug/L	<0.50	0.50	7972415

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

ATLANTIC VOCS - NON-CHLORINATED WATER (WATER)

Bureau Veritas ID		SMR326		
Sampling Date		2022/04/28 15:50		
COC Number		875559-01-01		
Sample #		MW6		
	UNITS	**MW6**	**RDL**	**QC Batch**
o-Xylene	ug/L	<1.0	1.0	7972415
p+m-Xylene	ug/L	<2.0	2.0	7972415
Total Xylenes	ug/L	<1.0	1.0	7972415
Total Trihalomethanes	ug/L	<1.0	1.0	7972415
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	94		7972415
D4-1,2-Dichloroethane	%	111		7972415
D8-Toluene	%	96		7972415

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Client Project #: 2001756.004
Sampler Initials: LL

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		SMR323	SMR324	SMR325	SMR326	SMR327	SMR328		
Sampling Date		2022/04/28 12:30	2022/04/28 11:40	2022/04/28 10:30	2022/04/28 15:50	2022/04/28 14:55	2022/04/28 14:40		
COC Number		875559-01-01	875559-01-01	875559-01-01	875559-01-01	875559-01-01	875559-01-01		
Sample #		MW1	MW3	MW4	MW6	MW9	MW11		
	UNITS	**MW1**	**MW3**	**MW4**	**MW6**	**MW9**	**MW11**	**RDL**	**QC Batch**
Calculated Parameters									
Hardness (CaCO3)	mg/L	160	96	76	99	240	230	1.0	7970018
Inorganics									
pH	pH	7.65	7.51	7.16	7.49	7.75	7.47		7974500
Conductivity	uS/cm	3800	940	340	270	510	490	1.0	7974498

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		SMR329	SMR330			SMR330			SMR331		
Sampling Date		2022/04/28 13:20	2022/04/28			2022/04/28			2022/04/28		
COC Number		875559-01-01	875559-01-01			875559-01-01			875559-01-01		
Sample #		MW14	DUP1			DUP1			TRIP BLANK		
	UNITS	**MW14**	**DUP1**	**RDL**	**QC Batch**	**DUP1 Lab-Dup**	**RDL**	**QC Batch**	**Trip Blank**	**RDL**	**QC Batch**
Calculated Parameters											
Hardness (CaCO3)	mg/L	130	230	1.0	7970018				<1.0	1.0	7970018
Inorganics											
pH	pH	7.27	7.58		7974500	7.54		7974500	5.98		7974500
Conductivity	uS/cm	550	480	1.0	7974498	490	1.0	7974498	1.0	1.0	7974498

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

Bureau Veritas ID		SMR332		
Sampling Date		2022/04/28 16:30		
COC Number		875559-01-01		
Sample #		EQUIPMENT BLANK		
	UNITS	**Equipment Blank**	**RDL**	**QC Batch**
Calculated Parameters				
Hardness (CaCO3)	mg/L	<1.0	1.0	7970018
Inorganics				
pH	pH	6.21		7974500
Conductivity	uS/cm	1.0	1.0	7974498

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		SMR323	SMR324	SMR325	SMR326	SMR327	SMR328		
Sampling Date		2022/04/28 12:30	2022/04/28 11:40	2022/04/28 10:30	2022/04/28 15:50	2022/04/28 14:55	2022/04/28 14:40		
COC Number		875559-01-01	875559-01-01	875559-01-01	875559-01-01	875559-01-01	875559-01-01		
Sample #		MW1	MW3	MW4	MW6	MW9	MW11		
	UNITS	**MW1**	**MW3**	**MW4**	**MW6**	**MW9**	**MW11**	**RDL**	**QC Batch**
Metals									
Dissolved Arsenic (As)	ug/L	3.8	<1.0	1.4	<1.0	<1.0	1.0	1.0	7974604
Dissolved Calcium (Ca)	ug/L	52000	26000	16000	33000	77000	74000	100	7974604
Dissolved Iron (Fe)	ug/L	22000	1500	330	<50	230	16000	50	7974604
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7974604
Dissolved Magnesium (Mg)	ug/L	7000	7300	8700	3700	11000	12000	100	7974604
Dissolved Manganese (Mn)	ug/L	22000	1400	5200	2.1	260	1400	2.0	7974604
Dissolved Zinc (Zn)	ug/L	<5.0	16	54	<5.0	5.6	<5.0	5.0	7974604

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		SMR329	SMR330	SMR331	SMR332		
Sampling Date		2022/04/28 13:20	2022/04/28	2022/04/28	2022/04/28 16:30		
COC Number		875559-01-01	875559-01-01	875559-01-01	875559-01-01		
Sample #		MW14	DUP1	TRIP BLANK	EQUIPMENT BLANK		
	UNITS	**MW14**	**DUP1**	**Trip Blank**	**Equipment Blank**	**RDL**	**QC Batch**
Metals							
Dissolved Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	7974604
Dissolved Calcium (Ca)	ug/L	38000	74000	<100	<100	100	7974604
Dissolved Iron (Fe)	ug/L	<50	16000	<50	<50	50	7974604
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	0.50	7974604
Dissolved Magnesium (Mg)	ug/L	7300	12000	<100	<100	100	7974604
Dissolved Manganese (Mn)	ug/L	1400	1400	<2.0	<2.0	2.0	7974604
Dissolved Zinc (Zn)	ug/L	24	<5.0	<5.0	<5.0	5.0	7974604

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

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

Package 1	9.0°C

Revised Report - revise client project number from 201756.004 to 2001756.004 as per email from R. Pellerin 2022-06-02 KMA

Results relate only to the items tested.

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Bureau Veritas Job #: C2B5986
Report Date: 2022/06/02

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
7972415	SHL	Matrix Spike	4-Bromofluorobenzene	2022/05/04		98	%	70 - 130
			D4-1,2-Dichloroethane	2022/05/04		110	%	70 - 130
			D8-Toluene	2022/05/04		90	%	70 - 130
			1,1-Dichloroethane	2022/05/04		109	%	70 - 130
			1,1-Dichloroethylene	2022/05/04		107	%	70 - 130
			1,1,1-Trichloroethane	2022/05/04		112	%	70 - 130
			1,1,2-Trichloroethane	2022/05/04		105	%	70 - 130
			1,1,2,2-Tetrachloroethane	2022/05/04		103	%	70 - 130
			Ethylene Dibromide	2022/05/04		103	%	70 - 130
			1,2-Dichlorobenzene	2022/05/04		92	%	70 - 130
			1,2-Dichloroethane	2022/05/04		107	%	70 - 130
			cis-1,2-Dichloroethylene	2022/05/04		95	%	70 - 130
			trans-1,2-Dichloroethylene	2022/05/04		106	%	70 - 130
			1,2-Dichloropropane	2022/05/04		98	%	70 - 130
			1,3-Dichlorobenzene	2022/05/04		89	%	70 - 130
			cis-1,3-Dichloropropene	2022/05/04		104	%	70 - 130
			trans-1,3-Dichloropropene	2022/05/04		129	%	70 - 130
			1,4-Dichlorobenzene	2022/05/04		86	%	70 - 130
			Benzene	2022/05/04		96	%	70 - 130
			Bromodichloromethane	2022/05/04		104	%	70 - 130
			Bromoform	2022/05/04		106	%	70 - 130
			Bromomethane	2022/05/04		88	%	60 - 140
			Carbon Tetrachloride	2022/05/04		100	%	70 - 130
			Chlorobenzene	2022/05/04		97	%	70 - 130
			Chloroethane	2022/05/04		95	%	60 - 140
			Chloroform	2022/05/04		115	%	70 - 130
			Chloromethane	2022/05/04		101	%	60 - 140
			Dibromochloromethane	2022/05/04		89	%	70 - 130
			Methylene Chloride(Dichloromethane)	2022/05/04		108	%	70 - 130
			Ethylbenzene	2022/05/04		93	%	70 - 130
			Methyl t-butyl ether (MTBE)	2022/05/04		103	%	70 - 130
			Styrene	2022/05/04		101	%	70 - 130
			Tetrachloroethylene	2022/05/04		93	%	70 - 130
			Toluene	2022/05/04		95	%	70 - 130
			Trichloroethylene	2022/05/04		92	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2022/05/04		97	%	60 - 140
			Vinyl Chloride	2022/05/04		93	%	60 - 140
			o-Xylene	2022/05/04		96	%	70 - 130
			p+m-Xylene	2022/05/04		91	%	70 - 130
7972415	SHL	Spiked Blank	4-Bromofluorobenzene	2022/05/04		97	%	70 - 130
			D4-1,2-Dichloroethane	2022/05/04		108	%	70 - 130
			D8-Toluene	2022/05/04		92	%	70 - 130
			1,1-Dichloroethane	2022/05/04		105	%	70 - 130
			1,1-Dichloroethylene	2022/05/04		102	%	70 - 130
			1,1,1-Trichloroethane	2022/05/04		108	%	70 - 130
			1,1,2-Trichloroethane	2022/05/04		100	%	70 - 130
			1,1,2,2-Tetrachloroethane	2022/05/04		95	%	70 - 130
			Ethylene Dibromide	2022/05/04		96	%	70 - 130
			1,2-Dichlorobenzene	2022/05/04		88	%	70 - 130
			1,2-Dichloroethane	2022/05/04		101	%	70 - 130
			cis-1,2-Dichloroethylene	2022/05/04		91	%	70 - 130
			trans-1,2-Dichloroethylene	2022/05/04		103	%	70 - 130
			1,2-Dichloropropane	2022/05/04		94	%	70 - 130
			1,3-Dichlorobenzene	2022/05/04		87	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			cis-1,3-Dichloropropene	2022/05/04		96	%	70 - 130
			trans-1,3-Dichloropropene	2022/05/04		118	%	70 - 130
			1,4-Dichlorobenzene	2022/05/04		83	%	70 - 130
			Benzene	2022/05/04		93	%	70 - 130
			Bromodichloromethane	2022/05/04		99	%	70 - 130
			Bromoform	2022/05/04		97	%	70 - 130
			Bromomethane	2022/05/04		82	%	60 - 140
			Carbon Tetrachloride	2022/05/04		97	%	70 - 130
			Chlorobenzene	2022/05/04		91	%	70 - 130
			Chloroethane	2022/05/04		92	%	60 - 140
			Chloroform	2022/05/04		112	%	70 - 130
			Chloromethane	2022/05/04		97	%	60 - 140
			Dibromochloromethane	2022/05/04		84	%	70 - 130
			Methylene Chloride(Dichloromethane)	2022/05/04		103	%	70 - 130
			Ethylbenzene	2022/05/04		87	%	70 - 130
			Methyl t-butyl ether (MTBE)	2022/05/04		100	%	70 - 130
			Styrene	2022/05/04		96	%	70 - 130
			Tetrachloroethylene	2022/05/04		90	%	70 - 130
			Toluene	2022/05/04		90	%	70 - 130
			Trichloroethylene	2022/05/04		89	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2022/05/04		93	%	60 - 140
			Vinyl Chloride	2022/05/04		90	%	60 - 140
			o-Xylene	2022/05/04		90	%	70 - 130
			p+m-Xylene	2022/05/04		85	%	70 - 130
7972415	SHL	Method Blank	4-Bromofluorobenzene	2022/05/04		97	%	70 - 130
			D4-1,2-Dichloroethane	2022/05/04		105	%	70 - 130
			D8-Toluene	2022/05/04		98	%	70 - 130
			1,1-Dichloroethane	2022/05/04	<2.0		ug/L	
			1,1-Dichloroethylene	2022/05/04	<0.50		ug/L	
			1,1,1-Trichloroethane	2022/05/04	<1.0		ug/L	
			1,1,2-Trichloroethane	2022/05/04	<1.0		ug/L	
			1,1,2,2-Tetrachloroethane	2022/05/04	<0.50		ug/L	
			Ethylene Dibromide	2022/05/04	<0.20		ug/L	
			1,2-Dichlorobenzene	2022/05/04	<0.50		ug/L	
			1,2-Dichloroethane	2022/05/04	<1.0		ug/L	
			cis-1,2-Dichloroethylene	2022/05/04	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2022/05/04	<0.50		ug/L	
			1,2-Dichloropropane	2022/05/04	<0.50		ug/L	
			1,3-Dichlorobenzene	2022/05/04	<1.0		ug/L	
			cis-1,3-Dichloropropene	2022/05/04	<0.50		ug/L	
			trans-1,3-Dichloropropene	2022/05/04	<0.50		ug/L	
			1,4-Dichlorobenzene	2022/05/04	<1.0		ug/L	
			Benzene	2022/05/04	<1.0		ug/L	
			Bromodichloromethane	2022/05/04	<1.0		ug/L	
			Bromoform	2022/05/04	<1.0		ug/L	
			Bromomethane	2022/05/04	<0.50		ug/L	
			Carbon Tetrachloride	2022/05/04	<0.50		ug/L	
			Chlorobenzene	2022/05/04	<1.0		ug/L	
			Chloroethane	2022/05/04	<8.0		ug/L	
			Chloroform	2022/05/04	<1.0		ug/L	
			Chloromethane	2022/05/04	<8.0		ug/L	
			Dibromochloromethane	2022/05/04	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2022/05/04	<3.0		ug/L	
			Ethylbenzene	2022/05/04	<1.0		ug/L	

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Bureau Veritas Job #: C2B5986
Report Date: 2022/06/02

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl t-butyl ether (MTBE)	2022/05/04	<2.0		ug/L	
			Styrene	2022/05/04	<1.0		ug/L	
			Tetrachloroethylene	2022/05/04	<1.0		ug/L	
			Toluene	2022/05/04	<1.0		ug/L	
			Trichloroethylene	2022/05/04	<1.0		ug/L	
			Trichlorofluoromethane (FREON 11)	2022/05/04	<8.0		ug/L	
			Vinyl Chloride	2022/05/04	<0.50		ug/L	
			o-Xylene	2022/05/04	<1.0		ug/L	
			p+m-Xylene	2022/05/04	<2.0		ug/L	
			Total Xylenes	2022/05/04	<1.0		ug/L	
			Total Trihalomethanes	2022/05/04	<1.0		ug/L	
7972415	SHL	RPD	1,1,2,2-Tetrachloroethane	2022/05/04	NC		%	40
			1,2-Dichlorobenzene	2022/05/04	NC		%	40
			cis-1,2-Dichloroethylene	2022/05/04	NC		%	40
			trans-1,3-Dichloropropene	2022/05/04	NC		%	40
			1,4-Dichlorobenzene	2022/05/04	NC		%	40
			Benzene	2022/05/04	NC		%	40
			Chloroform	2022/05/04	2.3		%	40
			Methylene Chloride(Dichloromethane)	2022/05/04	NC		%	40
			Ethylbenzene	2022/05/04	NC		%	40
			Tetrachloroethylene	2022/05/04	NC		%	40
			Toluene	2022/05/04	NC		%	40
			Trichloroethylene	2022/05/04	NC		%	40
			o-Xylene	2022/05/04	NC		%	40
			Total Xylenes	2022/05/04	NC		%	40
7972490	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/05/03		103	%	70 - 130
			Benzene	2022/05/03		106	%	70 - 130
			Toluene	2022/05/03		102	%	70 - 130
			Ethylbenzene	2022/05/03		102	%	70 - 130
			Total Xylenes	2022/05/03		101	%	70 - 130
7972490	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/05/03		105	%	70 - 130
			Benzene	2022/05/03		106	%	70 - 130
			Toluene	2022/05/03		99	%	70 - 130
			Ethylbenzene	2022/05/03		100	%	70 - 130
			Total Xylenes	2022/05/03		98	%	70 - 130
7972490	THL	Method Blank	Isobutylbenzene - Volatile	2022/05/03		101	%	70 - 130
			Benzene	2022/05/03	<0.0010		mg/L	
			Toluene	2022/05/03	<0.0010		mg/L	
			Ethylbenzene	2022/05/03	<0.0010		mg/L	
			Total Xylenes	2022/05/03	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/05/03	<0.090		mg/L	
7972490	THL	RPD	Benzene	2022/05/03	NC		%	40
			Toluene	2022/05/03	NC		%	40
			Ethylbenzene	2022/05/03	NC		%	40
			Total Xylenes	2022/05/03	NC		%	40
			C6 - C10 (less BTEX)	2022/05/03	NC		%	40
7972736	MGN	Matrix Spike	Isobutylbenzene - Extractable	2022/05/03		98	%	70 - 130
			n-Dotriacontane - Extractable	2022/05/03		101	%	70 - 130
			>C10-C16 Hydrocarbons	2022/05/03		92	%	70 - 130
			>C16-C21 Hydrocarbons	2022/05/03		92	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/05/03		91	%	70 - 130
7972736	MGN	Spiked Blank	Isobutylbenzene - Extractable	2022/05/03		97	%	70 - 130
			n-Dotriacontane - Extractable	2022/05/03		102	%	70 - 130
			>C10-C16 Hydrocarbons	2022/05/03		93	%	70 - 130

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Bureau Veritas Job #: C2B5986
Report Date: 2022/06/02

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C16-C21 Hydrocarbons	2022/05/03		90	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/05/03		86	%	70 - 130
7972736	MGN	Method Blank	Isobutylbenzene - Extractable	2022/05/03		99	%	70 - 130
			n-Dotriacontane - Extractable	2022/05/03		101	%	70 - 130
			>C10-C16 Hydrocarbons	2022/05/03	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/05/03	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/05/03	<0.090		mg/L	
7972736	MGN	RPD	>C10-C16 Hydrocarbons	2022/05/03	NC		%	40
			>C16-C21 Hydrocarbons	2022/05/03	NC		%	40
			>C21-<C32 Hydrocarbons	2022/05/03	NC		%	40
7974498	SHW	Spiked Blank	Conductivity	2022/05/04		102	%	80 - 120
7974498	SHW	Method Blank	Conductivity	2022/05/04	1.4, RDL=1.0		uS/cm	
7974498	SHW	RPD [SMR330-04]	Conductivity	2022/05/04	1.5		%	10
7974500	SHW	Spiked Blank	pH	2022/05/04		100	%	97 - 103
7974500	SHW	RPD [SMR330-04]	pH	2022/05/04	0.49		%	N/A
7974604	JHY	Matrix Spike	Dissolved Arsenic (As)	2022/05/04		94	%	80 - 120
			Dissolved Calcium (Ca)	2022/05/04		102	%	80 - 120
			Dissolved Iron (Fe)	2022/05/04		101	%	80 - 120
			Dissolved Lead (Pb)	2022/05/04		99	%	80 - 120
			Dissolved Magnesium (Mg)	2022/05/04		98	%	80 - 120
			Dissolved Manganese (Mn)	2022/05/04		98	%	80 - 120
			Dissolved Zinc (Zn)	2022/05/04		100	%	80 - 120
7974604	JHY	Spiked Blank	Dissolved Arsenic (As)	2022/05/04		93	%	80 - 120
			Dissolved Calcium (Ca)	2022/05/04		100	%	80 - 120
			Dissolved Iron (Fe)	2022/05/04		99	%	80 - 120
			Dissolved Lead (Pb)	2022/05/04		98	%	80 - 120
			Dissolved Magnesium (Mg)	2022/05/04		97	%	80 - 120
			Dissolved Manganese (Mn)	2022/05/04		96	%	80 - 120
			Dissolved Zinc (Zn)	2022/05/04		99	%	80 - 120
7974604	JHY	Method Blank	Dissolved Arsenic (As)	2022/05/04	<1.0		ug/L	
			Dissolved Calcium (Ca)	2022/05/04	<100		ug/L	
			Dissolved Iron (Fe)	2022/05/04	<50		ug/L	
			Dissolved Lead (Pb)	2022/05/04	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2022/05/04	<100		ug/L	
			Dissolved Manganese (Mn)	2022/05/04	<2.0		ug/L	
			Dissolved Zinc (Zn)	2022/05/04	<5.0		ug/L	
7974604	JHY	RPD	Dissolved Arsenic (As)	2022/05/04	NC		%	20
			Dissolved Calcium (Ca)	2022/05/04	NC		%	20
			Dissolved Iron (Fe)	2022/05/04	NC		%	20
			Dissolved Lead (Pb)	2022/05/04	NC		%	20
			Dissolved Magnesium (Mg)	2022/05/04	NC		%	20
			Dissolved Manganese (Mn)	2022/05/04	NC		%	20
			Dissolved Zinc (Zn)	2022/05/04	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Bureau Veritas Job #: C2B5986
Report Date: 2022/06/02

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: LL

VALIDATION SIGNATURE PAGE

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

Alan Stewart, Organics Manager, Bedford

Mike MacGillivray, Scientific Specialist (Inorganics)

Bureau Veritas Proprietary Software
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

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

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200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel.(902) 420-0203 Toll-free:800-563-6266 Fax:(902) 420-8612 www.bvna.com

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp	Company Name		Quotation #	C22111	Bureau Veritas Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	Ryan Pellerin / Lisa Lafleur	P.O. #		C2B5986	875559
Address	97 Troop Ave Dartmouth NS B3B 2A7	Address		Project #	201756.004	Chain Of Custody Record	Project Manager
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Project Name		C#875559-01-01	Keri Mackay
Email	Atlantic.ap@Englobecorp.com	Email	ryan.pellerin@englobecorp.com	Site #			
				Sampled By	LL/DM		

Regulatory Criteria:

Special Instructions

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RBCA Hydrocarbons in Water	As, Fe, Mn, Pb, Zn + Hardness	pH	Conductance - water	Atlantic VOCs - Non-Chlorinated Water						# of Bottles	Comments / Hazards / Other Required Analysis
1		MW1	28 APR 23	12h30	GW	X		X	X	X	X							4	
2		MW3		11h40		X		X	X	X	X							4	
3		MW4		10h50		X		X	X	X	X							4	
4		MW6		15h50		X		X	X	X	X	X						6	
5		MW9		14h55		X		X	X	X	X							4	
6		MW11		14h40		X		X	X	X	X							4	
7		MW14		13h20		X		X	X	X	X							4	
8		DUP1				X		X	X	X	X							4	
9		Trip Blank						X	X	X	X							4	
10		Equipment Blank		16h30				X	X	X	X							4	

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Lisa Lafleur	23/4/28	18h00	Ron Tuk BAY STREET LE				☐	8, 10, 9	☐ Yes ☐ No

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

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

White: Bureau Veritas Yellow: Client

FISH TOXICITY REPORT (Single Concentration)

HITS Aquatic Toxicity Testing

CLIENT INFORMATION

Englobe Corp.
97 Troop Ave.
Dartmouth, NS
Contact: Lisa Ladoucuer

TEST FACILITY INFORMATION

Harris Industrial Testing Service Ltd.
21 Old Cobequid Road, Waverley
Nova Scotia B2R 1P4
Ph: 902 861-2232 office@harrisindustrial.ca

SAMPLE INFORMATION (Client-provided data italicised)

Lab Identification #: 22-205-A
Sample Name/Location: TW1
Sampling Method: Grab Sample Homogenized: No
Sampler Name: D. Matthews
Date & Time Sampled: Apr. 28 2022 0945 hrs
Date & Time Received: Apr. 29 2022 1050 hrs
Sample Description: Yellow-orange, transparent liquid.

GENERAL TEST INFORMATION

Reference Method:
EPS 1/RM/13 2nd Ed. Dec. 2000 with Feb. 2016 Amendments
Type: Single Concentration (Pass/Fail) Tox 9A
General Test Procedures held on file
Test Organism: *Oncorhynchus mykiss*
(Rainbow trout)

PRE-TEST PARAMETERS

Pre-test Temp. (°C): 14.0

Pre-test D.O. (mg/L): 7.5
Pre-test D.O. Saturation (%): 79

Pre-test pH: 7.4 pH Adjusted: No

Sample Conductivity (µS/cm): 436

SAMPLE PRE-TREATMENT

Mandatory 30 minute Pre-aeration: Yes
Rate (ml/min/L): 6.5 ± 1 Time: 1140 hrs
D.O. (mg/L): 7.6 D.O. Saturation (%): 80

Pre-aeration Continued: No Duration: -- min. @ -- hrs
D.O. (mg/L): -- D.O. Saturation (%): --

Aeration continued throughout test by airstone @ 6.5 ± 1 ml/min/L

TEST CONDITIONS

Date & Time Test Initiated: Apr. 29 2022 1210 Hrs
Date & Time Test Terminated: May 03 2022 1210 Hrs

Deviations from Test Method: No
Description: N/A

Fish Batch #: 339
% Mortality over 7 days prior to test: 1.0

Test Volume (L): 20
Depth (cm): 36.2
Replicates: No
Number of fish per vessel: 10

Loading Density (g/L): 0.36

Mean Fork Length (mm): 40 ± 3.8 SD
Range (mm): 35 - 46

Mean Wet Weight (g): 0.72 ± 0.26 SD
Range (g): 0.43 – 1.13

Temperature: 15 ± 1°C
Photoperiod: 16L/8D
Lux: 100 – 500
Static Test, Duration: 96 hours
Control/Dilution Water: Dechlorinated Municipal Water

TEST PARAMETERS

	INITIAL (0 hrs)				FINAL (96 hrs)		
CONC. %	TEMP. °C	D.O. mg/L	pH	COND. µS/cm	TEMP. °C	D.O. mg/L	pH
100	14.0	7.6	7.4	436	15.5	10.2	8.0
Control	15.5	9.7	7.5	299	15.5	10.3	7.6

TEST RESULTS

CONC. %	TOTAL MORTALITY # 24 hrs	48 hrs	72 hrs	96 hrs	PERCENT MORTALITY % 24 hrs	48 hrs	72 hrs	96 hrs
100	0/10	0/10	0/10	0/10	0	0	0	0
Control	0/10	0/10	0/10	0/10	0	0	0	0

CONC. %	TOTAL STRESS # 24 hrs	48 hrs	72 hrs	96 hrs	PERCENT STRESS % 24 hrs	48 hrs	72 hrs	96 hrs
100	0/10	0/10	0/10	0/10	0	0	0	0
Control	0/10	0/10	0/10	0/10	0	0	0	0

96 HOUR ACUTE LETHALITY RESULTS

TOTAL MORTALITY 0 %

ACUTELY LETHAL **No**

Acutely Lethal:
No: Mortality 50% or less at 100% concentration
Yes: Mortality greater than 50% in 100% concentration

REFERENCE TOXICANT DATA

Performed under laboratory conditions as above, no deviations

Batch: 339 Test Date: Mar. 28 – Apr. 01 2022
Reference Substance: Phenol

LC_{50} Value:	8.23 mg/L
95% Confidence Limits:	6.88 – 9.85 mg/L
Historical Mean:	8.60 mg/L
Warning Limits ± 2 SD:	6.77 – 11.0 mg/L

COMMENTS

Test meets all conditions for test validity.

TEST AUTHORIZATION AND VERIFICATION

Analyst(s): J. Fraser

Verified by: H. Nickel

Date: May 03 2022

Signed: Hannah Nickel

REFERENCES

Tidepool Scientific Software, 2000 - 2022. Comprehensive Environmental Toxicity Information System – CETIS V2.1.0.12
Metals and Diamond Mining Effluent Regulations, SOR/2002-222, Dec. 20, 2020.
Pulp and Paper Effluent Regulations, SOR/92-269, Dec. 17 2020.
Wastewater Systems Effluent Regulations, SOR/2012-139, Dec. 17 2020.

Accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA Inc.).
The test included in this report is within the scope of this accreditation.
Results apply to the sample as received. Results reported apply only to the sample tested. Results are based on nominal concentrations.

FISH TOXICITY REPORT (Single Concentration)

HITS Aquatic Toxicity Testing

CLIENT INFORMATION

Englobe Corp.
97 Troop Ave.
Dartmouth, NS
Contact: Lisa Ladoucuer

TEST FACILITY INFORMATION

Harris Industrial Testing Service Ltd.
21 Old Cobequid Road, Waverley
Nova Scotia B2R 1P4
Ph: 902 861-2232 office@harrisindustrial.ca

SAMPLE INFORMATION (Client-provided data italicised)

Lab Identification #: 22-205-B
Sample Name/Location: TW3
Sampling Method: Grab Sample Homogenized: No
Sampler Name: D. Matthews
Date & Time Sampled: Apr. 28 2022 0920 hrs
Date & Time Received: Apr. 29 2022 1050 hrs
Sample Description: Orange, translucent liquid.

GENERAL TEST INFORMATION

Reference Method:
EPS 1/RM/13 2nd Ed. Dec. 2000 with Feb. 2016 Amendments
Type: Single Concentration (Pass/Fail) Tox 9A
General Test Procedures held on file
Test Organism: *Oncorhynchus mykiss*
(Rainbow trout)

PRE-TEST PARAMETERS

Pre-test Temp. (°C): 14.5

Pre-test D.O. (mg/L): 9.6
Pre-test D.O. Saturation (%): 92

Pre-test pH: 7.2 pH Adjusted: No

Sample Conductivity (µS/cm): 822

SAMPLE PRE-TREATMENT

Mandatory 30 minute Pre-aeration: Yes
Rate (ml/min/L): 6.5 ± 1 Time: 1140 hrs
D.O. (mg/L): 9.1 D.O. Saturation (%): 92

Pre-aeration Continued: No Duration: -- min. @ -- hrs
D.O. (mg/L): -- D.O. Saturation (%): --

Aeration continued throughout test by airstone @ 6.5 ± 1 ml/min/L

TEST CONDITIONS

Date & Time Test Initiated: Apr. 29 2022 1210 Hrs
Date & Time Test Terminated: May 03 2022 1210 Hrs

Deviations from Test Method: No
Description: N/A

Fish Batch #: 340
% Mortality over 7 days prior to test: 0.13

Test Volume (L): 18
Depth (cm): 31.2
Replicates: No
Number of fish per vessel: 10

Loading Density (g/L): 0.25

Mean Fork Length (mm): 37 ± 3.0 SD
Range (mm): 33 - 41

Mean Wet Weight (g): 0.46 ± 0.14 SD
Range (g): 0.29 – 0.77

Temperature: 15 ± 1°C
Photoperiod: 16L/8D
Lux: 100 – 500
Static Test, Duration: 96 hours
Control/Dilution Water: Dechlorinated Municipal Water

TEST PARAMETERS

	INITIAL (0 hrs)				FINAL (96 hrs)		
CONC. %	TEMP. °C	D.O. mg/L	pH	COND. µS/cm	TEMP. °C	D.O. mg/L	pH
100	15.0	9.1	7.3	817	15.0	10.3	8.1
Control	15.5	9.9	7.5	299	15.0	10.1	7.6

TEST RESULTS

CONC. %	TOTAL MORTALITY # 24 hrs	48 hrs	72 hrs	96 hrs	PERCENT MORTALITY % 24 hrs	48 hrs	72 hrs	96 hrs
100	0/10	0/10	0/10	0/10	0	0	0	0
Control	1/10	1/10	1/10	1/10	10	10	10	10

CONC. %	TOTAL STRESS # 24 hrs	48 hrs	72 hrs	96 hrs	PERCENT STRESS % 24 hrs	48 hrs	72 hrs	96 hrs
100	0/10	0/10	0/10	0/10	0	0	0	0
Control	0/10	0/10	0/10	0/10	0	0	0	0

96 HOUR ACUTE LETHALITY RESULTS

TOTAL MORTALITY 0 %

ACUTELY LETHAL **No**

Acutely Lethal:
No: Mortality 50% or less at 100% concentration
Yes: Mortality greater than 50% in 100% concentration

REFERENCE TOXICANT DATA

Performed under laboratory conditions as above, no deviations

Batch: 340 Test Date: May 02 – 06 2022

Reference Substance: Phenol

LC_{50} Value:	9.42 mg/L
95% Confidence Limits:	8.13 – 10.9 mg/L
Historical Mean:	8.60 mg/L
Warning Limits ± 2 SD:	6.83 – 10.8 mg/L

COMMENTS

Test meets all conditions for test validity. Control mortality within acceptable limits; results remain valid.

TEST AUTHORIZATION AND VERIFICATION

Analyst(s): J. Fraser **Verified by:** H. Nickel

Date: May 03 2022 **Signed:** Hannah Nickel

REFERENCES

Tidepool Scientific Software, 2000 - 2022. Comprehensive Environmental Toxicity Information System – CETIS V2.1.0.12
Metals and Diamond Mining Effluent Regulations, SOR/2002-222, Dec. 20, 2020.
Pulp and Paper Effluent Regulations, SOR/92-269, Dec. 17 2020.
Wastewater Systems Effluent Regulations, SOR/2012-139, Dec. 17 2020.

Accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA Inc.).
The test included in this report is within the scope of this accreditation.
Results apply to the sample as received. Results reported apply only to the sample tested. Results are based on nominal concentrations.

FISH TOXICITY REPORT (Single Concentration)

HITS Aquatic Toxicity Testing

CLIENT INFORMATION

Englobe Corp.
97 Troop Ave.
Dartmouth, NS
Contact: Lisa Ladoucuer

TEST FACILITY INFORMATION

Harris Industrial Testing Service Ltd.
21 Old Cobequid Road, Waverley
Nova Scotia B2R 1P4
Ph: 902 861-2232 office@harrisindustrial.ca

SAMPLE INFORMATION (Client-provided data italicised)

Lab Identification #: 22-205-C
Sample Name/Location: TW4
Sampling Method: Grab Sample Homogenized: No
Sampler Name: D. Matthews
Date & Time Sampled: Apr. 28 2022 1300 hrs
Date & Time Received: Apr. 29 2022 1050 hrs
Sample Description: Clear, transparent liquid with organic debris.

GENERAL TEST INFORMATION

Reference Method:
EPS 1/RM/13 2nd Ed. Dec. 2000 with Feb. 2016 Amendments
Type: Single Concentration (Pass/Fail) Tox 9A
General Test Procedures held on file
Test Organism: *Oncorhynchus mykiss* (Rainbow trout)

PRE-TEST PARAMETERS

Pre-test Temp. (°C): 15.0
Pre-test D.O. (mg/L): 10.1
Pre-test D.O. Saturation (%): 100
Pre-test pH: 7.6 pH Adjusted: No
Sample Conductivity (µS/cm): 745

SAMPLE PRE-TREATMENT

Mandatory 30 minute Pre-aeration: Yes
Rate (ml/min/L): 6.5 ± 1 Time: 1140 hrs
D.O. (mg/L): 10.2 D.O. Saturation (%): 100
Pre-aeration Continued: No Duration: -- min. @ -- hrs
D.O. (mg/L): -- D.O. Saturation (%): --
Aeration continued throughout test by airstone @ 6.5 ± 1 ml/min/L

TEST CONDITIONS

Date & Time Test Initiated: Apr. 29 2022 1210 Hrs
Date & Time Test Terminated: May 03 2022 1210 Hrs

Deviations from Test Method: No
Description: N/A

Fish Batch #: 339
% Mortality over 7 days prior to test: 1.0

Test Volume (L): 20
Depth (cm): 36.2
Replicates: No
Number of fish per vessel: 10

Loading Density (g/L): 0.33

Mean Fork Length (mm): 38 ± 6.7 SD
Range (mm): 30 - 47

Mean Wet Weight (g): 0.66 ± 0.34 SD
Range (g): 0.25 – 1.23

Temperature: 15 ± 1°C
Photoperiod: 16L/8D
Lux: 100 – 500
Static Test, Duration: 96 hours
Control/Dilution Water: Dechlorinated Municipal Water

TEST PARAMETERS

	INITIAL (0 hrs)				FINAL (96 hrs)		
CONC. %	TEMP. °C	D.O. mg/L	pH	COND. µS/cm	TEMP. °C	D.O. mg/L	pH
100	14.5	10.2	7.7	746	15.5	10.0	8.2
Control	15.5	10.0	7.5	302	15.5	10.1	7.6

TEST RESULTS

CONC. %	TOTAL MORTALITY # 24 hrs	48 hrs	72 hrs	96 hrs	PERCENT MORTALITY % 24 hrs	48 hrs	72 hrs	96 hrs
100	0/10	0/10	0/10	0/10	0	0	0	0
Control	0/10	0/10	0/10	0/10	0	0	0	0

CONC. %	TOTAL STRESS # 24 hrs	48 hrs	72 hrs	96 hrs	PERCENT STRESS % 24 hrs	48 hrs	72 hrs	96 hrs
100	0/10	0/10	0/10	0/10	0	0	0	0
Control	0/10	0/10	0/10	0/10	0	0	0	0

96 HOUR ACUTE LETHALITY RESULTS

TOTAL MORTALITY 0 %

ACUTELY LETHAL **No**

Acutely Lethal:
No: Mortality 50% or less at 100% concentration
Yes: Mortality greater than 50% in 100% concentration

REFERENCE TOXICANT DATA

Performed under laboratory conditions as above, no deviations

Batch: 339 Test Date: Mar. 28 – Apr. 01 2022
Reference Substance: Phenol

LC_{50} Value:	8.23 mg/L
95% Confidence Limits:	6.88 – 9.85 mg/L
Historical Mean:	8.60 mg/L
Warning Limits ± 2 SD:	6.77 – 11.0 mg/L

COMMENTS

Test meets all conditions for test validity.

TEST AUTHORIZATION AND VERIFICATION

Analyst(s): J. Fraser **Verified by:** H. Nickel

Date: May 03 2022 **Signed:** Hannah Nickel

REFERENCES

Tidepool Scientific Software, 2000 - 2022. Comprehensive Environmental Toxicity Information System – CETIS V2.1.0.12
Metals and Diamond Mining Effluent Regulations, SOR/2002-222, Dec. 20, 2020.
Pulp and Paper Effluent Regulations, SOR/92-269, Dec. 17 2020.
Wastewater Systems Effluent Regulations, SOR/2012-139, Dec. 17 2020.

Accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA Inc.).
The test included in this report is within the scope of this accreditation.
Results apply to the sample as received. Results reported apply only to the sample tested. Results are based on nominal concentrations.

Your Project #: 2001756.004
Your C.O.C. #: 901272-01-01, N/A

Attention: Ryan Pellerin

Englobe Corp
97 Troop Ave
Dartmouth, NS
CANADA B3B 2A7

Report Date: 2022/11/04
Report #: R7372903
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2U9251
Received: 2022/10/18, 10:53

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Conductance - water	9	N/A	2022/10/26	ATL SOP 00004	SM 23 2510B m
Conductance - water	1	N/A	2022/10/31	ATL SOP 00004	SM 23 2510B m
TEH in Water (PIRI)	2	2022/10/28	2022/10/29	ATL SOP 00113	Atl. RBCA v3.1 m
TEH in Water (PIRI)	8	2022/10/31	2022/10/31	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	3	N/A	2022/10/27	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	4	N/A	2022/10/28	ATL SOP 00048	Auto Calc
Hardness (calculated as CaCO3)	3	N/A	2022/10/31	ATL SOP 00048	Auto Calc
Metals Water Diss. MS (as rec'd)	3	N/A	2022/10/26	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	4	N/A	2022/10/27	ATL SOP 00058	EPA 6020B R2 m
Metals Water Diss. MS (as rec'd)	3	N/A	2022/10/28	ATL SOP 00058	EPA 6020B R2 m
pH (1)	9	N/A	2022/10/26	ATL SOP 00003	SM 23 4500-H+ B m
pH (1)	1	N/A	2022/10/31	ATL SOP 00003	SM 23 4500-H+ B m
ModTPH (T1) Calc. for Water	2	N/A	2022/10/31	N/A	Atl. RBCA v3 m
ModTPH (T1) Calc. for Water	8	N/A	2022/11/01	N/A	Atl. RBCA v3 m
Volatile Organic Compounds in Water	1	N/A	2022/10/27	ATL SOP 00133	EPA 8260D R4 m
VPH in Water (PIRI)	10	N/A	2022/10/26	ATL SOP 00130	Atl. RBCA v3.1 m

Remarks:

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

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope

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Your Project #: 2001756.004
Your C.O.C. #: 901272-01-01, N/A

Attention: Ryan Pellerin

Englobe Corp
97 Troop Ave
Dartmouth, NS
CANADA B3B 2A7

Report Date: 2022/11/04
Report #: R7372903
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2U9251
Received: 2022/10/18, 10:53

dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) The APHA Standard Method requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Keri Mackay, Customer Experience Team Lead
Email: Keri.MACKAY@bureauveritas.com
Phone# (902)420-0203 Ext:294
==========
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Suzanne Rogers, General Manager responsible for Nova Scotia Environmental laboratory operations.

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

RBCA HYDROCARBONS IN WATER (WATER)

Bureau Veritas ID		UCB033		UCB034	UCB035	UCB036		
Sampling Date		2022/10/17 16:45		2022/10/17 15:20	2022/10/17 15:00	2022/10/17 16:20		
COC Number		901272-01-01		901272-01-01	901272-01-01	901272-01-01		
Sample #		MW1		MW3	MW4	MW6		
	UNITS	**MW1**	**RDL**	**MW3**	**MW4**	**MW6**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0060 (1)	0.0060	<0.0010	<0.0010	<0.0010	0.0010	8306380
Toluene	mg/L	0.019	0.0010	<0.0010	<0.0010	<0.0010	0.0010	8306380
Ethylbenzene	mg/L	0.62	0.0010	<0.0010	<0.0010	<0.0010	0.0010	8306380
Total Xylenes	mg/L	0.73	0.0020	<0.0020	<0.0020	<0.0020	0.0020	8306380
C6 - C10 (less BTEX)	mg/L	8.8	0.090	<0.090	<0.090	<0.090	0.090	8306380
>C10-C16 Hydrocarbons	mg/L	2.7	0.050	<0.050	<0.050	<0.050	0.050	8315724
>C16-C21 Hydrocarbons	mg/L	<0.050	0.050	0.051	<0.050	<0.050	0.050	8315724
>C21-<C32 Hydrocarbons	mg/L	<0.090	0.090	0.15	<0.090	<0.090	0.090	8315724
Modified TPH (Tier1)	mg/L	12	0.090	0.20	<0.090	<0.090	0.090	8301652
Reached Baseline at C32	mg/L	Yes	N/A	Yes	NA	NA	N/A	8315724
Hydrocarbon Resemblance	mg/L	COMMENT (2)	N/A	COMMENT (3)	NA	NA	N/A	8315724
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	103		98	100	103		8315724
n-Dotriacontane - Extractable	%	111		109	117	116		8315724
Isobutylbenzene - Volatile	%	119		113	113	114		8306380

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated VPH RDL(s) due to matrix interference.
(2) One product in the gas/fuel oil range.
(3) One product in fuel / lube range. Possible lube oil fraction.

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

RBCA HYDROCARBONS IN WATER (WATER)

Bureau Veritas ID		UCB037		UCB038		UCB039		
Sampling Date		2022/10/17 15:45		2022/10/17 16:00		2022/10/17 17:05		
COC Number		901272-01-01		901272-01-01		901272-01-01		
Sample #		MW9		MW11		MW14		
	UNITS	**MW9**	**QC Batch**	**MW11**	**QC Batch**	**MW14**	**RDL**	**QC Batch**
Petroleum Hydrocarbons								
Benzene	mg/L	<0.0010	8306380	<0.0010	8306380	<0.0010	0.0010	8306380
Toluene	mg/L	<0.0010	8306380	<0.0010	8306380	<0.0010	0.0010	8306380
Ethylbenzene	mg/L	<0.0010	8306380	<0.0010	8306380	<0.0010	0.0010	8306380
Total Xylenes	mg/L	<0.0020	8306380	<0.0020	8306380	<0.0020	0.0020	8306380
C6 - C10 (less BTEX)	mg/L	<0.090	8306380	<0.090	8306380	<0.090	0.090	8306380
>C10-C16 Hydrocarbons	mg/L	<0.050	8312595	0.073	8315724	<0.050	0.050	8312595
>C16-C21 Hydrocarbons	mg/L	0.15	8312595	0.14	8315724	<0.050	0.050	8312595
>C21-<C32 Hydrocarbons	mg/L	0.93	8312595	1.1	8315724	<0.090	0.090	8312595
Modified TPH (Tier1)	mg/L	1.1	8301652	1.3	8301652	<0.090	0.090	8301652
Reached Baseline at C32	mg/L	Yes	8312595	No	8315724	NA	N/A	8312595
Hydrocarbon Resemblance	mg/L	COMMENT (1)	8312595	COMMENT (1)	8315724	NA	N/A	8312595
Surrogate Recovery (%)								
Isobutylbenzene - Extractable	%	98	8312595	96	8315724	103		8312595
n-Dotriacontane - Extractable	%	103	8312595	113	8315724	106		8312595
Isobutylbenzene - Volatile	%	113	8306380	115	8306380	116		8306380

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Lube oil fraction.

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

RBCA HYDROCARBONS IN WATER (WATER)

Bureau Veritas ID		UCB040	UCB041	UCB042		
Sampling Date		2022/10/17	2022/10/17 17:20	2022/10/17 17:30		
COC Number		901272-01-01	901272-01-01	901272-01-01		
Sample #		DUP1	TRIP BLANK	EQUIPMENT BLANK		
	UNITS	**DUP1**	**Trip Blank**	**Equipment Blank**	**RDL**	**QC Batch**
Petroleum Hydrocarbons						
Benzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	8306380
Toluene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	8306380
Ethylbenzene	mg/L	<0.0010	<0.0010	<0.0010	0.0010	8306380
Total Xylenes	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8306380
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	<0.090	0.090	8306380
>C10-C16 Hydrocarbons	mg/L	0.078	<0.050	<0.050	0.050	8315724
>C16-C21 Hydrocarbons	mg/L	0.16	<0.050	<0.050	0.050	8315724
>C21-<C32 Hydrocarbons	mg/L	1.3	<0.090	<0.090	0.090	8315724
Modified TPH (Tier1)	mg/L	1.5	<0.090	<0.090	0.090	8301652
Reached Baseline at C32	mg/L	No	NA	NA	N/A	8315724
Hydrocarbon Resemblance	mg/L	COMMENT (1)	NA	NA	N/A	8315724
Surrogate Recovery (%)						
Isobutylbenzene - Extractable	%	76	102	94		8315724
n-Dotriacontane - Extractable	%	83	119	129		8315724
Isobutylbenzene - Volatile	%	114	116	112		8306380

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Lube oil fraction.

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

ATLANTIC VOCS - NON-CHLORINATED WATER (WATER)

Bureau Veritas ID		UCB036		
Sampling Date		2022/10/17 16:20		
COC Number		901272-01-01		
Sample #		MW6		
	UNITS	**MW6**	**RDL**	**QC Batch**
Volatile Organics				
1,1-Dichloroethane	ug/L	<2.0	2.0	8306111
1,1-Dichloroethylene	ug/L	<0.50	0.50	8306111
1,1,1-Trichloroethane	ug/L	<1.0	1.0	8306111
1,1,2-Trichloroethane	ug/L	<1.0	1.0	8306111
1,1,2,2-Tetrachloroethane	ug/L	<0.50	0.50	8306111
Ethylene Dibromide	ug/L	<0.20	0.20	8306111
1,2-Dichlorobenzene	ug/L	<0.50	0.50	8306111
1,2-Dichloroethane	ug/L	<1.0	1.0	8306111
cis-1,2-Dichloroethylene	ug/L	9.3	0.50	8306111
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	8306111
1,2-Dichloropropane	ug/L	<0.50	0.50	8306111
1,3-Dichlorobenzene	ug/L	<1.0	1.0	8306111
cis-1,3-Dichloropropene	ug/L	<0.50	0.50	8306111
trans-1,3-Dichloropropene	ug/L	<0.50	0.50	8306111
1,4-Dichlorobenzene	ug/L	<1.0	1.0	8306111
Benzene	ug/L	<1.0	1.0	8306111
Bromodichloromethane	ug/L	<1.0	1.0	8306111
Bromoform	ug/L	<1.0	1.0	8306111
Bromomethane	ug/L	<0.50	0.50	8306111
Carbon Tetrachloride	ug/L	<0.50	0.50	8306111
Chlorobenzene	ug/L	<1.0	1.0	8306111
Chloroethane	ug/L	<8.0	8.0	8306111
Chloroform	ug/L	<1.0	1.0	8306111
Chloromethane	ug/L	<8.0	8.0	8306111
Dibromochloromethane	ug/L	<1.0	1.0	8306111
Methylene Chloride(Dichloromethane)	ug/L	<3.0	3.0	8306111
Ethylbenzene	ug/L	<1.0	1.0	8306111
Methyl t-butyl ether (MTBE)	ug/L	<2.0	2.0	8306111
Styrene	ug/L	<1.0	1.0	8306111
Tetrachloroethylene	ug/L	<1.0	1.0	8306111
Toluene	ug/L	<1.0	1.0	8306111
Trichloroethylene	ug/L	29	1.0	8306111
Trichlorofluoromethane (FREON 11)	ug/L	<8.0	8.0	8306111
Vinyl Chloride	ug/L	5.0	0.50	8306111

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

ATLANTIC VOCS - NON-CHLORINATED WATER (WATER)

Bureau Veritas ID		UCB036		
Sampling Date		2022/10/17 16:20		
COC Number		901272-01-01		
Sample #		MW6		
	UNITS	**MW6**	**RDL**	**QC Batch**
o-Xylene	ug/L	<1.0	1.0	8306111
p+m-Xylene	ug/L	<2.0	2.0	8306111
Total Xylenes	ug/L	<1.0	1.0	8306111
Total Trihalomethanes	ug/L	<1.0	1.0	8306111
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	96		8306111
D4-1,2-Dichloroethane	%	101		8306111
D8-Toluene	%	98		8306111

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		UCB033	UCB034	UCB035	UCB036	UCB037	UCB038		
Sampling Date		2022/10/17 16:45	2022/10/17 15:20	2022/10/17 15:00	2022/10/17 16:20	2022/10/17 15:45	2022/10/17 16:00		
COC Number		901272-01-01	901272-01-01	901272-01-01	901272-01-01	901272-01-01	901272-01-01		
Sample #		MW1	MW3	MW4	MW6	MW9	MW11		
	UNITS	**MW1**	**MW3**	**MW4**	**MW6**	**MW9**	**MW11**	**RDL**	**QC Batch**
Calculated Parameters									
Hardness (CaCO3)	mg/L	95	130	66	1100	320	100	1.0	8302017
Inorganics									
pH	pH	7.84	7.42	7.23	7.50	7.79	7.11		8306116
Conductivity	uS/cm	3000	740	360	370	790	5500	1.0	8306113

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		UCB039	UCB040			UCB040			UCB041		
Sampling Date		2022/10/17 17:05	2022/10/17			2022/10/17			2022/10/17 17:20		
COC Number		901272-01-01	901272-01-01			901272-01-01			901272-01-01		
Sample #		MW14	DUP1			DUP1			TRIP BLANK		
	UNITS	**MW14**	**DUP1**	**RDL**	**QC Batch**	**DUP1 Lab-Dup**	**RDL**	**QC Batch**	**Trip Blank**	**RDL**	**QC Batch**
Calculated Parameters											
Hardness (CaCO3)	mg/L	150	1100	1.0	8302017				<1.0	1.0	8302017
Inorganics											
pH	pH	7.32	7.26		8306116	7.26		8306116	6.79		8306116
Conductivity	uS/cm	660	5500	1.0	8306113	5500	1.0	8306113	18	1.0	8306113

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

Bureau Veritas ID		UCB042		
Sampling Date		2022/10/17 17:30		
COC Number		901272-01-01		
Sample #		EQUIPMENT BLANK		
	UNITS	**Equipment Blank**	**RDL**	**QC Batch**
Calculated Parameters				
Hardness (CaCO3)	mg/L	<1.0	1.0	8302017
Inorganics				
pH	pH	6.09		8312447
Conductivity	uS/cm	1.5	1.0	8312442

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

ELEMENTS BY ICP/MS (WATER)

Bureau Veritas ID		UCB033	UCB034	UCB035	UCB036		UCB037		
Sampling Date		2022/10/17 16:45	2022/10/17 15:20	2022/10/17 15:00	2022/10/17 16:20		2022/10/17 15:45		
COC Number		901272-01-01	901272-01-01	901272-01-01	901272-01-01		901272-01-01		
Sample #		MW1	MW3	MW4	MW6		MW9		
	UNITS	**MW1**	**MW3**	**MW4**	**MW6**	**QC Batch**	**MW9**	**RDL**	**QC Batch**
Metals									
Dissolved Arsenic (As)	ug/L	11	17	<1.0	1.8	8306419	<1.0	1.0	8308972
Dissolved Calcium (Ca)	ug/L	31000	31000	13000	330000	8306419	100000	100	8308972
Dissolved Iron (Fe)	ug/L	11000	7400	<50	49000	8306419	310	50	8308972
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	1.1	8306419	<0.50	0.50	8308972
Dissolved Magnesium (Mg)	ug/L	4500	13000	8300	63000	8306419	16000	100	8308972
Dissolved Manganese (Mn)	ug/L	12000	3000	7300	4700	8306419	700	2.0	8308972
Dissolved Zinc (Zn)	ug/L	<5.0	8.6	38	<5.0	8306419	9.0	5.0	8308972

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		UCB038	UCB039	UCB040	UCB041	UCB042		
Sampling Date		2022/10/17 16:00	2022/10/17 17:05	2022/10/17	2022/10/17 17:20	2022/10/17 17:30		
COC Number		901272-01-01	901272-01-01	901272-01-01	901272-01-01	901272-01-01		
Sample #		MW11	MW14	DUP1	TRIP BLANK	EQUIPMENT BLANK		
	UNITS	**MW11**	**MW14**	**DUP1**	**Trip Blank**	**Equipment Blank**	**RDL**	**QC Batch**
Metals								
Dissolved Arsenic (As)	ug/L	<1.0	<1.0	1.8	<1.0	<1.0	1.0	8308972
Dissolved Calcium (Ca)	ug/L	35000	45000	330000	<100	<100	100	8308972
Dissolved Iron (Fe)	ug/L	<50	<50	49000	<50	<50	50	8308972
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8308972
Dissolved Magnesium (Mg)	ug/L	4300	8900	62000	<100	<100	100	8308972
Dissolved Manganese (Mn)	ug/L	76	1800	4700	<2.0	<2.0	2.0	8308972
Dissolved Zinc (Zn)	ug/L	6.7	28	<5.0	5.2	<5.0	5.0	8308972

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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GENERAL COMMENTS

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

Package 1	5.0°C
Package 2	5.0°C

Results relate only to the items tested.

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8306111	ASL	Matrix Spike	4-Bromofluorobenzene	2022/10/27		101	%	70 - 130
			D4-1,2-Dichloroethane	2022/10/27		108	%	70 - 130
			D8-Toluene	2022/10/27		93	%	70 - 130
			1,1-Dichloroethane	2022/10/27		96	%	70 - 130
			1,1-Dichloroethylene	2022/10/27		93	%	70 - 130
			1,1,1-Trichloroethane	2022/10/27		103	%	70 - 130
			1,1,2-Trichloroethane	2022/10/27		107	%	70 - 130
			1,1,2,2-Tetrachloroethane	2022/10/27		106	%	70 - 130
			Ethylene Dibromide	2022/10/27		103	%	70 - 130
			1,2-Dichlorobenzene	2022/10/27		101	%	70 - 130
			1,2-Dichloroethane	2022/10/27		100	%	70 - 130
			cis-1,2-Dichloroethylene	2022/10/27		90	%	70 - 130
			trans-1,2-Dichloroethylene	2022/10/27		92	%	70 - 130
			1,2-Dichloropropane	2022/10/27		95	%	70 - 130
			1,3-Dichlorobenzene	2022/10/27		96	%	70 - 130
			cis-1,3-Dichloropropene	2022/10/27		96	%	70 - 130
			trans-1,3-Dichloropropene	2022/10/27		110	%	70 - 130
			1,4-Dichlorobenzene	2022/10/27		94	%	70 - 130
			Benzene	2022/10/27		88	%	70 - 130
			Bromodichloromethane	2022/10/27		100	%	70 - 130
			Bromoform	2022/10/27		109	%	70 - 130
			Bromomethane	2022/10/27		92	%	60 - 140
			Carbon Tetrachloride	2022/10/27		96	%	70 - 130
			Chlorobenzene	2022/10/27		97	%	70 - 130
			Chloroethane	2022/10/27		90	%	60 - 140
			Chloroform	2022/10/27		106	%	70 - 130
			Chloromethane	2022/10/27		102	%	60 - 140
			Dibromochloromethane	2022/10/27		102	%	70 - 130
			Methylene Chloride(Dichloromethane)	2022/10/27		92	%	70 - 130
			Ethylbenzene	2022/10/27		92	%	70 - 130
			Methyl t-butyl ether (MTBE)	2022/10/27		91	%	70 - 130
			Styrene	2022/10/27		106	%	70 - 130
			Tetrachloroethylene	2022/10/27		92	%	70 - 130
			Toluene	2022/10/27		89	%	70 - 130
			Trichloroethylene	2022/10/27		91	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2022/10/27		88	%	60 - 140
			Vinyl Chloride	2022/10/27		93	%	60 - 140
			o-Xylene	2022/10/27		99	%	70 - 130
			p+m-Xylene	2022/10/27		92	%	70 - 130
8306111	ASL	Spiked Blank	4-Bromofluorobenzene	2022/10/27		102	%	70 - 130
			D4-1,2-Dichloroethane	2022/10/27		102	%	70 - 130
			D8-Toluene	2022/10/27		94	%	70 - 130
			1,1-Dichloroethane	2022/10/27		96	%	70 - 130
			1,1-Dichloroethylene	2022/10/27		95	%	70 - 130
			1,1,1-Trichloroethane	2022/10/27		105	%	70 - 130
			1,1,2-Trichloroethane	2022/10/27		105	%	70 - 130
			1,1,2,2-Tetrachloroethane	2022/10/27		104	%	70 - 130
			Ethylene Dibromide	2022/10/27		99	%	70 - 130
			1,2-Dichlorobenzene	2022/10/27		102	%	70 - 130
			1,2-Dichloroethane	2022/10/27		99	%	70 - 130
			cis-1,2-Dichloroethylene	2022/10/27		89	%	70 - 130
			trans-1,2-Dichloroethylene	2022/10/27		93	%	70 - 130
			1,2-Dichloropropane	2022/10/27		95	%	70 - 130
			1,3-Dichlorobenzene	2022/10/27		100	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			cis-1,3-Dichloropropene	2022/10/27		94	%	70 - 130
			trans-1,3-Dichloropropene	2022/10/27		103	%	70 - 130
			1,4-Dichlorobenzene	2022/10/27		96	%	70 - 130
			Benzene	2022/10/27		89	%	70 - 130
			Bromodichloromethane	2022/10/27		101	%	70 - 130
			Bromoform	2022/10/27		106	%	70 - 130
			Bromomethane	2022/10/27		88	%	60 - 140
			Carbon Tetrachloride	2022/10/27		97	%	70 - 130
			Chlorobenzene	2022/10/27		99	%	70 - 130
			Chloroethane	2022/10/27		90	%	60 - 140
			Chloroform	2022/10/27		105	%	70 - 130
			Chloromethane	2022/10/27		101	%	60 - 140
			Dibromochloromethane	2022/10/27		100	%	70 - 130
			Methylene Chloride(Dichloromethane)	2022/10/27		91	%	70 - 130
			Ethylbenzene	2022/10/27		96	%	70 - 130
			Methyl t-butyl ether (MTBE)	2022/10/27		91	%	70 - 130
			Styrene	2022/10/27		108	%	70 - 130
			Tetrachloroethylene	2022/10/27		95	%	70 - 130
			Toluene	2022/10/27		92	%	70 - 130
			Trichloroethylene	2022/10/27		93	%	70 - 130
			Trichlorofluoromethane (FREON 11)	2022/10/27		90	%	60 - 140
			Vinyl Chloride	2022/10/27		93	%	60 - 140
			o-Xylene	2022/10/27		103	%	70 - 130
			p+m-Xylene	2022/10/27		96	%	70 - 130
8306111	ASL	Method Blank	4-Bromofluorobenzene	2022/10/27		96	%	70 - 130
			D4-1,2-Dichloroethane	2022/10/27		93	%	70 - 130
			D8-Toluene	2022/10/27		101	%	70 - 130
			1,1-Dichloroethane	2022/10/27	<2.0		ug/L	
			1,1-Dichloroethylene	2022/10/27	<0.50		ug/L	
			1,1,1-Trichloroethane	2022/10/27	<1.0		ug/L	
			1,1,2-Trichloroethane	2022/10/27	<1.0		ug/L	
			1,1,2,2-Tetrachloroethane	2022/10/27	<0.50		ug/L	
			Ethylene Dibromide	2022/10/27	<0.20		ug/L	
			1,2-Dichlorobenzene	2022/10/27	<0.50		ug/L	
			1,2-Dichloroethane	2022/10/27	<1.0		ug/L	
			cis-1,2-Dichloroethylene	2022/10/27	<0.50		ug/L	
			trans-1,2-Dichloroethylene	2022/10/27	<0.50		ug/L	
			1,2-Dichloropropane	2022/10/27	<0.50		ug/L	
			1,3-Dichlorobenzene	2022/10/27	<1.0		ug/L	
			cis-1,3-Dichloropropene	2022/10/27	<0.50		ug/L	
			trans-1,3-Dichloropropene	2022/10/27	<0.50		ug/L	
			1,4-Dichlorobenzene	2022/10/27	<1.0		ug/L	
			Benzene	2022/10/27	<1.0		ug/L	
			Bromodichloromethane	2022/10/27	<1.0		ug/L	
			Bromoform	2022/10/27	<1.0		ug/L	
			Bromomethane	2022/10/27	<0.50		ug/L	
			Carbon Tetrachloride	2022/10/27	<0.50		ug/L	
			Chlorobenzene	2022/10/27	<1.0		ug/L	
			Chloroethane	2022/10/27	<8.0		ug/L	
			Chloroform	2022/10/27	<1.0		ug/L	
			Chloromethane	2022/10/27	<8.0		ug/L	
			Dibromochloromethane	2022/10/27	<1.0		ug/L	
			Methylene Chloride(Dichloromethane)	2022/10/27	<3.0		ug/L	
			Ethylbenzene	2022/10/27	<1.0		ug/L	

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Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Methyl t-butyl ether (MTBE)	2022/10/27	<2.0		ug/L	
			Styrene	2022/10/27	<1.0		ug/L	
			Tetrachloroethylene	2022/10/27	<1.0		ug/L	
			Toluene	2022/10/27	<1.0		ug/L	
			Trichloroethylene	2022/10/27	<1.0		ug/L	
			Trichlorofluoromethane (FREON 11)	2022/10/27	<8.0		ug/L	
			Vinyl Chloride	2022/10/27	<0.50		ug/L	
			o-Xylene	2022/10/27	<1.0		ug/L	
			p+m-Xylene	2022/10/27	<2.0		ug/L	
			Total Xylenes	2022/10/27	<1.0		ug/L	
			Total Trihalomethanes	2022/10/27	<1.0		ug/L	
8306111	ASL	RPD	1,1-Dichloroethane	2022/10/27	NC		%	40
			1,1-Dichloroethylene	2022/10/27	NC		%	40
			1,1,1-Trichloroethane	2022/10/27	NC		%	40
			1,1,2-Trichloroethane	2022/10/27	NC		%	40
			1,1,2,2-Tetrachloroethane	2022/10/27	NC		%	40
			Ethylene Dibromide	2022/10/27	NC		%	40
			1,2-Dichlorobenzene	2022/10/27	NC		%	40
			1,2-Dichloroethane	2022/10/27	NC		%	40
			cis-1,2-Dichloroethylene	2022/10/27	NC		%	40
			trans-1,2-Dichloroethylene	2022/10/27	NC		%	40
			1,2-Dichloropropane	2022/10/27	NC		%	40
			1,3-Dichlorobenzene	2022/10/27	NC		%	40
			cis-1,3-Dichloropropene	2022/10/27	NC		%	40
			trans-1,3-Dichloropropene	2022/10/27	NC		%	40
			1,4-Dichlorobenzene	2022/10/27	NC		%	40
			Benzene	2022/10/27	0		%	40
			Bromodichloromethane	2022/10/27	NC		%	40
			Bromoform	2022/10/27	NC		%	40
			Bromomethane	2022/10/27	NC		%	40
			Carbon Tetrachloride	2022/10/27	NC		%	40
			Chlorobenzene	2022/10/27	NC		%	40
			Chloroethane	2022/10/27	NC		%	40
			Chloroform	2022/10/27	NC		%	40
			Chloromethane	2022/10/27	NC		%	40
			Dibromochloromethane	2022/10/27	NC		%	40
			Methylene Chloride(Dichloromethane)	2022/10/27	NC		%	40
			Ethylbenzene	2022/10/27	NC		%	40
			Methyl t-butyl ether (MTBE)	2022/10/27	NC		%	40
			Styrene	2022/10/27	NC		%	40
			Tetrachloroethylene	2022/10/27	NC		%	40
			Toluene	2022/10/27	NC		%	40
			Trichloroethylene	2022/10/27	NC		%	40
			Trichlorofluoromethane (FREON 11)	2022/10/27	NC		%	40
			Vinyl Chloride	2022/10/27	NC		%	40
			o-Xylene	2022/10/27	NC		%	40
			p+m-Xylene	2022/10/27	NC		%	40
			Total Xylenes	2022/10/27	NC		%	40
			Total Trihalomethanes	2022/10/27	NC		%	40
8306113	AA0	Spiked Blank	Conductivity	2022/10/26		108	%	80 - 120
8306113	AA0	Method Blank	Conductivity	2022/10/26	1.2		uS/cm	
8306113	AA0	RPD [UCB040-04]	Conductivity	2022/10/26	0		%	10
8306116	AA0	Spiked Blank	pH	2022/10/26		100	%	97 - 103
8306116	AA0	RPD [UCB040-04]	pH	2022/10/26	0		%	N/A

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8306380	THL	Matrix Spike	Isobutylbenzene - Volatile	2022/10/26		120	%	70 - 130
			Benzene	2022/10/26		92	%	70 - 130
			Toluene	2022/10/26		92	%	70 - 130
			Ethylbenzene	2022/10/26		97	%	70 - 130
			Total Xylenes	2022/10/26		96	%	70 - 130
8306380	THL	Spiked Blank	Isobutylbenzene - Volatile	2022/10/26		121	%	70 - 130
			Benzene	2022/10/26		88	%	70 - 130
			Toluene	2022/10/26		89	%	70 - 130
			Ethylbenzene	2022/10/26		94	%	70 - 130
			Total Xylenes	2022/10/26		91	%	70 - 130
8306380	THL	Method Blank	Isobutylbenzene - Volatile	2022/10/26		115	%	70 - 130
			Benzene	2022/10/26	<0.0010		mg/L	
			Toluene	2022/10/26	<0.0010		mg/L	
			Ethylbenzene	2022/10/26	<0.0010		mg/L	
			Total Xylenes	2022/10/26	<0.0020		mg/L	
			C6 - C10 (less BTEX)	2022/10/26	<0.090		mg/L	
8306380	THL	RPD	Benzene	2022/10/26	NC		%	40
			Toluene	2022/10/26	NC		%	40
			Ethylbenzene	2022/10/26	NC		%	40
			Total Xylenes	2022/10/26	NC		%	40
			C6 - C10 (less BTEX)	2022/10/26	NC		%	40
8306419	EPU	Matrix Spike	Dissolved Arsenic (As)	2022/10/26		100	%	80 - 120
			Dissolved Calcium (Ca)	2022/10/26		NC	%	80 - 120
			Dissolved Iron (Fe)	2022/10/26		NC	%	80 - 120
			Dissolved Lead (Pb)	2022/10/26		98	%	80 - 120
			Dissolved Magnesium (Mg)	2022/10/26		NC	%	80 - 120
			Dissolved Manganese (Mn)	2022/10/26		NC	%	80 - 120
			Dissolved Zinc (Zn)	2022/10/26		98	%	80 - 120
8306419	EPU	Spiked Blank	Dissolved Arsenic (As)	2022/10/26		98	%	80 - 120
			Dissolved Calcium (Ca)	2022/10/26		109	%	80 - 120
			Dissolved Iron (Fe)	2022/10/26		113	%	80 - 120
			Dissolved Lead (Pb)	2022/10/26		101	%	80 - 120
			Dissolved Magnesium (Mg)	2022/10/26		115	%	80 - 120
			Dissolved Manganese (Mn)	2022/10/26		102	%	80 - 120
			Dissolved Zinc (Zn)	2022/10/26		100	%	80 - 120
8306419	EPU	Method Blank	Dissolved Arsenic (As)	2022/10/26	<1.0		ug/L	
			Dissolved Calcium (Ca)	2022/10/26	<100		ug/L	
			Dissolved Iron (Fe)	2022/10/26	<50		ug/L	
			Dissolved Lead (Pb)	2022/10/26	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2022/10/26	<100		ug/L	
			Dissolved Manganese (Mn)	2022/10/26	<2.0		ug/L	
			Dissolved Zinc (Zn)	2022/10/26	<5.0		ug/L	
8306419	EPU	RPD	Dissolved Arsenic (As)	2022/10/26	2.5		%	20
			Dissolved Calcium (Ca)	2022/10/26	0.29		%	20
			Dissolved Iron (Fe)	2022/10/26	0.23		%	20
			Dissolved Lead (Pb)	2022/10/26	NC		%	20
			Dissolved Magnesium (Mg)	2022/10/26	0.23		%	20
			Dissolved Manganese (Mn)	2022/10/26	0.90		%	20
			Dissolved Zinc (Zn)	2022/10/26	NC		%	20
8308972	JHY	Matrix Spike	Dissolved Arsenic (As)	2022/10/28		98	%	80 - 120
			Dissolved Calcium (Ca)	2022/10/28		NC	%	80 - 120
			Dissolved Iron (Fe)	2022/10/28		NC	%	80 - 120
			Dissolved Lead (Pb)	2022/10/28		104	%	80 - 120
			Dissolved Magnesium (Mg)	2022/10/28		NC	%	80 - 120

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Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Manganese (Mn)	2022/10/28		NC	%	80 - 120
			Dissolved Zinc (Zn)	2022/10/28		96	%	80 - 120
8308972	JHY	Spiked Blank	Dissolved Arsenic (As)	2022/10/28		93	%	80 - 120
			Dissolved Calcium (Ca)	2022/10/28		101	%	80 - 120
			Dissolved Iron (Fe)	2022/10/28		100	%	80 - 120
			Dissolved Lead (Pb)	2022/10/28		99	%	80 - 120
			Dissolved Magnesium (Mg)	2022/10/28		100	%	80 - 120
			Dissolved Manganese (Mn)	2022/10/28		99	%	80 - 120
			Dissolved Zinc (Zn)	2022/10/28		101	%	80 - 120
8308972	JHY	Method Blank	Dissolved Arsenic (As)	2022/10/27	<1.0		ug/L	
			Dissolved Calcium (Ca)	2022/10/27	<100		ug/L	
			Dissolved Iron (Fe)	2022/10/27	<50		ug/L	
			Dissolved Lead (Pb)	2022/10/27	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2022/10/27	<100		ug/L	
			Dissolved Manganese (Mn)	2022/10/27	<2.0		ug/L	
			Dissolved Zinc (Zn)	2022/10/27	<5.0		ug/L	
8308972	JHY	RPD	Dissolved Arsenic (As)	2022/10/28	0.025		%	20
			Dissolved Calcium (Ca)	2022/10/28	0.11		%	20
			Dissolved Iron (Fe)	2022/10/28	0.90		%	20
			Dissolved Lead (Pb)	2022/10/28	NC		%	20
			Dissolved Magnesium (Mg)	2022/10/28	0.091		%	20
			Dissolved Manganese (Mn)	2022/10/28	1.0		%	20
			Dissolved Zinc (Zn)	2022/10/28	2.4		%	20
8312442	KMC	Spiked Blank	Conductivity	2022/10/31		103	%	80 - 120
8312442	KMC	Method Blank	Conductivity	2022/10/31	<1.0		uS/cm	
8312442	KMC	RPD	Conductivity	2022/10/31	0.75		%	10
8312447	KMC	Spiked Blank	pH	2022/10/31		100	%	97 - 103
8312447	KMC	RPD	pH	2022/10/31	0.34		%	N/A
8312595	MSK	Matrix Spike	Isobutylbenzene - Extractable	2022/10/29		95	%	70 - 130
			n-Dotriacontane - Extractable	2022/10/29		106	%	70 - 130
			>C10-C16 Hydrocarbons	2022/10/29		94	%	70 - 130
			>C16-C21 Hydrocarbons	2022/10/29		102	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/10/29		102	%	70 - 130
8312595	MSK	Spiked Blank	Isobutylbenzene - Extractable	2022/10/29		101	%	70 - 130
			n-Dotriacontane - Extractable	2022/10/29		117	%	70 - 130
			>C10-C16 Hydrocarbons	2022/10/29		99	%	70 - 130
			>C16-C21 Hydrocarbons	2022/10/29		105	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/10/29		111	%	70 - 130
8312595	MSK	Method Blank	Isobutylbenzene - Extractable	2022/10/29		98	%	70 - 130
			n-Dotriacontane - Extractable	2022/10/29		110	%	70 - 130
			>C10-C16 Hydrocarbons	2022/10/29	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/10/29	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/10/29	<0.090		mg/L	
8312595	MSK	RPD	>C10-C16 Hydrocarbons	2022/10/29	NC		%	40
			>C16-C21 Hydrocarbons	2022/10/29	NC		%	40
			>C21-<C32 Hydrocarbons	2022/10/29	NC		%	40
8315724	MGN	Matrix Spike	Isobutylbenzene - Extractable	2022/10/31		100	%	70 - 130
			n-Dotriacontane - Extractable	2022/10/31		114	%	70 - 130
			>C10-C16 Hydrocarbons	2022/10/31		101	%	70 - 130
			>C16-C21 Hydrocarbons	2022/10/31		103	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/10/31		112	%	70 - 130
8315724	MGN	Spiked Blank	Isobutylbenzene - Extractable	2022/10/31		81	%	70 - 130
			n-Dotriacontane - Extractable	2022/10/31		105	%	70 - 130
			>C10-C16 Hydrocarbons	2022/10/31		99	%	70 - 130

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Bureau Veritas Job #: C2U9251
Report Date: 2022/11/04

Englobe Corp
Client Project #: 2001756.004
Sampler Initials: DM

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			>C16-C21 Hydrocarbons	2022/10/31		102	%	70 - 130
			>C21-<C32 Hydrocarbons	2022/10/31		140 (1)	%	70 - 130
8315724	MGN	Method Blank	Isobutylbenzene - Extractable	2022/10/31		82	%	70 - 130
			n-Dotriacontane - Extractable	2022/10/31		121	%	70 - 130
			>C10-C16 Hydrocarbons	2022/10/31	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2022/10/31	<0.050		mg/L	
			>C21-<C32 Hydrocarbons	2022/10/31	<0.090		mg/L	
8315724	MGN	RPD	>C10-C16 Hydrocarbons	2022/10/31	NC		%	40
			>C16-C21 Hydrocarbons	2022/10/31	NC		%	40
			>C21-<C32 Hydrocarbons	2022/10/31	NC		%	40

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Spike: results are outside acceptance limit. Insufficient sample for repeat analysis.

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VALIDATION SIGNATURE PAGE

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

Janah Rhyno, Metals Supervisor-Bedford

Phil Deveau, Scientific Specialist (Organics)

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp	Company Name		Quotation #	C22111	Bureau Veritas Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	Ryan Pellerin	P.O. #		C209251	901272
Address	97 Troop Ave	Address		Project #	2001756.004	Chain Of Custody Record	Project Manager
	Dartmouth NS B3B 2A7			Project Name		C#901272-01-01	Keri Mackay
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Site #			
Email	Atlantic.ap@Englobecorp.com	Email	ryan.pellerin@englobecorp.com	Sampled By	Dan Matthews		

Regulatory Criteria:

Special Instructions

** Specify Matrix: Surface/Ground/Tapwater/Sewage/Effluent/Seawater Potable/Nonpotable/Tissue/Soil/Sludge/Metal

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: ✓

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RBCA Hydrocarbons in Water	As, Fe, Mn, Pb, Zn + Hardness	pH	Conductance - water	Atlantic VOCs - Non-Chlorinated Water						# of Bottles	Comments / Hazards / Other Required Analysis
1	SID#576634	MW1	Oct 17/22	1645	GW	X		X	X	X	X							4	
2	SID#576635	MW3		1520	GW	X		X	X	X	X							4	
3	SID#576636	MW4		1500	GW	X		X	X	X	X							4	
4	SID#576637	MW6		1620	GW	X		X	X	X	X	X						5	
5	SID#576638	MW9		1545	GW	X		X	X	X	X							4	
6	SID#576639	MW11		1600	GW	X		X	X	X	X							4	
7	SID#576640	MW14		1705	GW	X		X	X	X	X							4	
8	SID#576641	DUP1		—	GW	X		X	X	X	X							4	2022 OCT 18 10:53
9	SID#576642	Trip Blank		1720	other			X	X	X	X							4	
10	SID#576643	Equipment Blank	↓	1730	Other			X	X	X	X							4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Dan Matthews Dan Matthews	22/10/18	1004	HOLLY JESSOME				☐	4.3, 8.1, 3.6, 6.6	☐ Yes ☐ No

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

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

White: Bureau Veritas Yellow: Client

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Tel: 902-567-1255 Fax: 902-539-6504 Toll Free: 1-888-535-7770

CHAIN OF CUSTODY RECORD

ENV COC - 00016v3

Invoice Information		Report Information (if differs from invoice)		Project Information	
Invoice to (requires report) ☐					
Company :	#41009 Englobe Corp	Company:	Englobe Corp	Quotation #:	C22111
Contact Name:	Accounts Payable	Contact Name:	Ryan Pellerin	P.O. #/ AFE#:	
Street Address:	97 Troop Ave	Street Address:		Project #:	2001756.004
City: Dartmouth Prov: NS Postal Code: B3B2A7		City: Prov: Postal Code:		Site #:	
Phone:	902-468-6486	Phone:		Site Location:	
Email:	Atlantic.ap@englobecorp.com	Email:	ryan.pellerin@englobecorp.com	Site Location Province:	
Copies:		Copies:		Sampled By:	Dan Matthews

LAB USE ONLY - PLACE STICKER HERE

Rush Confirmation #:

Regulatory Criteria

**Specify matrix for each regulation: surface water (SW)/groundwater (GW)/tap water/sewage/effluent/seawater/potable water/non-potable water/tissue/soil/sludge/metal

Regulation	**Matrix

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

Regular Turnaround Time (TAT): ☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply: ☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 Total metals (default)-well/SW	5 pH	6 Conductance - Water	7 TSS	8 Hardness	9 RBCA HC (BTEX, C6-C32)	10	11	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Comments
1	TW1	22	10	17	11	35	Water - Surface				x	x	x	x	x	x												7		
2	TW3	22	10	17	11	00	Water - Surface				x	x	x	x	x	x												7		
3	TW4	22	10	17	13	45	Water - Surface				x	x	x	x	x	x												7		
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

2022 OCT 18 10:43

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LAB USE ONLY	Yes	No	°C	1	2	3
Seal present				4	3	8
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present				3	6	6
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

Temperature reading by:

Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM
1 Dan Matthews	22	10	18	10	04	1 Hall Hall JESSOME					
2 Dan Matthews						2					

Special instructions: C2U9251

ENGLOBE