

April 2025 Groundwater Quality Monitoring Report

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

Build Nova Scotia
Final Report

October 10, 2025
2001756.006



eNGLOBE

Build Nova Scotia

Prepared by:



Vanessa Jauer, B.Sc.

Environmental Professional
Environmental Engineering

Reviewed by:



Ryan Pellerin, B.Sc., A.Sc.T.

Team Leader
Environmental Engineering

Approved by:



Robert Bekkers, M.Sc., P.Geo.

Site Professional
Environmental Engineering

Production team

Build Nova Scotia

Project Manager	Cory MacPhee, P.Eng.
-----------------	----------------------

Englobe Corp.

Site Professional	Robert Bekkers, M.Sc., P.Geo.
Project Manager	Ryan Pellerin, B.Sc., A.Sc.T.
Site Assessor/Report Preparation	Vanessa Jauer, B.Sc.

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Executive Summary

At the request of Build Nova Scotia, Englobe Corp. (Englobe) conducted a groundwater sampling event in April 2025 consisting of the sampling and testing of five (5) specified groundwater monitor wells and interpretation of the analytical results. This work was completed as per details outlined in portions of Section 10 (Groundwater Monitoring) and Section 12 (Reporting) of the Nova Scotia Environment and Climate Change (NSE) Industrial Approval No. 2020-2690529-02, dated February 3, 2025.

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 April 2025 event:

- Concentrations of modified TPH and BTEX in groundwater samples collected from the five monitoring wells were below the NSE Tier I EQS of 20 mg/L for all parameters.
- Conductivity in the wells ranged from 530 $\mu\text{S}/\text{cm}$ (MW6 and MW9) to 2500 $\mu\text{S}/\text{cm}$ (MW1).
- pH values ranged from 7.15 (MW6) to 7.59 (MW1).
- Concentrations of arsenic, lead and zinc in groundwater samples collected from the five monitoring wells were below the NSE Tier II PSS for groundwater discharging to marine surface water.

Englobe recommends further investigation of the well at MW11, which appeared to be blocked or damaged at a depth of approximately 2.7 m below TOC where the water level meter probe was getting stuck. The monitor well may need to be redrilled prior to future monitoring events.

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1 Introduction

Englobe Corp. (Englobe) was retained by Build Nova Scotia to undertake a groundwater monitoring event 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 2020-2690529-02 (effective February 3, 2025). The groundwater program includes sampling of five (5) existing groundwater monitoring wells, laboratory testing for predetermined parameters, interpretation of results and publishing of the data with recommendations as required in a report as per Section 10 (Groundwater Monitoring - subsection 10(a), 10(b) and 10(f)). A site plan showing the Trenton Commercial Park site and monitor well 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. 2020-2690526-02 on February 2, 2025, 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 are not included in this 'Groundwater Quality Monitoring' report by Englobe.

Englobe has completed annual groundwater quality monitoring and reporting from 2014 to 2023 (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 2023 monitoring program, the following conclusions and statements on the identification of any groundwater or surface water discharge impacts as a result of site activities during the 2023 calendar year were made (see Englobe's 2023 Annual Groundwater Quality Monitoring Report dated April 12, 2024):

- Concentrations of modified TPH and BTEX in groundwater samples collected from the seven monitoring wells were below the NSE Tier I EQS of 20 mg/L for all parameters.
- Conductivity in the wells ranged from 400 µS/cm (MW6) to 3,900 µS/cm (MW1) in April 2023, and 350 µS/cm (MW14) to 2,700 µS/cm (MW1) in October 2023.
- pH values were reported between 6.89 and 7.74.
- Concentrations of arsenic, iron, lead, manganese and zinc in groundwater samples collected from the seven monitoring wells were below the NSE Tier II PSS for groundwater discharging to surface water (marine), where they exist, during either the April or October 2023 sampling events.
- 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 2023, the laboratory reported 0% Mortality (Pass).

In conclusion, the annual groundwater sampling from 2023 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 2023 were consistent with concentrations identified during previous monitoring events conducted at the site.

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 7(c)) of the Approval 2020-2690529-02 (dated February 3, 2025). In the Request for Proposals from Build Nova Scotia, it

specified that five (5) groundwater monitoring wells 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 a report as per details outlined in selected portions of Section 10 and Section 7 of the Industrial Approval from the NSE (Approval 2020-2690529-02, dated February 3, 2025).

Section 10 of the NSE Approval specifies that five (5) groundwater monitoring stations identified as MW1, MW3, MW6, MW9 and MW11 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. The report shall summarize and interpret the groundwater monitoring data and identify any impacts as a result of site activities.

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 but discontinued for the 2025 assessment.

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. In an email to Build Nova Scotia on September 7, 2023, NSE confirmed that the section of the East River adjacent to the site is considered marine and, therefore, comparison of groundwater results to criteria for groundwater discharging to freshwater surface water would be no longer required. Based on this, the current groundwater results are compared to the applicable guidelines for groundwater discharging to marine water only.

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 and pH in groundwater for the site.

4.3 Metals

Analytical results for metals in groundwater are compared to:

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

5 Methodology

Figure 1 (Appendix A) shows the monitor well locations, groundwater flow gradient and hydraulic gradient for the April 2025 event.

5.1 Groundwater Sampling

On April 16, 2025, 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 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, and TPH/BTEX (Atlantic Partners in RBCA Implementation (PIRI) methodology) 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, 2022, 2023 and sampling events as there was no longer free product observed in this well.

5.2 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.

A field duplicate (DUP1) was collected for groundwater (equivalent to approximately 10% of the samples collected). A field duplicate was collected at the same time as the corresponding primary sample.

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
MW3	DUP1	16 April 2025	TPH/BTEX, metals, conductivity, pH
DUP1	Dup1 Lab-Dup	16 April 2025	Conductivity, pH

6 Field Observations

During the site work, all monitoring wells except for MW11 appeared to be in good condition. MW11 was blocked or damaged at a depth of approximately 2.7 m below the top of casing (TOC) where the water level meter probe was getting stuck. Groundwater was measured at approximately 2.0 m below TOC, and Englobe was able to successfully purge and sample the monitor well.

Groundwater levels measured and observations made at each location (current and historical) are provided in Table B-1, Appendix B.

All monitor wells were observed to be protected against tampering with locked covers, as per the NSE Approval Section 10 (g).

Free product was not detected in groundwater 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. PHC results for each monitoring well are presented in Tables 1A through 5A (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 5B (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 the April 2025 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 2023). A copy of the laboratory certificate for the April 2025 sampling event is provided in Appendix D.

7.1.1 TPH/BTEX

Concentrations of modified TPH in groundwater collected from MW3 and MW6 were reported as below the laboratory detection limit (0.090 mg/L) and below the NSE Tier I EQS.

Concentrations of modified TPH in groundwater collected from MW1, MW9 and MW11 ranged from 0.95 mg/L (MW11) to 17 mg/L (MW9).

Concentrations of BTEX in groundwater samples collected from MW3, MW6, MW9, and MW11 were reported as below the laboratory detection limits (0.0010 or 0.0020 mg/L) and below the NSE Tier I EQS.

BTEX concentrations in the sample collected from MW1 were reported above the laboratory detection limits but below the NSE Tier I EQS.

7.1.2 Conductivity and pH

There are no NSE Tier I EQS for conductivity in groundwater. Conductivity in the wells ranged from 530 $\mu\text{S}/\text{cm}$ (MW6 and MW9) to 2500 $\mu\text{S}/\text{cm}$ (MW1).

There are no NSE Tier I EQS for pH in groundwater. Groundwater pH results ranged from 7.15 (MW6) to 7.59 (MW1).

7.1.3 Metals

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

7.1.3.1 Arsenic

Arsenic was reported at less than laboratory detection limits ($<1.0 \mu\text{g}/\text{L}$) in groundwater collected from MW3, MW6, MW9 and MW11. Arsenic was reported at $2.6 \mu\text{g}/\text{L}$ at MW1.

All arsenic results are below the NSE Tier II PSS for groundwater discharging to marine surface water ($125 \mu\text{g}/\text{L}$).

7.1.3.2 Lead

Concentrations of lead in all groundwater samples collected from the seven monitoring wells in April were reported as less than laboratory detection limits ($<0.50 \mu\text{g}/\text{L}$) and below the NSE Tier II PSS for groundwater discharging to marine surface water ($20 \mu\text{g}/\text{L}$).

7.1.3.3 Zinc

Zinc was reported at concentrations ranging from $5 \mu\text{g}/\text{L}$ (MW1) to $16 \mu\text{g}/\text{L}$ (MW3).

All zinc results are below the NSE Tier II PSS for groundwater discharging to marine surface water ($100 \mu\text{g}/\text{L}$).

7.1.4 Trends Discussion for Exceedances

7.1.4.1 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 $35 \text{ mg}/\text{L}$ in 2010 to the $12 \text{ mg}/\text{L}$ observed in April 2025.

At MW9, the modified TPH concentration ($17 \text{ mg}/\text{L}$) was higher compared to those reported during all monitoring programs from 2013 to 2023. Modified TPH concentrations at MW9 have consistently been significantly lower (i.e., ranging from 0.11 to $3.8 \text{ mg}/\text{L}$) than the maximum concentration of $68 \text{ mg}/\text{L}$ documented in 2010. In October 2023 it was reported at $7.5 \text{ mg}/\text{L}$ prior to the April 2025 increase to $17 \text{ mg}/\text{L}$.

At MW11, free product was observed in groundwater during all monitoring events from 2013 to 2016. Between 2017 and 2023, concentrations ranged from 1.3 to $8.7 \text{ mg}/\text{L}$. The April 2025 result of $0.95 \text{ mg}/\text{L}$ was the lowest concentration reported since the monitoring program began.

7.2 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:

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

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 6A and 6B (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.

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 April 2025 event:

- Concentrations of modified TPH and BTEX in groundwater samples collected from the five monitoring wells were below the NSE Tier I EQS of 20 mg/L for all parameters.
- Conductivity in the wells ranged from 530 $\mu\text{S}/\text{cm}$ (MW6 and MW9) to 2500 $\mu\text{S}/\text{cm}$ (MW1).
- pH values ranged from 7.15 (MW6) to 7.59 (MW1).
- Concentrations of arsenic, lead and zinc in groundwater samples collected from the five monitoring wells were below the NSE Tier II PSS for groundwater discharging to marine surface water.

9 Recommendations

Englobe recommends further investigation of the well at MW11, which appeared to be blocked or damaged at a depth of approximately 2.7 m below TOC where the water level meter probe was getting stuck. The monitor well may need to be redrilled prior to future 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 a site visit by Englobe Corp. personnel in April 2025 for the purpose of collection of groundwater samples from five existing monitoring wells. 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 analyses.

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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.

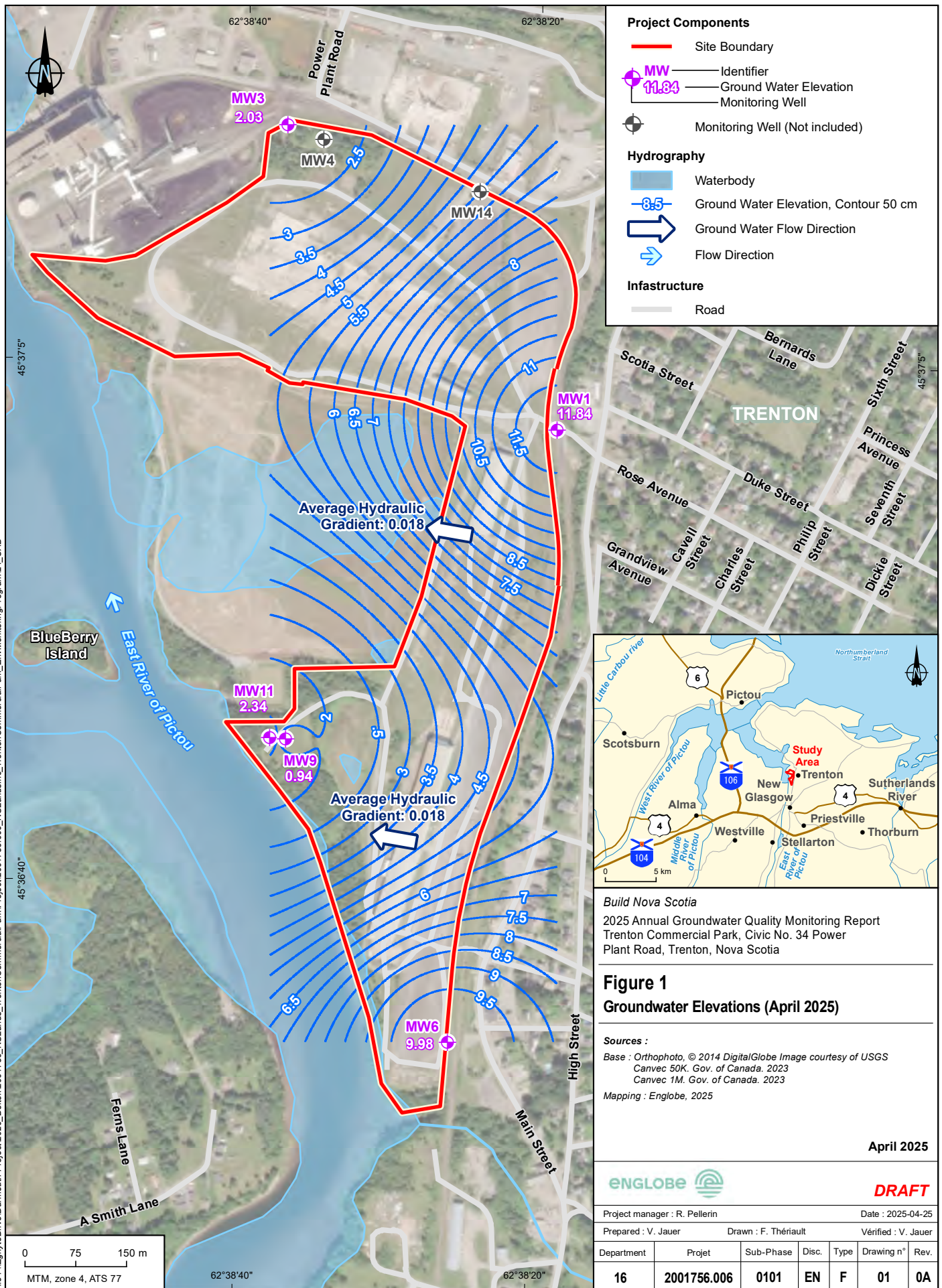
Appendix A

Site Figures



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Appendix B

Groundwater Field Observations



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TABLE B-1: Groundwater Field Observations
Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.006

Date	Field Observations				
	Location				
	MW1	MW3	MW6	MW9	MW11
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	Clear, minor sediment noted	Petroleum sheen present, brown in colour, abundant iron flocculants, groundwater clear upon sampling	Free product (10mm)
April 23, 2014	Dark grey to black, PHC odour and sheen	Dark grey to black, minor silt, no sheen	Mostly clear	Red-brown, PHC odour and sheen, iron flocculants present	Free product (20mm)
October 30, 2014	Dark grey to black, PHC odour and sheen	Dark grey to black, minor silt, no sheen	Mostly clear	Red-brown, PHC odour and sheen, iron flocculants present	Free product (5mm)
June 24, 2015	Mild PHC odour in sample	Discolored sample (Grey/black)	Clear sample	Clear sample	Free product (1-2mm)
November 12, 2015	Strong PHC odour in sample	Significant sediment visible	Clear sample	Clear sample, sulphur odour	Free product (2mm)
April 26, 2016	-	-	-	-	Free product (1-2mm)
October 24, 2016	-	-	-	-	Free product (1-2mm)
April 24, 2017	PHC odour	Silty	-	-	-
October 12, 2017	PHC odour	Silty	-	-	-
April 9, 2018	PHC odour	Silty	-	-	-
October 11, 2018	PHC odour	Silty	-	-	-
May 28, 2020	PHC odour	Silty	Sheen	Silty	PHC odour, sheen
October 28, 2020	PHC odour	Silty	-	PHC odour	PHC odour, sheen
April 28, 2021	Strong PHC odour	Black, organic odour	Slight sheen	Light brown	PHC sheen
October 20, 2021	PHC odour and sheen	Sheen	-	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	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?
October 17, 2022	PHC odour, grey colour, silty	Brown, silty	Brown, silty	Brown, silty	Floating solids, clear
April 26, 2023	Strong fuel/gasoline odour, clear	Brown, silty	Brown, silty	Clear	Clear, trace silt
October 17, 2023	Strong PHC odour, sheen. Slightly hazy.	Slightly hazy	Slightly hazy	Faint PHC odour, slightly hazy	Yellow, silty, minor sheen, organit matter floating in water in bailer.
April 16, 2025	Strong PHC odour, sheen. Clear sample.	Clear sample, rainbow sheen.	Slightly hazy.	Grey tinge, PHC odour and iron flocculants.	Impact to casing in well, could only meaure 2.7 m. Slight PHC odour and rainbow sheen.

TABLE B-2: Groundwater Levels

Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.006

Date	Measurement	Location				
		MW1	MW3	MW6	MW9	MW11
Ground Surface Elevation (masl) ¹		13.51	1.84	10.23	3.47	2.11
Top of Casing Elevation (masl) ¹		14.01	2.35	11.31	3.97	2.94
April 19, 2010	Depth to GW	2.63	1.71	2.88	2.84	-
	GW Elevation	11.38	0.64	8.43	1.13	-
May 21, 2013	Depth to GW	-	-	-	-	-
	GW Elevation	-	-	-	-	-
October 25, 2013	Depth to GW	3.91	1.66	2.52	2.86	2.74
	GW Elevation	10.10	0.69	8.79	1.11	0.20
April 23, 2014	Depth to GW	2.10	1.67	2.60	2.96	2.52
	GW Elevation	11.91	0.68	8.71	1.01	0.42
October 30, 2014	Depth to GW	4.87	1.50	2.47	3.01	2.75
	GW Elevation	9.14	0.85	8.84	0.96	0.19
June 24, 2015	Depth to GW	2.45	1.41	2.33	2.00	2.47
	GW Elevation	11.56	0.93	8.98	1.97	0.48
November 12, 2015	Depth to GW	4.60	1.68	2.64	3.22	2.88
	GW Elevation	9.41	0.67	8.67	0.75	0.06
April 26, 2016	Depth to GW	1.89	1.64	2.52	2.90	2.60
	GW Elevation	12.12	0.71	8.79	1.07	0.34
October 24, 2016	Depth to GW	3.00	3.22	2.38	2.67	2.58
	GW Elevation	11.01	-0.87	8.93	1.30	0.36
April 24, 2017	Depth to GW	2.29	1.59	2.67	3.15	2.73
	GW Elevation	11.72	0.76	8.64	0.82	0.21
October 12, 2017	Depth to GW	4.01	1.66	2.64	3.25	2.87
	GW Elevation	10.00	0.69	8.67	0.72	0.07
April 9, 2018	Depth to GW	2.83	1.15	2.57	2.64	2.68
	GW Elevation	11.18	1.20	8.74	1.33	0.26
October 11, 2018	Depth to GW	4.00	1.66	2.75	3.23	2.93
	GW Elevation	10.01	0.69	8.56	0.74	0.01
May 28, 2020	Depth to GW	2.58	2.56	2.66	4.2	2.66
	GW Elevation	11.43	-0.21	8.65	-0.23	0.28
October 28, 2020	Depth to GW	4.58	1.63	2.92	3.99	3.08
	GW Elevation	9.43	0.72	8.39	-0.02	-0.14
April 28, 2021	Depth to GW	2.64	1.57	2.67	3.09	2.44
	GW Elevation	11.37	0.78	8.64	0.88	0.50
October 20, 2021	Depth to GW	3.91	1.57	2.43	2.96	2.65
	GW Elevation	10.10	0.78	8.88	1.02	0.29
April 28, 2022	Depth to GW	1.30	0.30	1.32	2.39	1.62
	GW Elevation	12.71	2.05	9.99	1.58	1.32
October 17, 2022	Depth to GW	3.66	1.78	2.71	3.25	2.85
	GW Elevation	10.35	0.57	8.60	0.73	0.10
April 26, 2023	Depth to GW	2.15	0.65	1.59	2.37	1.90
	GW Elevation	11.86	1.70	9.72	1.60	1.04
October 17, 2023	Depth to GW	2.97	0.48	2.11	1.88	2.11
	GW Elevation	11.04	1.87	9.20	2.09	0.83
April 16, 2025	Depth to GW	2.17	0.31	1.33	1.64	2.00
	GW Elevation	11.84	2.03	9.98	2.34	0.94

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.: 2001756.006

Parameter		Units	NSE Tier I EQS ¹	MW1											
				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
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		2023		2025	
				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	26-Apr-23	17-Oct-23	16-Apr-25
BTEX	Benzene	mg/L	6.3	<0.025	-	<0.010	<0.0030	0.009	<0.0040	<0.0050	0.0063	<0.0030	<0.0060	<0.0030 (1)	0.0038	0.0057
	Toluene	mg/L	20	<0.025	-	0.02	0.0089	0.014	0.009	0.012	0.016	0.0073	0.019	0.0097	0.014	0.019
	Ethylbenzene	mg/L	20	0.86	-	0.89	0.79	0.87	0.81	0.68	0.82	0.77	0.62	0.52	0.62	0.59
	Xylenes	mg/L	20	1.0	-	1.2	0.79	1.0	0.77	0.72	0.89	0.72	0.73	0.52	0.62	0.63
Modified TPH	Gas Range	mg/L	-	7.6	-	12	10	12	9.4	9	8.7	11	8.8	9.6	11	9.5
	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	2.6	2.2	2.6
	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	<0.050	<0.050	<0.050
	Lube Range (>C21-C32)	mg/L	-	<0.10	<0.10	0.17	0.092	0.11	0.14	<0.090	0.093	0.1	<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	9.9	-	15	13	14	12	12	11	15	12	12	13	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.	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:

(1) Elevated VPH RDL(s) due to matrix interference.

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.: 2001756.006

Parameter	Units	NSE Tier I EQS ¹	NSE Tier II PSS groundwater discharging to surface water (>10m)	MW1											
				Marine Water ²	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	-	-	-	7.37	7.30	6.97	7.23	7.16	7.17	7.06	7.04	7.02	7.43	
Field pH	Units	-	-	-	-	-	7.07	-	-	-	-	-	-	-	
Hardness	mg/L												-	-	
Metals															
Dissolved Arsenic (As)	ug/L	-	125	-	<1.0	17	3.2	14	1.8	22	2.4	18	3	3.2	
Dissolved Iron (Fe)	ug/L	-	-	-	<50	6500	24000	10000	29000	24000	31000	17000	17000	11000	
Dissolved Lead (Pb)	ug/L	-	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	-	-	-	37200	21000	61000	30000	53000	37000	46000	22000	26000	17000	
Dissolved Zinc (Zn)	ug/L	-	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												
				Marine Water ²	2018		2020		2021			2022		2023		2025
					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	26-Apr-23	17-Oct-23	16-Apr-25
Laboratory Conductivity	µS/cm	-	-	3300	3800	4100	3300	3400	4000	3900	3800	3000	3900	2700	2500	
Field Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	4790	3040	2751	2620	556	
Laboratory pH	Units	-	-	7.11	6.89	7.01	7.03	7.23	7.21	7.27	7.65	7.84	7.61	7.54	7.59	
Field pH	Units	-	-	-	-	-	-	-	-	-	6.88	7.01	6.92	6.94	7.00	
Hardness	mg/L	-	-	-	-	-	-	-	-	-	160	95	160	95	97	
Metals																
Dissolved Arsenic (As)	ug/L	-	125	6.5	21	1.0	3.1	2.3	3.7	14	3.8	11	4.1	8.8	2.6	
Dissolved Iron (Fe)	ug/L	-	-	14000	19000	24000	14000	20000	20000	19000	22000	11000	23000	11000	17000	
Dissolved Lead (Pb)	ug/L	-	20	0.76	<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	-	-	23000	29000	31000	15000	23000	21000	21000	22000	12000	22000	13000	15000	
Dissolved Zinc (Zn)	ug/L	-	100	23	<5.0	7.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	7	32	5	

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for marine water
-	- 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.

² 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.: 2001756.006

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		2023		2025
				9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22	26-Apr-23	17-Oct-23	16-Apr-25
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
	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
	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
	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
Modified TPH	Gas Range	mg/L	-	<0.010	<0.010	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
	Fuel Range (C10-C16)	mg/L	-	<0.050	<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	0.051	<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	0.15	<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	0.2	<0.090	<0.090	<0.090
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.: 2001756.006

Parameter	Units	NSE Tier I EQS ¹	NSE Tier II PSS groundwater discharging to surface water (>10m)	MW3												
				Marine Water ²	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	-	-	6.65	6.99	6.82	6.77	6.92	7.40	6.97	-	7.28	7.02	6.92	6.95	
Field pH	Units	-	-	-	-	-	7.11	6.79	-	-	-	-	-	-	-	
Hardness	mg/L			-	-	-	-	-	-	-	-	-	-	-	-	
Metals																
Dissolved Arsenic (As)	ug/L	-	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	-	-	8300	<50	2400	880	2100	3700	6400	6300	3500	4200	8400	8300	
Dissolved Lead (Pb)	ug/L	-	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	-	-	2800	3270	3400	2800	1500	2400	2700	2700	2300	2000	2900	2900	
Dissolved Zinc (Zn)	ug/L	-	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											
				Marine Water ²	2018		2020		2021		2022		2023		2025
					9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22	26-Apr-23	17-Oct-23	16-Apr-25
Laboratory Conductivity	µS/cm	-	-	700	630	820	680	870	480	940	740	1800	610	1100	
Field Conductivity	µS/cm			-	-	-	-	-	-	1535	790	2001	1122	524	
Laboratory pH	Units	-	-	7.02	6.77	6.99	6.91	6.97	7.28	7.51	7.42	7.4	7.31	7.41	
Field pH	Units	-	-	-	-	-	-	-	-	6.86	6.67	6.63	6.48	6.81	
Hardness	mg/L			-	-	-	-	-	-	96	130	270	71	160	
Metals															
Dissolved Arsenic (As)	ug/L	-	125	2.3	4.3	3.7	2.0	1.4	2.3	<1.0	17	<1.0	<1.0	<1.0	
Dissolved Iron (Fe)	ug/L	-	-	7400	9200	<50	9400	4400	3100	1500	7400	3300	980	2200	
Dissolved Lead (Pb)	ug/L	-	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.5	<0.50	<0.50	<0.50	
Dissolved Manganese (Mn)	ug/L	-	-	3200	3200	4500	5700	3600	3300	1400	3000	4700	1500	2900	
Dissolved Zinc (Zn)	ug/L	-	100	17	6.3	24	<5.0	14	7.8	16	8.6	34	14	16	

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for marine water
-	- 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.
² 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 (MW6)

Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.006

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
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	
	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		2023		2025
				28-May-20	28-Oct-20	28-Apr-21	22-Oct-21	28-Apr-22	17-Oct-22	26-Apr-23	17-Oct-23	16-Apr-25
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	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.08	<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
	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	<0.090	<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 3B: CONDUCTIVITY, pH and METALS in Groundwater (MW6)

Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.006

Parameter	Units	NSE Tier I EQS ¹	NSE Tier II PSS groundwater discharging to surface water (>10m)	MW6													
				Marine Water ²	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	-	-	-	6.71	6.97	6.70	7.21	6.77	6.79	-	6.68	6.83	6.54	6.55	6.62	
Field pH	Units	-	-	-	-	-	7.21	6.84	-	-	-	-	-	-	-	-	
Hardness	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Metals																	
Dissolved Arsenic (As)	ug/L	-	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	-	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
Dissolved Lead (Pb)	ug/L	-	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	-	-	-	2.8	170	23	190	4.5	41	40	2.7	24	6.9	13	8.4	
Dissolved Zinc (Zn)	ug/L	-	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												
				Marine Water ²	2018		2020		2021		2022		2023			2025
					9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	22-Oct-21	28-Apr-22	17-Oct-22	26-Apr-23	Lab-Dup	17-Oct-23	16-Apr-25
Laboratory Conductivity	µS/cm	-	-	210	190	140	210	190	220	270	370	400	400	420	530	
Field Conductivity	µS/cm	-	-	-	-	-	-	-	-	NR	347	379	-	390	587	
Laboratory pH	-	-	-	6.62	6.52	6.65	6.40	6.57	7.46	7.49	7.5	7.74	7.62	7.26	7.15	
Field pH	Units	-	-	-	-	-	-	-	-	6.89	6.73	6.67	-	6.52	6.88	
Hardness	mg/L	-	-	-	-	-	-	-	-	99	1100	170	-	170	100	
Metals																
Dissolved Arsenic (As)	ug/L	-	125	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	-	<1.0	<1.0	
Dissolved Iron (Fe)	ug/L	-	-	<50	<50	<50	<50	<50	<50	<50	49000	<50	-	<50	2200	
Dissolved Lead (Pb)	ug/L	-	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	<0.50	-	<0.50	<0.50	
Dissolved Manganese (Mn)	ug/L	-	-	8.4	17	6.4	37	12	44	2.1	4700	2.5	-	130	13	
Dissolved Zinc (Zn)	ug/L	-	100	5.8	10	7.4	7.4	5.1	6.1	<5.0	<5.0	5.2	-	6.2	5.4	

Notes:

value	- exceeds NSE EQS
value	- exceeds NSE PSS for marine water
-	- 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.
² 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 (MW9)

Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.006

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	<i>68</i>	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		2023		2025	
				9-Apr-18	11-Oct-18	28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	17-Oct-22	26-Apr-23	Lab-Dup	17-Oct-23	16-Apr-25
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
	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
	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
	Xylenes	mg/L	20	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<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	<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	<0.050	<0.050	0.073	0.086
	Fuel Range (>C16-C21)	mg/L	-	0.089	0.090	0.079	0.21	0.2	0.2	0.075	0.15	0.054	<0.050	0.84	1.5
	Lube Range (>C21-C32)	mg/L	-	0.69	0.64	0.58	1.3	1.7	1.6	0.58	0.93	0.19	0.12	6.6	16
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	0.24	-	7.5	17
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,

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 (MW9)

Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.006

Parameter	Units	NSE Tier I EQS ¹	NSE Tier II PSS groundwater discharging to surface water (>10m)	MW9											
				Marine Water ²	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	-	-	-	-	820	660	650	690	500	670	560	560	460	630
Field Conductivity	µS/cm				-	-	-	-	-	-	-	-	-	-	-
Laboratory pH	Units	-	-	-	-	7.17	7.16	7.11	7.30	7.55	7.42	7.53	7.41	7.34	7.37
Field pH	Units	-	-	-	-	-	-	7.28	-	-	-	-	-	-	-
Hardness	mg/L				-	-	-	-	-	-	-	-	-	-	-
Metals															
Dissolved Arsenic (As)	ug/L	-	125	-	-	<1.0	<1.0	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Iron (Fe)	ug/L	-	-	-	-	<50	640	370	550	<50	890	220	260	480	820
Dissolved Lead (Pb)	ug/L	-	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	-	-	-	-	592	490	320	600	47	940	300	170	520	1000
Dissolved Zinc (Zn)	ug/L	-	100	-	-	10	5.2	9.5	12	12	<5.0	8.6	8.2	<5.0	<5.0

Parameter	Units	NSE Tier I EQS ¹	NSE Tier II PSS groundwater discharging to surface water (>10m)	MW9											
				Marine Water ²	2018			2020		2021		2022		2023	
					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	26-Apr-23	16-Apr-25
Laboratory Conductivity	µS/cm	-	-	-	520	-	630	540	700	530	640	510	5500	640	530
Field Conductivity	µS/cm				-	-	-	-	-	-	-	964	760	713	486
Laboratory pH	Units	-	-	-	7.33	-	7.25	7.52	7.39	7.14	7.40	7.75	7.79	7.57	7.56
Field pH	Units	-	-	-	-	-	-	-	-	-	-	6.90	6.93	6.86	7.05
Hardness	mg/L				-	-	-	-	-	-	-	240	790	290	250
Metals															
Dissolved Arsenic (As)	ug/L	-	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	-	-	-	69	470	620	220	1500	160	230	230	310	650	<50
Dissolved Lead (Pb)	ug/L	-	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	-	-	-	300	520	850	780	1400	360	330	260	76	730	72
Dissolved Zinc (Zn)	ug/L	-	100	-	9.3	<5.0	<5.0	8.1	5.9	8.5	6.2	5.6	9	9.1	9.3

Notes:

value	- exceeds NSE EQS
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 marine surface water (>10m)

TABLE 5A: PETROLEUM HYDROCARBON COMPOUNDS in Groundwater (MW11)

Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.006

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				2023		2025	
				28-May-20	28-Oct-20	28-Apr-21	20-Oct-21	28-Apr-22	DUP1	17-Oct-22	DUP1	26-Apr-23	17-Oct-23	16-Apr-25	
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	
	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	
	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	
	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	
Modified TPH	Gas Range	mg/L	-	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090	
	Fuel Range (C10-C16)	mg/L	-	0.17	0.24	0.099	0.15	0.15	0.15	0.073	0.078	0.12	0.12	0.13	
	Fuel Range (>C16-C21)	mg/L	-	0.47	0.76	0.32	0.62	0.57	0.51	0.14	0.16	0.28	0.34	0.26	
	Lube Range (>C21-C32)	mg/L	-	4.2	7.7	3.7	6.2	4.9	4.3	1.1	1.3	2	2.1	0.56	
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	1.3	1.5	2.4	2.5	0.95	
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.	One product in fuel oil range. Lube oil fraction.	One product in fuel oil range. Lube oil fraction.	One product in fuel oil range. Unidentified compounds in fuel/lube range. 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 (MW11)

Client: Build Nova Scotia
Site Location: Civic No. 34 Power Plant Road, Trenton, NS
Englobe Project No.: 2001756.006

Parameter	Units	NSE Tier I EQS ¹	NSE Tier II PSS groundwater discharging to surface water (>10m)	MW11													
				Marine Water ²	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	-	-	7.38	-	-	-	-	-	-	-	7.31	7.34	7.49	7.42	7.34	
Field pH	Units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hardness	mg/L			-	-	-	-	-	-	-	-	-	-	-	-	-	
Metals																	
Dissolved Arsenic (As)	ug/L	-	125	<1.0	-	-	-	-	-	-	-	1.3	-	2.8	<1.0	<1.0	
Dissolved Iron (Fe)	ug/L	-	-	<50	-	-	-	-	-	-	-	8200	-	9100	<50	<50	
Dissolved Lead (Pb)	ug/L	-	20	<0.50	-	-	-	-	-	-	-	<0.50	-	<0.50	<0.50	<0.50	
Dissolved Manganese (Mn)	ug/L	-	-	1590	-	-	-	-	-	-	-	1600	-	1600	1800	1800	
Dissolved Zinc (Zn)	ug/L	-	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													
				Marine Water ²	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	-	-	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	-	-	-	-	-	-	-	-	-	-	6.88	-	-	6.85	-	
Hardness	mg/L			-	-	-	-	-	-	-	-	230	230	-	100	1100	
Metals																	
Dissolved Arsenic (As)	ug/L	-	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	-	-	<50	<50	9100	20000	4900	20000	18000	18000	16000	16000	-	<50	49000	
Dissolved Lead (Pb)	ug/L	-	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	-	-	1800	1800	1600	1600	1500	1500	1600	1600	1400	1400	-	76	76	
Dissolved Zinc (Zn)	ug/L	-	100	<5.0	<5.0	<5.0	5.9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-	9	6.7	

Parameter	Units	NSE Tier I EQS ¹	NSE Tier II PSS groundwater discharging to surface water (>10m)	MW11			
				Marine Water ²	2023		2025
					26-Apr-23	17-Oct-23	16-Apr-25
Laboratory Conductivity	µS/cm	-	-	820	730	580	
Field Conductivity	µS/cm			1284	924	508	
Laboratory pH	Units	-	-	7.35	7.55	7.52	
Field pH	Units	-	-	6.81	6.88	6.93	
Hardness	mg/L			250	300	280	
Metals							
Dissolved Arsenic (As)	ug/L	-	125	<1.0	1.2	<1.0	
Dissolved Iron (Fe)	ug/L	-	-	15000	7400	18000	
Dissolved Lead (Pb)	ug/L	-	20	<0.50	<0.50	<0.50	
Dissolved Manganese (Mn)	ug/L	-	-	1300	1300	2900	
Dissolved Zinc (Zn)	ug/L	-	100	5.3	<5.0	16	

Notes:

value	- exceeds NSE EQS
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 marine surface water (>10m)

TABLE 6A: Field and Laboratory Duplicate QA/QC - PHC

Client: Build Nova Scotia

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

Englobe Project No.: 2001756.006

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

Parameter		Units	RPD Limit	MW9					MW14					MW14					MW3				
				RDL	RDL x5	2023		RPD	RDL	RDL x5	2023		RPD	RDL	RDL x5	2023		RPD	RDL	RDL x5	2025		RPD
						26-Apr-23	Lab-Dup				26-Apr-23	DUP1				17-Oct-23	DUP1				16-Apr-25	DUP1	
BTEX	Benzene	mg/L	40%	0.0010	0.0050	<0.0010	-	-	0.0050	0.0250	<0.0010	<0.0010	NC	0.0050	0.0250	<0.0010	<0.0010	NC	0.0050	0.0250	<0.0010	<0.0010	NC
	Toluene	mg/L	40%	0.0010	0.0050	<0.0010	-	-	0.0010	0.0050	<0.0010	<0.0010	NC	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	0.0050	<0.0010	<0.0010	NC	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	0.010	<0.0020	<0.0020	NC	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	0.450	<0.090	<0.090	NC	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	<0.050	<0.050	NC	0.050	0.250	<0.050	<0.050	NC	0.050	0.250	<0.050	<0.050	NC
	Fuel Range (>C16-C21)	mg/L	40%	0.050	0.250	0.054	<0.050	NC	0.050	0.250	<0.050	<0.050	NC	0.050	0.250	<0.050	<0.050	NC	0.050	0.250	<0.050	<0.050	NC
	Lube Range (>C21-C32)	mg/L	40%	0.090	0.450	0.19	0.12	NC	0.090	0.450	<0.090	<0.090	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%	0.090	0.450	0.24	-	NC	0.0900	0.450	<0.090	<0.090	NC	0.0900	0.450	<0.090	<0.090	NC	0.0900	0.450	<0.090	<0.090	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 6B: 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.: 2001756.006

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										MW6				
			RDL	RDL x5	2022		RPD	RDL	RDL x5	2022		RPD	RDL	RDL x5	2022		RPD	RDL	RDL x5	2022		RPD	RDL	RDL x5	2023		RPD
					28-Apr-22	DUP1				DUP1	Lab-Dup				17-Oct-22	DUP1				DUP1	Lab-Dup				26-Apr-23	Lab-Dup	
Laboratory Conductivity	µS/cm	40%	1.0	5.0	490	480	2	1.0	5.0	480	490	2	1.0	5.0	5500	5500	0	1.0	5.0	5500	5500	0	1.0	5.0	400	400	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	-	-	7.12	7.74	8
Hardness	mg/L	40%	1.0	5.0	230	230	0	1.0	5.0	230	-	-	1.0	5.0	100	1100	-	1.0	5.0	1100	-	-	1.0	5.0	90	170	62
Metals																											
Dissolved Arsenic (As)	ug/L	40%	1.0	5.0	1	<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	-	-	-

Parameter	Units	RPD Limit	MW14					MW3					MW3				
			RDL	RDL x5	2023		RPD	RDL	RDL x5	2023		RPD	RDL	RDL x5	2025		RPD
					26-Apr-23	DUP1				17-Oct-23	DUP1				16-Apr-25	DUP1	
Laboratory Conductivity	µS/cm	40%	1.0	5.0	580	580	0	1.0	5.0	610	670	9	1.0	5.0	1100	1100	0
Laboratory pH	Units	40%	-	-	7.17	7.14	0.4	-	-	7.31	7.49	2	-	-	7.41	7.24	2
Hardness	mg/L	40%	1.0	5.0	130	130	0	1.0	5.0	71	72	1	1.0	5.0	160	-	-
Metals																	
Dissolved Arsenic (As)	ug/L	40%	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
Dissolved Iron (Fe)	ug/L	40%	50	250	<50	<50	NC	50	250	980	1000	2	50	250	980	1000	2
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	NC
Dissolved Manganese (Mn)	ug/L	40%	2.0	10	1700	1700	0	2.0	10	1500	1600	6	2.0	10	1500	1600	6
Dissolved Zinc (Zn)	ug/L	40%	5.0	25	23	26	12	5.0	25	14	11	NC	5.0	25	14	11	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.

Appendix D

Laboratory Certificates



eNGLOBE



Your P.O. #: 80296
Your Project #: 2001756.006
Your C.O.C. #: C#1040985-01-01

Attention: Ryan Pellerin

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

Report Date: 2025/04/24
Report #: R8525788
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C542957

Received: 2025/04/17, 10:22

Sample Matrix: Ground Water
Samples Received: 6

Analyses	Date		Date Analyzed	Laboratory Method	Analytical Method
	Quantity	Extracted			
Conductance - water	6	N/A	2025/04/24	ATL SOP 00004	SM 24 2510B m
TEH in Water (PIRI)	6	2025/04/22	2025/04/22	ATL SOP 00113	Atl. RBCA v3.1 m
Hardness (calculated as CaCO3)	5	N/A	2025/04/24	ATL SOP 00048	Auto Calc
Metals Water Diss. MS- Field Filtered	6	N/A	2025/04/23	ATL SOP 00058	EPA 6020B R2 m
pH (1)	6	N/A	2025/04/24	ATL SOP 00003	SM 24 4500-H+ B m
ModTPH (T1) Calc. for Water	6	N/A	2025/04/23	N/A	Atl. RBCA v3 m
VPH in Water (PIRI)	6	N/A	2025/04/21	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, EPA, APHA or the Quebec Ministry of Environment.

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.

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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.



Your P.O. #: 80296
Your Project #: 2001756.006
Your C.O.C. #: C#1040985-01-01

Attention: Ryan Pellerin

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

Report Date: 2025/04/24
Report #: R8525788
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C542957

Received: 2025/04/17, 10:22

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:

Preeti Kapadia, Project Manager
Email: Preeti.Kapadia@bureauveritas.com
Phone# (902)420-0203 Ext:252

=====

This report has been generated and distributed using a secure automated process.

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.



BUREAU
VERITAS

Bureau Veritas Job #: C542957

Report Date: 2025/04/24

Englobe Corp

Client Project #: 2001756.006

Your P.O. #: 80296

Sampler Initials: VJ

RBCA HYDROCARBONS IN WATER (GROUND WATER)

Bureau Veritas ID		APZP65	APZP67		APZP68	APZP69		
Sampling Date		2025/04/16 14:05	2025/04/16 14:15		2025/04/16 15:05	2025/04/16 13:55		
COC Number		C#1040985-01-01	C#1040985-01-01		C#1040985-01-01	C#1040985-01-01		
	UNITS	MW1	MW3	QC Batch	MW6	MW9	RDL	QC Batch

Petroleum Hydrocarbons								
Benzene	mg/L	0.0057	<0.0010	9912828	<0.0010	<0.0010	0.0010	9912828
Toluene	mg/L	0.019	<0.0010	9912828	<0.0010	<0.0010	0.0010	9912828
Ethylbenzene	mg/L	0.59	<0.0010	9912828	<0.0010	<0.0010	0.0010	9912828
Total Xylenes	mg/L	0.63	<0.0020	9912828	<0.0020	<0.0020	0.0020	9912828
C6 - C10 (less BTEX)	mg/L	9.5	<0.090	9912828	<0.090	<0.090	0.090	9912828
>C10-C16 Hydrocarbons	mg/L	2.6	<0.050	9913464	<0.050	0.086	0.050	9913464
>C16-C21 Hydrocarbons	mg/L	<0.050	<0.050	9913464	<0.050	1.5	0.050	9913464
>C21-<C32 Hydrocarbons	mg/L	<0.090	<0.090	9913464	<0.090	16	0.090	9913464
Modified TPH (Tier1)	mg/L	12	<0.090	9911666	<0.090	17	0.090	9912060
Reached Baseline at C32	mg/L	Yes	NA	9913464	NA	No	N/A	9913464
Hydrocarbon Resemblance	mg/L	COMMENT (1)	NA	9913464	NA	COMMENT (2)	N/A	9913464

Surrogate Recovery (%)

Isobutylbenzene - Extractable	%	92	95	9913464	94	95		9913464
n-Dotriacontane - Extractable	%	95	103	9913464	102	128		9913464
Isobutylbenzene - Volatile	%	94	96	9912828	96	95		9912828

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

N/A = Not Applicable

(1) One product in the gas/fuel oil range.

(2) Lube oil fraction.



BUREAU
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Bureau Veritas Job #: C542957

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Sampler Initials: VJ

RBGA HYDROCARBONS IN WATER (GROUND WATER)

Bureau Veritas ID		APZP70	APZP72		
Sampling Date		2025/04/16 13:30	2025/04/16		
COC Number		C#1040985-01-01	C#1040985-01-01		
	UNITS	MW11	DUP1	RDL	QC Batch
Petroleum Hydrocarbons					
Benzene	mg/L	<0.0010	<0.0010	0.0010	9912828
Toluene	mg/L	<0.0010	<0.0010	0.0010	9912828
Ethylbenzene	mg/L	<0.0010	<0.0010	0.0010	9912828
Total Xylenes	mg/L	<0.0020	<0.0020	0.0020	9912828
C6 - C10 (less BTEX)	mg/L	<0.090	<0.090	0.090	9912828
>C10-C16 Hydrocarbons	mg/L	0.13	<0.050	0.050	9913464
>C16-C21 Hydrocarbons	mg/L	0.26	<0.050	0.050	9913464
>C21-<C32 Hydrocarbons	mg/L	0.56	<0.090	0.090	9913464
Modified TPH (Tier1)	mg/L	0.95	<0.090	0.090	9912060
Reached Baseline at C32	mg/L	Yes	NA	N/A	9913464
Hydrocarbon Resemblance	mg/L	COMMENT (1)	NA	N/A	9913464
Surrogate Recovery (%)					
Isobutylbenzene - Extractable	%	100	99		9913464
n-Dotriacontane - Extractable	%	97	108		9913464
Isobutylbenzene - Volatile	%	95	95		9912828
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
N/A = Not Applicable					
(1) One product in fuel oil range. Unidentified compound(s) in fuel / lube range. Lube oil fraction.					



**BUREAU
VERITAS**

Bureau Veritas Job #: C542957

Report Date: 2025/04/24

Englobe Corp

Client Project #: 2001756.006

Your P.O. #: 80296

Sampler Initials: VJ

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		APZP65	APZP67	APZP68	APZP69	APZP70		
Sampling Date		2025/04/16 14:05	2025/04/16 14:15	2025/04/16 15:05	2025/04/16 13:55	2025/04/16 13:30		
COC Number		C#1040985-01-01	C#1040985-01-01	C#1040985-01-01	C#1040985-01-01	C#1040985-01-01		
	UNITS	MW1	MW3	MW6	MW9	MW11	RDL	QC Batch
Calculated Parameters								
Hardness (CaCO ₃)	mg/L	97	160	100	250	280	1.0	9911829
Inorganics								
pH	pH	7.59	7.41	7.15	7.56	7.52		9915194
Conductivity	uS/cm	2500	1100	270	530	580	1.0	9915195
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								

Bureau Veritas ID		APZP70	APZP72		
Sampling Date		2025/04/16 13:30	2025/04/16		
COC Number		C#1040985-01-01	C#1040985-01-01		
	UNITS	MW11 Lab-Dup	DUP1	RDL	QC Batch
Inorganics					
pH	pH	7.51	7.24		9915194
Conductivity	uS/cm	590	1100	1.0	9915195
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Lab-Dup = Laboratory Initiated Duplicate					



**BUREAU
VERITAS**

Bureau Veritas Job #: C542957

Report Date: 2025/04/24

Englobe Corp

Client Project #: 2001756.006

Your P.O. #: 80296

Sampler Initials: VJ

ELEMENTS BY ICP/MS (GROUND WATER)

Bureau Veritas ID		APZP65	APZP67	APZP68	APZP69	APZP70		
Sampling Date		2025/04/16 14:05	2025/04/16 14:15	2025/04/16 15:05	2025/04/16 13:55	2025/04/16 13:30		
COC Number		C#1040985-01-01	C#1040985-01-01	C#1040985-01-01	C#1040985-01-01	C#1040985-01-01		
	UNITS	MW1	MW3	MW6	MW9	MW11	RDL	QC Batch

Metals

Dissolved Arsenic (As)	ug/L	2.6	<1.0	<1.0	<1.0	<1.0	1.0	9914399
Dissolved Calcium (Ca)	ug/L	32000	44000	33000	80000	87000	100	9914399
Dissolved Iron (Fe)	ug/L	17000	2200	<50	<50	18000	50	9914399
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	9914399
Dissolved Magnesium (Mg)	ug/L	4500	11000	4400	13000	16000	100	9914399
Dissolved Manganese (Mn)	ug/L	15000	2900	13	72	1200	2.0	9914399
Dissolved Zinc (Zn)	ug/L	5.0	16	5.4	9.3	5.5	5.0	9914399

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Bureau Veritas ID		APZP72		
Sampling Date		2025/04/16		
COC Number		C#1040985-01-01		
	UNITS	DUP1	RDL	QC Batch

Metals

Dissolved Arsenic (As)	ug/L	<1.0	1.0	9914399
Dissolved Calcium (Ca)	ug/L	44000	100	9914399
Dissolved Iron (Fe)	ug/L	2300	50	9914399
Dissolved Lead (Pb)	ug/L	<0.50	0.50	9914399
Dissolved Magnesium (Mg)	ug/L	11000	100	9914399
Dissolved Manganese (Mn)	ug/L	2900	2.0	9914399
Dissolved Zinc (Zn)	ug/L	16	5.0	9914399

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



GENERAL COMMENTS

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

Package 1	1.7°C
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Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C542957

Report Date: 2025/04/24

Englobe Corp

Client Project #: 2001756.006

Your P.O. #: 80296

Sampler Initials: VJ

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9912828	THL	Matrix Spike	Isobutylbenzene - Volatile	2025/04/21		94	%	70 - 130
			Benzene	2025/04/21		94	%	70 - 130
			Toluene	2025/04/21		95	%	70 - 130
			Ethylbenzene	2025/04/21		94	%	70 - 130
			Total Xylenes	2025/04/21		97	%	70 - 130
9912828	THL	Spiked Blank	Isobutylbenzene - Volatile	2025/04/21		97	%	70 - 130
			Benzene	2025/04/21		98	%	70 - 130
			Toluene	2025/04/21		99	%	70 - 130
			Ethylbenzene	2025/04/21		98	%	70 - 130
			Total Xylenes	2025/04/21		101	%	70 - 130
9912828	THL	Method Blank	Isobutylbenzene - Volatile	2025/04/21		95	%	70 - 130
			Benzene	2025/04/21	<0.0010		mg/L	
			Toluene	2025/04/21	<0.0010		mg/L	
			Ethylbenzene	2025/04/21	<0.0010		mg/L	
			Total Xylenes	2025/04/21	<0.0020		mg/L	
9912828	THL	RPD	C6 - C10 (less BTEX)	2025/04/21	<0.090		mg/L	
			Benzene	2025/04/21	NC		%	40
			Toluene	2025/04/21	NC		%	40
			Ethylbenzene	2025/04/21	NC		%	40
			Total Xylenes	2025/04/21	NC		%	40
9913464	MSK	Matrix Spike	C6 - C10 (less BTEX)	2025/04/21	NC		%	40
			Isobutylbenzene - Extractable	2025/04/22		100	%	70 - 130
			n-Dotriacontane - Extractable	2025/04/22		107	%	70 - 130
			>C10-C16 Hydrocarbons	2025/04/22		97	%	70 - 130
			>C16-C21 Hydrocarbons	2025/04/22		94	%	70 - 130
9913464	MSK	Spiked Blank	>C21-<C32 Hydrocarbons	2025/04/22		90	%	70 - 130
			Isobutylbenzene - Extractable	2025/04/22		77	%	70 - 130
			n-Dotriacontane - Extractable	2025/04/22		112	%	70 - 130
			>C10-C16 Hydrocarbons	2025/04/22		100	%	70 - 130
			>C16-C21 Hydrocarbons	2025/04/22		96	%	70 - 130
9913464	MSK	Method Blank	>C21-<C32 Hydrocarbons	2025/04/22		93	%	70 - 130
			Isobutylbenzene - Extractable	2025/04/22		70	%	70 - 130
			n-Dotriacontane - Extractable	2025/04/22		106	%	70 - 130
			>C10-C16 Hydrocarbons	2025/04/22	<0.050		mg/L	
			>C16-C21 Hydrocarbons	2025/04/22	<0.050		mg/L	
9913464	MSK	RPD	>C21-<C32 Hydrocarbons	2025/04/22	<0.090		mg/L	
			>C10-C16 Hydrocarbons	2025/04/22	NC		%	40
			>C16-C21 Hydrocarbons	2025/04/22	NC		%	40
9914399	MTZ	Matrix Spike	>C21-<C32 Hydrocarbons	2025/04/22	NC		%	40
			Dissolved Arsenic (As)	2025/04/23		103	%	80 - 120
			Dissolved Calcium (Ca)	2025/04/23		98	%	80 - 120
			Dissolved Iron (Fe)	2025/04/23		102	%	80 - 120
			Dissolved Lead (Pb)	2025/04/23		99	%	80 - 120
9914399	MTZ	Spiked Blank	Dissolved Magnesium (Mg)	2025/04/23		104	%	80 - 120
			Dissolved Manganese (Mn)	2025/04/23		102	%	80 - 120
			Dissolved Zinc (Zn)	2025/04/23		101	%	80 - 120
			Dissolved Arsenic (As)	2025/04/23		102	%	80 - 120
			Dissolved Calcium (Ca)	2025/04/23		99	%	80 - 120
9914399	MTZ	Spiked Blank	Dissolved Iron (Fe)	2025/04/23		103	%	80 - 120
			Dissolved Lead (Pb)	2025/04/23		100	%	80 - 120
			Dissolved Magnesium (Mg)	2025/04/23		105	%	80 - 120
			Dissolved Manganese (Mn)	2025/04/23		102	%	80 - 120
			Dissolved Zinc (Zn)	2025/04/23		102	%	80 - 120



**BUREAU
VERITAS**

Bureau Veritas Job #: C542957

Report Date: 2025/04/24

Englobe Corp

Client Project #: 2001756.006

Your P.O. #: 80296

Sampler Initials: VJ

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
9914399	MTZ	Method Blank	Dissolved Arsenic (As)	2025/04/23	<1.0		ug/L	
			Dissolved Calcium (Ca)	2025/04/23	<100		ug/L	
			Dissolved Iron (Fe)	2025/04/23	<50		ug/L	
			Dissolved Lead (Pb)	2025/04/23	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2025/04/23	<100		ug/L	
			Dissolved Manganese (Mn)	2025/04/23	<2.0		ug/L	
			Dissolved Zinc (Zn)	2025/04/23	<5.0		ug/L	
9914399	MTZ	RPD	Dissolved Arsenic (As)	2025/04/23	1.8		%	20
			Dissolved Calcium (Ca)	2025/04/23	3.3		%	20
			Dissolved Iron (Fe)	2025/04/23	0.34		%	20
			Dissolved Lead (Pb)	2025/04/23	NC		%	20
			Dissolved Magnesium (Mg)	2025/04/23	0.52		%	20
			Dissolved Manganese (Mn)	2025/04/23	0.67		%	20
			Dissolved Zinc (Zn)	2025/04/23	7.7		%	20
9915194	KMC	Spiked Blank	pH	2025/04/24		99	%	97 - 103
9915194	KMC	RPD [APZP70-01]	pH	2025/04/24	0.11		%	N/A
9915195	KMC	Spiked Blank	Conductivity	2025/04/24		98	%	80 - 120
9915195	KMC	Method Blank	Conductivity	2025/04/24	<1.0		uS/cm	
9915195	KMC	RPD [APZP70-01]	Conductivity	2025/04/24	1.0		%	10

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).



BUREAU
VERITAS

Bureau Veritas Job #: C542957

Report Date: 2025/04/24

Englobe Corp

Client Project #: 2001756.006

Your P.O. #: 80296

Sampler Initials: VJ

VALIDATION SIGNATURE PAGE

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

Phil Deveau, Scientific Specialist (Organics)

Bureau Veritas Certified by Janah Rhyno, Scientific Specialist

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