For Office Use Only: File Number Related File Number Pre-consultation Meeting Application Submitted Complete Application	Application Fee Conservation Authority Fee Well & Septic Info Provided Planner Public Notice Sign
Check the type of plan	ning application(s) you are submitting.
	/Boundary Adjustment ing Severance and Zoning By-law Amendment Vay
Property Assessment	
A. Applicant Information	on Girhard George Hipbert
It is the responsibility of to ownership within 30 days	the owner or applicant to notify the planner of any changes in s of such a change.
Address	9411 Elgin St.
Town and Postal Code	Straffordoille ON NOJ 140
Phone Number	519-842-0964
Cell Number	519-842-0964
Email	nick 7 hiebert a gmail. com
Name of Applicant	George Hiebert
Address	9411 Elgin St
Town and Postal Code	Straffor Juille, ON NOT 140
Phone Number	519-842-0964
Cell Number	319-842-0964
Email	nick 7 hiebert @ ho trail, com



Name of Agent		
Address		
Town and Postal Code		
Phone Number		
Cell Number		
Email		
	otices in respect	ns should be sent. Unless otherwise directed, t of this application will be forwarded to the
✓ Owner	☐ Agent	☐ Applicant
B. Location, Legal Des	cription and Pr	· ·
Block Number and Urb		Township, Concession Number, Lot Number, nlet):
Lot 13 Con	cession 14	Township of North Walsing
Norfolk Com	, /-	
Municipal Civic Addres	s: 1019	Norfolk County Rd. 21
Present Official Plan D		
Present Zoning:	Hamlet	Residential
2. Is there a special provis	sion or site spec	cific zone on the subject lands?
□ Yes 💢 No If yes, p	lease specify:	
3. Present use of the subj		



4.	Please describe all existing buildings or structures on the subject lands and whether they are to be retained, demolished or removed. If retaining the buildings or structures, please describe the type of buildings or structures, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application: Vacant
5.	If an addition to an existing building is being proposed, please explain what it will be used for (for example a bedroom, kitchen, or bathroom). If new fixtures are proposed, please describe.
6.	Please describe all proposed buildings or structures/additions on the subject lands. Describe the type of buildings or structures/additions, and illustrate the setback, in metric units, from front, rear and side lot lines, ground floor area, gross floor area, lot coverage, number of storeys, width, length, and height on your attached sketch which must be included with your application:
7.	Are any existing buildings on the subject lands designated under the <i>Ontario Heritage Act</i> as being architecturally and/or historically significant? Yes \(\subseteq \) No \(\subseteq \) If yes, identify and provide details of the building:
8.	If known, the length of time the existing uses have continued on the subject lands:
9.	Existing use of abutting properties: Residential houses
10.	Are there any easements or restrictive covenants affecting the subject lands?
	☐ Yes ☒ No If yes, describe the easement or restrictive covenant and its effect:





C. Purpose of Development Application

Note: Please complete all that apply. Failure to complete this section will result in an incomplete application.

1. Site Information (Please refer to Zoning By-law to confirm permitted dimensions)

	Existing	Permitted	Provision	Proposed	Deficiency
Lot frontage	30.785M	30 M			
Lot depth	63.739M				
Lot width	30.785M	30 M			
Lot area	30.785M	0.4 Hec.			
Lot coverage					
Front yard					
Rear yard					
Height					
Left Interior side yard					
Right Interior side yard					
Exterior side yard (corner lot)					
Parking Spaces (number)					
Aisle width					
Stall size					
Loading Spaces					er.
Other					



Retained

C. Purpose of Development Application

Note: Please complete all that apply. Failure to complete this section will result in an incomplete application.

1. Site Information (Please refer to Zoning By-law to confirm permitted dimensions)

	Existing	Permitted	Provision	Proposed	Deficiency
Lot frontage	30.785M	30 M			
Lot depth	63.734 M				
Lot width	30.785M	30M			
Lot area	30.785M	0.4 Hec.			
Lot coverage					
Front yard					
Rear yard					
Height					
Left Interior side yard					
Right Interior side yard					
Exterior side yard (corner lot)					
Parking Spaces (number)					
Aisle width					
Stall size					
Loading Spaces					
Other					



2.		ny it is not possible to comply with the provision(s) of the Zoning			
	By-law:	ient in Lot Area			
	Je ·· c	ient in Lot Area			
	Consent/Severar severed in metric	nce/Boundary Adjustment: Description of land intended to be			
	Frontage:	30.785 M			
	Depth:	63.739 M			
	Width:	30.785 M			
	Lot Area:	1962.465591			
	Present Use:	Vacant Land			
	Proposed Use:	Residential Boild			
	Proposed final lot	size (if boundary adjustment):			
	If a boundary adjustment, identify the assessment roll number and property owner of				
	the lands to which the parcel will be added:				
	the lands to willon	the pareer will be added			
	Description of land	intended to be retained in metric units:			
	Frontage:	30.785 M			
	Depth:	63.734 M			
	Width:	30. 785 M			
	Lot Area:	1961.085 M			
	Present Use:	Vacant Land			
	Proposed Use:	Residential Build			
	Buildings on retain	ed land: New Construction House currently being b			
	<u> </u>				
1	Easement/Right-o	of-Way: Description of proposed right-of-way/easement in metric			
	units:				
I	Frontage: _				
I	Depth:				



	Vidth:	
	\rea:	
	Proposed Use:	
5.	Surplus Farm Dwelling Severances Only: List all properties in Norfolk County, which are owned and farmed by the applicant and involved in the farm operation	
Ov	ers Name:	
Ro	Number:	
То	l Acreage:	
Wd	kable Acreage:	
Ex	ting Farm Type: (for example: corn, orchard, livestock)	
Dν	lling Present?: □ Yes □ No If yes, year dwelling built	
Da	of Land Purchase:	_
	ers Name: Number:	
Tot	Acreage:	
Wc	able Acreage:	_
Exi	ing Farm Type: (for example: corn, orchard, livestock)	
Dw	ling Present?: ☐ Yes ☐ No If yes, year dwelling built	
Dat	of Land Purchase:	
Rol Tot	ers Name: Number: Acreage: able Acreage:	_
	ng Farm Type: (for example: corn, orchard, livestock)	
	ling Present?: ☐ Yes ☐ No If yes, year dwelling built	
	of Land Purchase:	



Owners Name:
Roll Number:
Total Acreage:
Workable Acreage:
Existing Farm Type: (for example: corn, orchard, livestock)
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built
Date of Land Purchase:
Owners Name:
Roll Number:
Total Acreage:
Workable Acreage:
Existing Farm Type: (for example: corn, orchard, livestock)
Dwelling Present?: ☐ Yes ☐ No If yes, year dwelling built
Date of Land Purchase:
Note: If additional space is needed please attach a separate sheet.
D. All Applications: Previous Use of the Property
1. Has there been an industrial or commercial use on the subject lands or adjacent
lands? □ Yes ឪ No □ Unknown
If yes, specify the uses (for example: gas station, or petroleum storage):
2. Is there reason to believe the subject lands may have been contaminated by former uses on the site or adjacent sites? ☐ Yes ☒ No ☐ Unknown
3. Provide the information you used to determine the answers to the above questions:



4.	If you answered yes to any of the above questions in Section D, a previous use inventory showing all known former uses of the subject lands, or if appropriate, the adjacent lands, is needed. Is the previous use inventory attached? \square Yes \square No
E.	All Applications: Provincial Policy
1.	Is the requested amendment consistent with the provincial policy statements issued under subsection 3(1) of the <i>Planning Act, R.S.O. 1990, c. P. 13</i> ? ☑ Yes ☐ No
	If no, please explain:
	Annual Control of the
2.	It is owner's responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals, including the Endangered Species Act, 2007. Have the subject lands been screened to ensure that development or site alteration will not have any impact on the habitat for endangered or threatened species further to the provincial policy statement subsection 2.1.7? Ver Species No
	If no, please explain:
	Have the subject lands been screened to ensure that development or site alteration will not have any impact on source water protection? Yes No
	Note: If in an area of source water Wellhead Protection Area (WHPA) A, B or C please attach relevant information and approved mitigation measures from the Risk Manager Official.



4.	All Applications: Are any of the following uses or features on the subject lands or within 500 metres of the subject lands, unless otherwise specified? Please check boxes, if applicable.
	Livestock facility or stockyard (submit MDS Calculation with application)
	☐ On the subject lands or ☐ within 500 meters – distance
	Wooded area
	Municipal Landfill ☐ On the subject lands or ☐ within 500 meters – distance
	Sewage treatment plant or waste stabilization plant ☐ On the subject lands or ☐ within 500 meters – distance
	Provincially significant wetland (class 1, 2 or 3) or other environmental feature ☐ On the subject lands or ☐ within 500 meters — distance
	Floodplain ☐ On the subject lands or ☐ within 500 meters – distance
	Rehabilitated mine site ☐ On the subject lands or ☐ within 500 meters – distance
	Non-operating mine site within one kilometre ☐ On the subject lands or ☐ within 500 meters – distance
	Active mine site within one kilometre ☐ On the subject lands or ☐ within 500 meters – distance
	Industrial or commercial use (specify the use(s)) ☐ On the subject lands or ☐ within 500 meters – distance
	Active railway line ☐ On the subject lands or ☐ within 500 meters – distance
	Seasonal wetness of lands ☐ On the subject lands or ☐ within 500 meters – distance
	Erosion □ On the subject lands or □ within 500 meters – distance
	Abandoned gas wells ☐ On the subject lands or ☐ within 500 meters – distance



F. All Applications: Servicing and Access 1. Indicate what services are available or proposed: Water Supply ☐ Municipal piped water □ Communal wells 💢 Individual wells ☐ Other (describe below) Sewage Treatment ☐ Municipal sewers ☐ Communal system Storm Drainage ☐ Storm sewers Den ditches ☐ Other (describe below) 2. Existing or proposed access to subject lands: Municipal road ☐ Provincial highway ☐ Unopened road ☐ Other (describe below) Name of road/street: G. All Applications: Other Information

- 1. Does the application involve a local business? ☐ Yes ∑ No If yes, how many people are employed on the subject lands?
- 2. Is there any other information that you think may be useful in the review of this application? If so, explain below or attach on a separate page.



H. Supporting Material to be submitted by Applicant

In order for your application to be considered complete, folded hard copies (number of paper copies as directed by the planner) and an **electronic version (PDF) of the site plan drawings, additional plans, studies and reports** will be required, including but not limited to the following details:

- 1. Concept/Layout Plan
- 2. All measurements in metric
- 3. Existing and proposed easements and right of ways
- 4. Parking space totals required and proposed
- 5. All dimensions of the subject lands
- 6. Dimensions and setbacks of all buildings and structures
- 7. Location and setbacks of septic system and well from all existing and proposed lot lines, and all existing and proposed structures
- 8. Names of adjacent streets
- 9. Natural features, watercourses and trees

In addition, the following additional plans, studies and reports, including but not limited to, **may** also be required as part of the complete application submission:

□ On-Site Sewage Disposal System Evaluation Form (to verify location and condition)

□ Environmental Impact Study

☑ Geotechnical Study / Hydrogeological Review

□ Minimum Distance Separation Schedule

□ Record of Site Condition

Your development approval might also be dependent on Ministry of Environment

All final plans must include the owner's signature as well as the engineer's signature and seal.

Conservation and Parks, Ministry of Transportation or other relevant federal or

provincial legislation, municipal by-laws or other agency approvals.



I. Transfers, Easements and Postponement of Interest

The owner acknowledges and agrees that if required it is their solicitor's responsibility on behalf of the owner for the registration of all transfer(s) of land to the County, and/or transfer(s) of easement in favour of the County and/or utilities. Also, the owner further acknowledges and agrees that it is their solicitor's responsibility on behalf of the owner for the registration of postponements of any charges in favour of the County.

Permission to Enter Subject Lands

Permission is hereby granted to Norfolk County officers, employees or agents, to enter the premises subject to this application for the purposes of making inspections associated with this application, during normal and reasonable working hours.

Freedom of Information

For the purposes of the Municipal Freedom of	Information and Protection of Privacy Act
I authorize and consent to the use by or the di	
information that is collected under the authorit	y of the <i>Planning Act, R.S.O. 1990, c. P.</i>
13 for the purposes of processing this applicat	ion.
George Hiebert	Sept 11, 2024
Owner/Applicant/Agent Signature	Date
J. Owner's Authorization	
If the applicant/agent is not the registered own	-
application, the owner must complete the auth	orization set out below.
We General Hickert	am/are the registered owner(s) of the
ands that is the subject of this application.	
We authorize 61 hard Highert	to make this application on
my/our behalf and to provide any of my/our pe	rsonal information necessary for the
processing of this application. Moreover, this s	shall be your good and sufficient
authorization for so doing.	
coner	Sept 11,2024
Owner	Date
	4 · · ·
Owner	Date

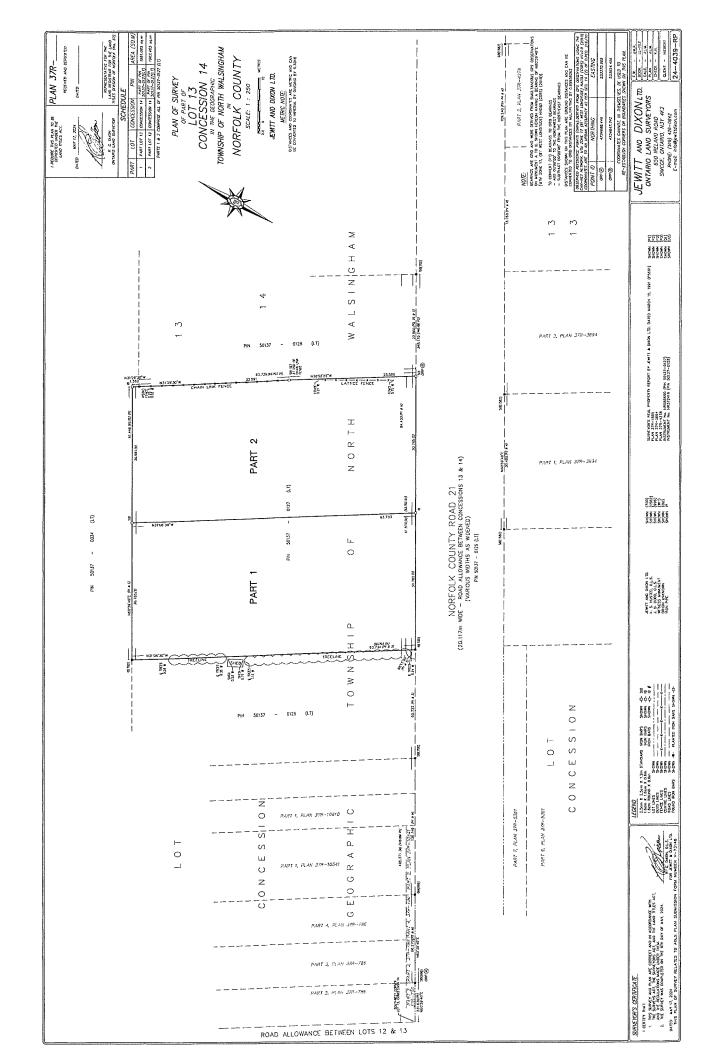
*Note: If property is owned by an Ontario Ltd. Corporation, Articles of Incorporation are required to be attached to the application.

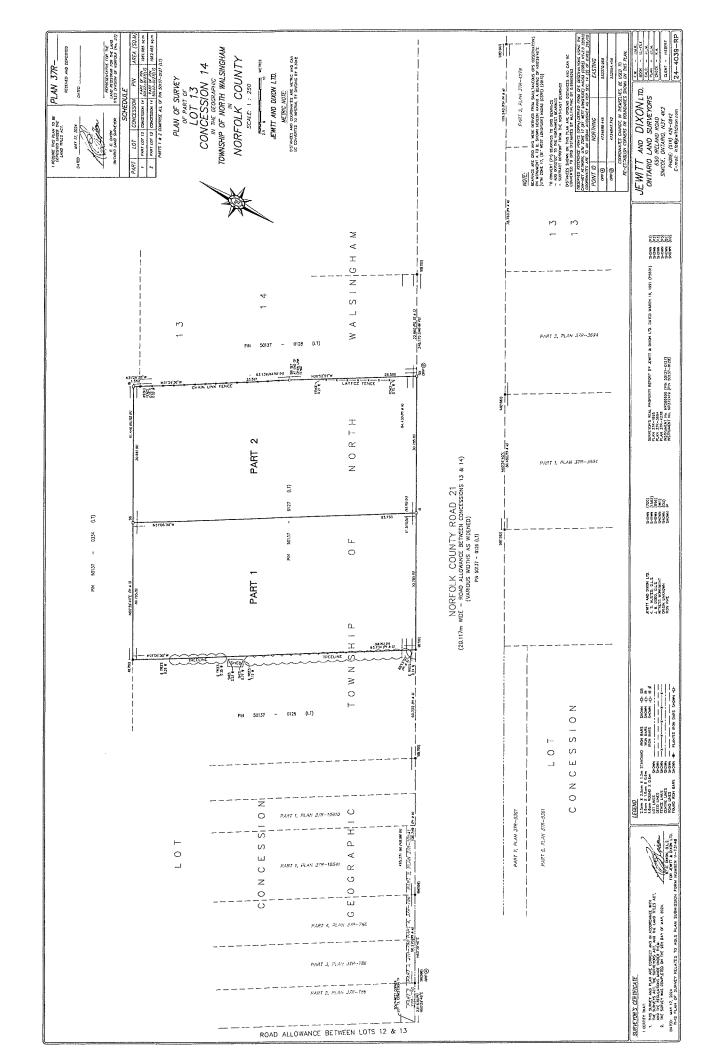


Girberd Hiebert K. Declaration of Strathfordully , beache Hicker solemnly declare that: all of the above statements and the statements contained in all of the exhibits transmitted herewith are true and I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of The Canada Evidence Act. Declared before me at: Owner/Applicant/Agent Signature This 11 day of sept A.D., 20 24 John Andrew Wallace, a Commissioner, Ma., Province of Ontario, for the Corporation of Norfolk County. Expires January 16, 2027.



A Commissioner, etc.





SKETCH FOR SEVERANCE APPLICATION OF PART OF

LOT 13, CONCESSION 14

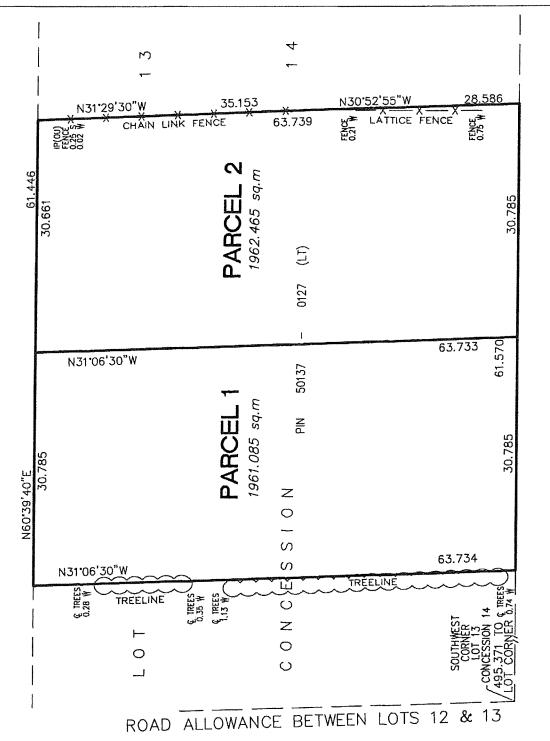
IN THE GEOGRAPHIC TOWNSHIP OF NORTH WALSINGHAM

IF OF NORTH WAL. NORFOLK COUNTY

SCALE: 1 : 500 JEWITT AND DIXON LTD.

MAY 17, 2024





4 સ 13 ROAD ALLOWANCE BETWEEN CONCESSIONS 2 ROAD COUNTY NORFOLK (20.117m WIDE

NO TE:

THIS PLAN IS IN METRIC AND CAN BE CONVERTED TO IMPERIAL BY MULTIPLYING BY 3.2808

CAUTION:

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JEWITT AND DIXON LTD. ONTARIO LAND SURVEYORS

650 IRELAND ROAD, SIMCOE, ONTARIO, N3Y 4K

PHONE: (519) 426–0842 E-mail: info@jewittdixon.com

JOB # 24-4039 CLENT: HIEBERT

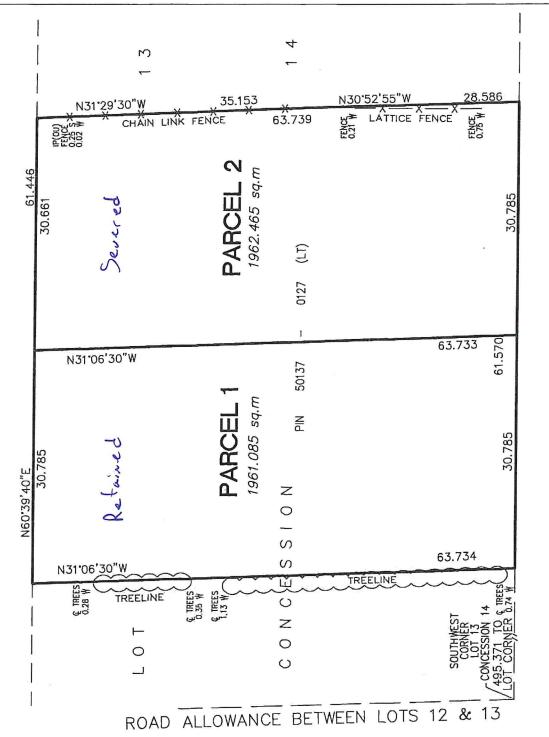
APPLICATION CONCESSION 14 OF PART OF SKETCH SEVERANCE A 13, 107

OF NORTH WALSINGHAM THE GEOGRAPHIC < TOWNSHIP

COUNTY NORFOLK

JEWITT AND DIXON LTD. MAY 17, 2024 SCALE: 1: 500





14) ઝ 13 CONCESSIONS 7 ROAD ROAD ALLOWANCE BETWEEN COUNTY NORFOLK (20.117m WIDE

NO TE:

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*1*10 SURVEYORS NOXIO ONTARIO LAND AND JEWITT

SIMCOE, ONTARIO, N3Y 650 IRELAND ROAD,

PHONE: (519) 426–0842 E-mail: info@jewittdixon.com

24-4039

englobe



September 10, 2024

Mr. Nick Hiebert

158B concession St West, Tillsonburg

Subject: Hydrogeological Study for Water Supply Well and Septic System Services

Part of Lot 13, Concession 14, Township of North Walsingham, Norfolk County, Ontario

Englobe reference: 02405890.000

1. Introduction

Englobe Corp. (Englobe) was retained by Mr. Nick Hiebert ("the Client") to conduct a hydrogeological study at Part of Lot 13, Concession 14, Township of North Walsingham, Norfolk County, Ontario and municipally addressed 1019 Norfolk County Road 21 (referred to herein-as the "Site"). It is Englobe's understanding that the Site, is currently undeveloped, with no buildings or servicing. Englobe understands that it is the ultimate intention to sever the Site into two separate Parcels, and that each Parcel will be serviced with a water supply well (consisting of a sand-point well) and septic system. The work was carried out in accordance with Englobe's proposal dated June 4th, 2024 (Ref.: P2405890.000) and authorized by the Client on July 3rd, 2024.

The hydrogeological study was completed following the general approach and methodology provided within the Ontario Ministry of the Environment, Conservation and Parks (MECP) documents D-5-4 Individual On-Site Sewer Systems: Water Quality Risk Assessment and D-5-5 Private Wells: Water Supply Assessment. Englobe notes however that the above-noted document is applicable to developments with more than five on-site sewage systems, and not all components of this document are intended for single-unit sewage systems.

This letter report has been prepared specifically and solely for the project described herein. It presents the factual results of the field investigation and provides estimates of the observed percolation rates at the tested locations.

1.1 Site Description

A summary of the Site details is presented in the following table.

Table 1-1: Site description

	Site Information
Existing Site Area	3,924 m ² in total area: Parcel 1 (approximately 1,961.085 m2), and Parcel 2 (approximately 1,962.465 m2).
Municipal Address	Part of Lot 13, Concession 14, Township of North Walsingham, Norfolk County, Ontario
Geodetic Coordinates to Centroid (approx.)	UTM 533618.52 m E, 4 533618.52 m N 1984 World Geodetic System datum

Notes:

UTM - Universal Transverse Mercator

Zoning Map Source: https://maps.kitchener.ca/OnPointExternal/RMap/Default.aspx#

The Site is rectangular in shape and approximately 3,924 m² in area. The Site is currently undeveloped/vacant. Surrounding land uses consist of the following:

- North: Agricultural properties;
- East: : Residential and agricultural properties;
- South: Norfolk City Road 21 followed by residential and agricultural properties; and
- West: Residential and agricultural properties.

A Site Location Map is provided in Figure 1 in Appendix A.

2. Methodology

Englobe completed work at the Site in July 2024 to evaluate whether the severed parcels can be appropriately serviced with a septic systems and potable water wells. The scope of work included collecting soil samples for laboratory analysis of grain size, completing an in-situ percolation tests, and collecting one groundwater sample from a previously installed monitoring well. The following sections further describe the methodologies or procedures applied to carry out these key tasks.

2.1 Test Pitting Program

On July 17, 2024, as part of the percolation testing field investigation, the Client provided an excavator to advance three (3) test pits from the existing ground surface to their respective termination depths. The test pits were designated TP24-1, TP24-2 and TP24-3, and were advanced within the contemplated location(s) of septic fields. The test pits were advanced to approximately 3.0 mbgs to view soil stratigraphy and permit percolation rate testing at selected depths below ground.

The approximate locations of the test pits are presented on the attached Test Pit and Potable Water Well Location Plan in **Figure 2** in **Appendix A.** Test pit logs are presented in **Appendix B.**

2.2 In-Situ Percolation Rate Testing

On July 17, 2024, Englobe completed *in-situ* percolation rate tests within soils at depths of approximately 1.0 m at the location of TP24-1 and TP24-2. In general, Englobe followed the following procedure during the completion of the percolation test:

- A cylindrical hole was dug at the target depths within the test pit to a depth of approximately 0.3 m and with a diameter of approximately 0.1 m;
- Smeared soils were removed from the walls and floor of the hole;
- A ruler was installed at the bottom of the hole;
- The hole was saturated with water by twice filling the hole with distilled water and allowing a
 portion of the water to percolate into the soils;
- The hole was refilled with distilled water to a measured depth, then allowed to fully percolate into the soils, while measuring water levels at set time intervals during the test.

2.3 Test Well Installation

On July 13, 2024, the Client retained the services of Water Mining Inc., a licensed well contractor, to advance two (2) domestic water supply wells at the Site. For the purposes of the report, the potable water well with well tag number A409223 is designated "PW-1" and the potable water well with well tag number A370019 is designated "PW-2".

The potable water wells were installed within a water-bearing overburden aquifer consisting primarily of sand, and screened from depths ranging from approximately 6.1 to 8.2 metre below ground surface (mbgs). The well construction information for the potable water wells is included within the Ontario Regulation 903 water well records, included within **Appendix B**.

2.4 Aquifer Testing and Groundwater Sampling Program

To assess the quantity and quality of groundwater available from the aquifer intercepting the well screening, the two potable water wells were subjected to a constant rate pumping test for six (6) hours on July 23 and July 24, 2024. The constant rate pumping test was conducted using centrifugal well pumps installed by the licensed well contractor.

The pumping tests were initiated with a static water levels and was performed at a fixed pumping rate. During the pumping test, water well measurements were electronically recovered via pressure transducer installed within the pumping wells to measure drawdown of the water level in the test wells in response to pumping. Immediately following the pumping test, water level recovery was monitoring in the test wells until static water levels were reached.

Groundwater pumped during the tests was discharged to a down-gradient location to ensure that artificial recharge did not occur.

Pumping test details are provided in Table 2-1.

Table 2-1: Pumping Test Program Details

Pumping Well	Well Depth (mbgs)	Water Found Depths (mbgs)	Pumping Rate (L/min)	Static Water Level (mbgs)
PW-1 (A409223)	7.6	6.1	30	3.42
PW-2 (A370019)	8.2	6.4	30	3.60

A total of two (2) groundwater samples were collected at 3-hour and 6-hour marks from the end of the discharge hose. The groundwater samples were submitted to ALS Environment (ALS) in Waterloo, Ontario for analysis of general water potability parameters (inorganics, general chemistry, nutrients, metals, and microbiological parameters).

3. Results and Discussions

3.1 Soil Stratigraphy and Hydrogeology

At the time of the test pit program, the Site had been cleared and graded in anticipation of construction activities. The soil stratigraphy observed at each test pit location consisted of:

 Coarse brown sand from the ground surface to the final termination depth of the test pits at approximately 3 mbgs.

Based on the MECP well records for the two installed test wells, the soil stratigraphy encountered during the advancements of these wells consisted of:

 Sand from the ground surface to final termination depths of the wells, ranging from 7.6 to 8. 2 mbgs. The sand transitioned from brown to grey at approximately 6.1 to 6.4 mbgs, indicating the presence of groundwater.

3.2 Percolation Rate Test and Hydraulic Conductivity Results

A summary of the results of the percolation rate testing completed at the Site are provided in **Table 3-1**.

Table 3-1 Summary of Percolation Rate Test Results

Measurements	Start Depth of Water (cm)	End Depth of Water (cm)	Start Time (min)	End Time (min)	Perc test result (min/cm)
1	28	1	0.0	22	1.2
2	26	0	0.0	18.5	1.4

The complete soil percolation test results are provided in **Appendix C**.

3.3 Pumping Test Results

The pumping test program results for PW-1 and PW-2 are summarized in Table 3-2.

Table 3-2 Pumping Test Program Results

Pumping Well	Test Date	Target Pumping Rate (L/min)	Pumping Duration (min)	Static Water Level (mbgs)	Available Drawdown (m)	Steady State Drawdown (m)	Steady State Percent Drawdown (%)	Time to 95% Recovery (min)
PW-1 (A409223)	2024- 07-23	30	360	3.42	4.18	2.3	55	< 1.5

Pumping Well	Test Date	Target Pumping Rate (L/min)	Pumping Duration (min)	Static Water Level (mbgs)	Available Drawdown (m)	Steady State Drawdown (m)	Steady State Percent Drawdown (%)	Time to 95% Recovery (min)
PW-2 (A370019)	2024- 07-24	30	300	3.60	4.6	2.0	43	< 1

Within PW-1, a pseudo-steady state drawdown was achieved after approximately 30 minutes of pumping. Minor variations in the drawdown were encountered until approximately minute 270 of pumping, when a pump failure resulted in the cessation of pumping. Following the pumping failure, water levels recovered to approximately the static water level within approximately 1.5 minutes. Upon repair and restarting of the pump, a similar static water level was reached within approximately 1 minute. At the cessation of all pumping activities, the well recovered to static within approximately 1.5 minutes.

Within PW-2, a pseudo-steady state drawdown was achieved after approximately 50 minutes of pumping. Minor variations in the drawdown were encountered until the cessation of pumping activities at minute 300. The well recovered to static within approximately 1 minute of the cessation of pumping activities.

As part of the Well Yield Testing completed by Water Mining Inc., PW-1 was pumped at a rate of 34 L/min (9 gallons/min) and PW-2 was pumped at a rate of 42 L/min (11 gallons/min), each for a period of 1-hour. A well production rate of 34 L/min and 42 L/min was noted by Water Mining Inc. for PW-1 and PW-2, respectively.

Based on the noted soil stratigraphy and pumping test results, both PW-1 and PW-2 are situated within a highly productive overburden sand aquifer and are capable of sustaining well production rates greater than 30 L/min.

The MECP document D-5-5 *Private Wells: Water Supply Assessment* notes that a minimum of 13.7 L/min well production rate is required for a four bedroom dwelling. PW-1 and PW-2 have demonstrated the capability of well production rates in excess of the required 13.7 L/min.

Based on the above information, there are no apparent issues related to well quantity or interference associated with the proposed severance.

3.4 Groundwater Quality

A total of two (2) groundwater samples were collected at 3-hour and approximately 6-hour marks from the end of the discharge hose from each well. The groundwater samples were submitted to ALS Environment (ALS) in Waterloo, Ontario for analysis of general water potability parameters (inorganics, general chemistry, nutrients, metals, and microbiological parameters).

- DW1-1: Collected from PW-1 at 3 hours;
- DW1-2: Collected from PW-2 prior to cessation of pumping;
- DW2-1: Collected from PW-2 at 3 hours; and,

DW2-2: Collected from PW2 prior to cessation of pumping.

Groundwater sampling results were compared to the standards and objectives specified in the Ontario Drinking Water Quality Standards (ODWQS) (MECP, 2006) and the maximum treatability limits included in the MECP Procedure D-5-5. Analytical summary tables for the collected groundwater samples are provided in **Appendix D** and laboratory certificates of analysis are provided in Appendix E.

Based on the laboratory analytical results, the following parameters exceeded the health-based Schedule 1 (Microbial) and/or Schedule 2 (Chemical) standards of the ODWQS:

- Total Coliforms: ODWQS of non-detectable.
 - DW1-2: 1 MPN/100 mL;
 - DW2-1: 21 MPN/100 mL; and,
 - DW2-2: 53 MPN/100 ml

Based on the laboratory analytical results, the following parameters exceeded the aesthetic objectives (AO) and/or operational guidelines (OG) within the ODWQS:

- Chloride: ODWQS of 250 mg/L as an Aesthetic Objective.
 - DW1-1: 440 mg/L;
 - DW1-2: 388 mg/L;
 - DW2-1: 378 mg/L; and,
 - DW2-2: 344 mg/L.
- Hardness: ODWQS of 80 100 mg/L as an Operational Guideline.
 - DW1-1: 287 mg/L;
 - DW1-2: 276 mg/L;
 - DW2-1: 211 mg/L; and,
 - DW2-2: 216 mg/L.
- Total Dissolved Solids: ODWQS of 500 mg/L as an Aesthetic Objective.
 - DW1-1: 960 mg/L;
 - DW1-2: 978 mg/L;
 - DW2-1: 945 mg/L; and,
 - DW2-2: 873 mg/L.
- Total Sodium: ODWQS of 200 mg/L as an Aesthetic Objective.
 - DW1-1: 260 mg/L;
 - DW1-2: 250 mg/L;
 - DW2-1: 289 mg/L; and,
 - DW2-2: 266 mg/L.

Discussions on the above-noted results are provided below:

- Total Coliforms: It is recommended that resampling of the wells for total coliforms is completed. If
 the resample results show detectable total coliform values, then the steps outlined within the
 MECP's information page on bacteria-contaminated wells (https://www.ontario.ca/page/what-do-if-your-well-contaminated-bacteria) should be followed. Note that the well is currently a test hole
 and not an active water supply well.
- Chloride: Higher than normal levels of chloride (>250 mg/L) in water would likely cause corrosion and shorted the life of plumbing and piping associated with the treatment system (AWWA, 2010). Chloride concentrations in groundwater ranged from 378 440 mg/L. The reported concentration of chloride in groundwater exceeded the objective level and treatability limit of 250 mg/L indicating the potential for corrosion. The most common water treatment systems for reducing the chloride content of drinking water are reverse osmosis, anion exchange, or distillation treatment systems.
- Hardness (as CaCO3): Hardness in groundwater samples varied from 211 287 mg/L. Reported concentrations of hardness exceeded the operational guideline value range of 80 to 100 mL. The degree of hardness of water may be classified in terms of its calcium carbonate concentration as follows: soft, 0 to <60 mg/L; medium-hard, 60 to <120 mg/L; hard, 120 to <180 mg/L; and very hard, 180 mg/L and above (AWWA, 2010). Groundwater samples indicate that the water is very hard. When the water with relatively high hardness is heated, excessive scaling of water pipes and values can result. A water softener treatment may be utilized to lower the level of hardness. It should be noted that a water softener using sodium-based brine could result in elevated levels of sodium in the water supply.</p>
- Sodium: Sodium was detected at concentrations varying from 250 289 mg/L and above the sodium notification limits and aesthetic objectives. Under the Safe Drinking Water Act, the Ontario Drinking Water Systems Regulation (170/03 as amended) requires that a report be made to the local Medical Officer(s) of Health if a sodium result exceeds 20 mg/L is a sample of drinking water. The MECP guideline D-5-5 requires that warning clauses should be addressed to people on sodium-restricted diets and should be registered on the property title. Also, if water softening is utilized to reduce hardness, a warning should be registered on the title with the recommendation that a separate tap, which bypasses the softener, be installed to supply unsoftened drinking water. Sodium in the groundwater supply can be reduced by employing water treatment systems such as reverse osmosis and ion exchange.
- Nitrate and Nitrite (as N): Nitrate was detected in groundwater at concentrations ranging from 1.31 2.24 mg/L, while nitrite was measured below the laboratory reportable detection limit (< 0.0050 mg/L). The maximum acceptable concentration of nitrates in drinking water is 10 mg/L as nitrogen. Nitrates are present in water (particularly groundwater) because of the decay of plan or animal material, the use of agricultural contamination, or geological formations containing soluble nitrogen compounds.

4. Evaluation of Subsurface Sewage

The two severed lots are anticipated to be serviced by new on-site septic systems.

The MECP Procedure D-5-4 provides an approach for evaluating the potential impact of on-site sewage system on the underlying water supply aquifer through a nitrate attenuation approach. For this approach, the following assumptions and results were utilized:

- It is inferred that the shallow groundwater direction is towards Deer Creek, located south of the
 Site and the planned septic systems will be located in an area outside of the 100-year flood.
- The highest nitrate concentration measured (2.24 mg/L) was utilized;
- The Site's post-development infiltration rate was estimated to be 276 mm/yr, based on the value for fine sand and urban lawns from Table 3.1 of the Ontario Ministry of the Environment, "Stormwater Management Planning and Design Manual" (2003);
- It was assumed that a total of 2,000 L/day/lot of sewage would be produced, based on a 4 bedroom dwelling as listed within Table 8.2.1.3.A, "Residential Occupancy" of the Ontario Building Code.
- The nitrate input is estimated as 2.9 x 10⁷ mg/year (2,000 L/day x 40 mg/L x 365 days/year).
- The area of each lot is approximately 1,962 m² based on the Plan of Survey.

Based on the above assumptions and results, the maximum nitrate concentrations are calculated using the following equation:

$$C_{Max,N} = C_{0,N} + \frac{I_N}{IR \times A + V_{SD}}$$

Where,

 $C_{Max,N} = Maximum Nitrate Concentration (mg/L)$

 $C_{0,N}$ = Initial Nitrate Concentration (mg/L) = 2.24 mg/L

 I_N = Nitrate Input (mg/year) = 2.9 x 10⁷ mg/year

IR = Infiltration Rate (m/year) = 0.276 m/year

 $A = Lot Area (m^2) = 1,962 m^2$

V_{SD} = Volume of Sewage Dilution = 1,000 L/day = 197 m³/year

Based on the above calculation, the maximum nitrate concentration in the aquifer was calculated to be 57.2 mg/L.

The maximum nitrate concentration was calculated to be greater than the maximum acceptable concentration of 10 mg/L of nitrates, and therefore a Class 4 sewage system (i.e. leaching bed system) is not supported for the Site without the inclusion of a treatment unit within the system as specified within the Ontario Building Code to reduce effluent concentrations of nitrates leaving the system.

5. Conclusions and Recommendations

Based on the preceding discussion and findings, Englobe offers the following conclusions and recommendations.

5.1 Conclusions

- Test pit investigations indicate that the soils at the Site generally consist of sands.
- Percolation rates at the Site were measured ranging from 1.2 to 1.4 min/cm, indicating relatively fast percolating soils;
- Well yield testing indicated that each installed pumping well is capable of sustaining well
 production rates greater than 30 L/min, which indicates a suitable available groundwater quantity
 for the proposed severance;
- Total coliforms were identified at each pump well location;
- The maximum nitrate concentration within the underlying aquifer was calculated to be 57.2 mg/L, which is greater than the acceptable concentration of 10 mg/L of nitrates, and therefore a Class 4 sewage system (i.e. leaching bed system) is not supported for the Site without the inclusion of a treatment unit within the system as specified within the Ontario Building Code to reduce effluent concentrations of nitrates leaving the system..

5.2 Recommendations

It is recommended that resampling of the wells for total coliforms is completed. If the resample results show detectable total coliform values, then the steps outlined within the MECP's information page on bacteria-contaminated wells (https://www.ontario.ca/page/what-do-if-your-well-contaminated-bacteria) should be followed. Note that the well is currently a test hole and not an active water supply well.

6. Closure

We trust the above letter meets your current needs. Should you have any further questions, please do not hesitate to contact the undersigned.

For Englobe Corp.

DRAFT DRAFT

Pegah Vatani, M.A.Sc.,Kevin Bailey, M.A.Sc., P. Eng.Environmental Professional - SWOTeam Lead - Environmental - SWO

Enclosures

Appendix A - Figures

Appendix B - MECP Well Records

Appendix C - Percolation Test Results

Appendix D - Laboratory Summary Tables

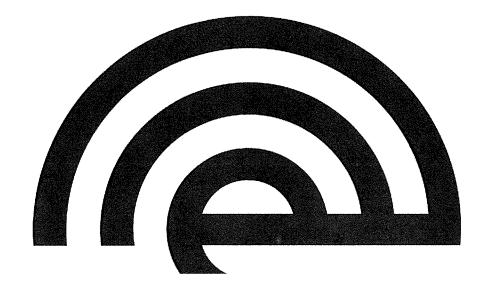
Appendix E - Laboratory Certificates of Analysis

Appendix F - Statement of Limitations

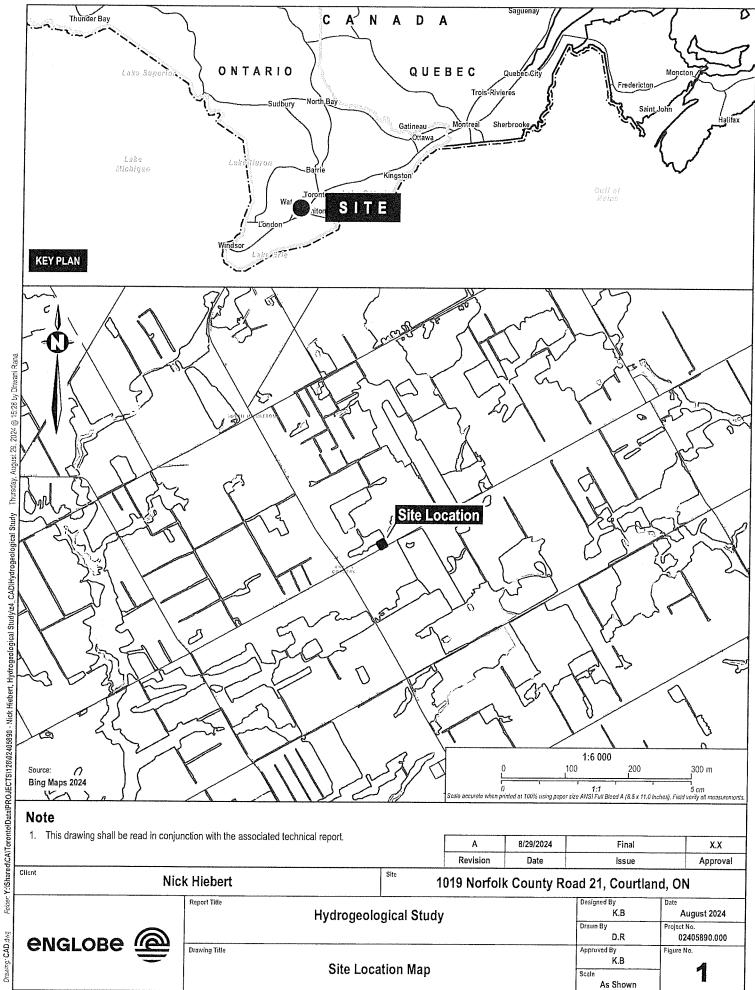
7. References

- American Water Works Association (AWWA). 2004. A guide for design and installation of steel pipes.
- Government of Ontario. 2017. Section 8 Building Code, Ontario Regulation 332/12 with amendments up to Ontario Regulation 191/14, under the Building Code Act, 1992.
- Ministry of Environment Conservation and Parks. 2021. D-5-4 Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment, 2016.
- Ministry of Environment Conservation and Parks. 2021. D-5-5 Private Wells: Water Supply Assessment, 2016.
- Ontario Ministry of the Environment and Climate Change, as amended January 2014. Ontario Resources Act R.R.O. 1990, Regulation 903 Wells
- Ontario Ministry of the Environment (MOE), 2003. Stormwater Planning and Design Manual. March 2003.

Appendix A Figures



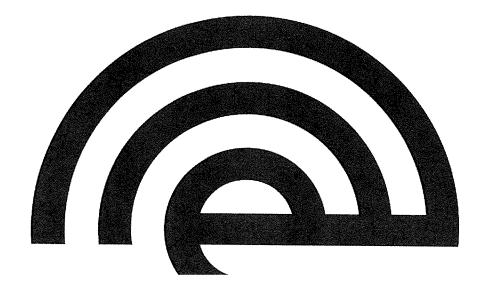
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Appendix B MECP Well Records



Appendix C Percolation Test Results



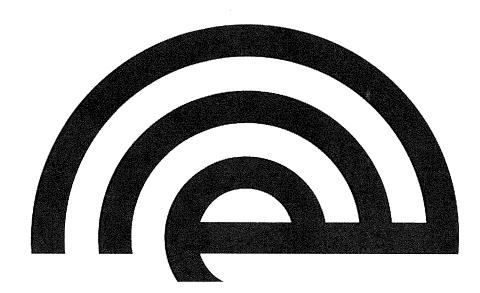
	Analyst: Thomas Langille	Weather: 24 degrees Cel. And Sunny	Date: July 17 2024	Location: Parcel 1 Lot 1
Borehole radius (cm): 7,62		And Sunny		Location: Parcel 1 Lot 13, Concession 14, Township of North Walsingham, Ontario

		!	•													
Date:	Date: July 17 2024														And the second s	
Weather:	Weather: 24 degrees Cel. And Sunny	nd Sunny														
Analyst:	Analyst: Thomas Langille								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							
В	Borehole radius (cm): 7.62	7.62														
Soil class:	Soil class: Weak capillarity	70.00	Print van ar dam.													
Measurement	Start depth of water (cm)	End depth of water (cm)	Start time (*decimal	End time	time	in bead	Perc test result	Perc test	mean head	Н/а	2H^2	2H/*	0			\$
1	27.94	24.13	0 7	10	(1000)	(cm)	(min/cm)	(hr/mm)	(m)	(unitless)	(m2)	(unitless)	(un	Ca2 (m2)	Denom	(mm/hr)
2	21.34	10.81	0 0	1.0	0.50	0.8	0.1	0.0002	0.260	3.417	0.136	0.014	1.3085	0.00760	3.44764E-05	220.4
u	100	, i	2.0	2.5	C.5	T. C.	0.3	0.0005	0.206	2.700	0.085	0.011	1.1193	0.00650	5.58802E-05	116.3
٠ (10.0	1/./8	3.0	3.5	0.5	1.0	0.5	0.0008	0.183	2,400	0.067	0.010	1.0336	0.00600	6.78657E-05	88.4
1	1/.2/	16.51	4.0	4.5	0.5	0,83	0.7	0.0011	0.169	2.217	0.057	0.009	0.9789	0.00568	7 908085-05	71.0
U	15.75	15.24	5.0	5.5	05	0.5	1.0	0.0016	0.155	2.033	0.048	0.009	0 9225	0 00536	0 000101701	, 1.0
6	14.99	14.9	6.0	6.5	0.5	0.1	5.6	0.0093	0.149	1 961	0 042	9000	0 0007	0.000	0.00010101	6.70
7	14.73	13.97	7.0	7.5	0.5	8.0	0.7	0.0011	0.144	1 883	0.041	0.000	0.0747	0.000.22	0.000538865	9./
8	13.72	12.7	8.0	8.5	0.5	1.0	0.5	0.0008	0 132	1 734	3500	7 7 7	0.0747	0.00.00	3.94668E-05	85.4
9	12.45	12.19	9.0	9.5	0.5	0.6	1.9	0.0032	0 123	1 617		0 0	0.04.00	0.00.7	3.842616-05	124.8
10	11.68	11.43	10.0	10.5	0.5	9	2.0	0 0023	0116	1 510	0.000	0.00/	0./862	0.00457	0.000133865	34.1
11	11.18	10.92	11.0	11 5	2	2	1 1	0.0000	O.T.TO	915.1	0.02/	0.006	0.7515	0.00436	0.000124955	34.9
12	10.41	10.16	12.0	12.5	o c	3 6	3	0.0032	0.111	1.450	0.024	0.006	0.7281	0.00423	0.000111497	37.9
13	9.91	9,4	13.0	13 5	o s	on i	5 6	0.0033	0.103	1.350	0.021	0.006	0.6920	0.00402	0.00010296	39.0
14	9.14	8.89	140	220	0 (9 5	1.0	9100.0	7,60.0	1.267	0.019	0.005	0.6615	0.00384	4.55045E-05	84.4
15	8.64	8 52	150	14.5	0.5	C.	2.0	0.0033	0.090	1.183	0.016	0.005	0.6299	0.00366	8.30656E-05	44.0
16	8.38	8 13	15.0	15.5	0.5	0.3	4.5	0.0076	0.086	1.127	0.015	0.005	0.6082	0.00353	0.000174555	20.2
17	7.87	7.62	17.0	10.5	0.5	0.3	2.0	0.0033	0.083	1.083	0.014	0.005	0.5913	0.00343	7.21614E-05	47.6
18	7.37	7.11	180	105	3 0.5	0.5	2.0	0.0033	0.077	1.016	0.012	0.004	0.5648	0.00328	6.52633E-05	50.2
19	7 11	500	100	10.3	G.S	0.3	1.9	0.0032	0.072	0.950	0.010	0.004	0.5379	0.00312	5.65035E-05	55.3
20	6.35	5.00	30.0	19.5	0.5	0.3	2.0	0.0033	0.070	0.917	0.010	0.004	0.5241	0.00304	5.56065E-05	54.7
21	5.08	4 00	20.0	20.5	0.5	0.6	0.9	0.0015	0.061	0.797	0.007	0.003	0.4736	0.00275	2.04638E-05	134.4
23	4 06	1 27	23.0	2.12	0.5	0.3	2.0	0.0033	0.050	0.650	0.005	0.003	0.4081	0.00237	3.34429E-05	70.9
	1.00	1.2.7	0.27	22.5	0.5	60	0.2	0.0003	0.027	0.350	0.001	0.001	2502	20112	22.	

Location:	Location: Parcel 2 Lot 13, Concession 14, Township of North Walsingham, Ontario
Date:	Date: July 17 2024
Weather:	Weather: 24 degrees Cel. And Sunny
Analyst:	Analyst: Thomas Langille
co	Borehole radius (cm): 7.62
	G. 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1

		7.04														
Soil class: W	Soil class: Weak capillarity															
St	art depth of water	Start depth of water End depth of water Start time (*decimal	Start time (*decimal	End time	in in	in bead	Perc test result	Derre tect	mean head		ראוור	*/*	,			
Measurement	(cm)	(cm)	min)	(*decimal min)	(min)		(min/cm)	(hr/mm)	(m)	(unitless)	/ (cm)	(imitless) (imitless)	(unitless)	(F)		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
1-3	26	22.75	0.5	1.0	0.50	ω ω	0.2	0.0003	0.244			0.014	1.2531	0.00728	3 58067F-05	203.2
2	21	19.5	2.0	2.5	0.5	LA CO	0.3	0.0006	0.203	2.657	0.082	0.011	1.1074	0.00643	5.53848E-05	1161
ω	16.75	16	3.0	3.5	0.5	0.8	0.7	0.0011	0.164		0.054	0.009	0 9583	0.00556	7 587745-05	72 2
4	14.8	13.9	4.0	4.5	0.5	0.9	0.6	0.0009	0 144		001	000	00747			
5	13	125	7.0	n n	1	1			0.5	1	0.04	0.000	0.0/4/	0.00008	5.021815-05	101.1
ח	110	1	0.0	3.5	0.5	0.5	1.0	0.0017	0.128	1.673	0.033	0.007	0.8054	0.00468	7.3787E-05	63.4
1 0	11,0	11	6.0	6.5	0.5	0.6	0.8	0.0014	0.113	1.483	0.026	0.006	0.7397	0.00430	5.01541E-05	85.6
,	2.01	9.8	7.0	7.5	0.5	0.7	0.7	0.0012	0.102	1.332	0.021	0.006	0.6855	0.00398	3.59806E-05	110.6
000	9.8	9.5	8.0	8.5	0.5	0.3	1.7	0.0028	0.097	1.266	0.019	0.005	0.6613	0.00384	7.72923E-05	49.7
9	9	8.6	9.0	9.5	0.5	0.4	1.3	0.0021	0.088	1.155	0.015	0.005	0.6191	0.00359	4.99406E-05	72.0
TO	α	7.4	10.0	10.5	0.5	0.6	0.8	0.0014	0.077	1.010	0.012	0.004	0.5624	0.00327	2.69462E-05	121.2
111	7.2	6.9	11.0	11.5	0.5	0,5	1.7	0.0028	0.071	0.925	0.010	0.004	0.5277	0.00306	4.70028E-05	65.2
12	6.25	6	12.0	12.5	0.5	0.3	2.0	0.0033	0.061	0.804	0.008	0.003	0.4764	0.00277	4.55746E-05	60.7
1. 13	5.75	5.28	13.0	13.5	0.5	0.5	1.1	0.0018	0.055	0.724	0.006	0.003	0.4414	0.00256	2.07619E-05	123,4
17	. 0	4.46	14.0	14.5	0.5	0.5	0.9	0.0015	0.047	0.621	0.004	0.003	0.3944	0.00229	1.44949E-05	158.0
15	1 1	3.44	15.0	15.5	5.0	0.6	0.9	0.0015	0.037	0.488	0.003	0.002	0.3305	0.00192	1.00501E-05	191.0
17	2.5	1.95	16.0	16.5	0.5	0.6	0.9	0.0015	0.022	0.292	0.001	0.001	0.2258	0.00131	5.35975E-06	244.6
40	21.5	1.1	17.0	17.5	0.5	0.4	1.3	0.0021	0.013	0.171	0.000	0.001	0.1512	0.00088	4.03782E-06	217.4
70	0.5	0.2	18.0	18.5	0.5	0.3	1.7	0.0028	0.004	0.046	0.000	0.000	0.0565	0.00033	1.51871E-06	215.8
														ı		

Appendix D Laboratory Summary Tables



Guid	elines
Ontario Drinking Water Regulation (JAN, 2020)	Ontario Drinking Water Regulation (JAN, 2020)
Aesthetic Objective/Operational Guideline (2006)	ile 1 (Microbiological) and 2 (Chemical) Standards (JAN
ONDWS	DNDWS
N12(t	

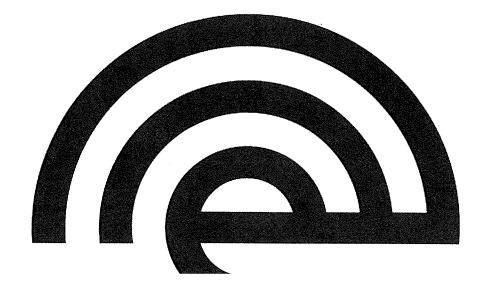
	- 	.,	Pass Limits	Pass Limits				
Sample	2200 00 00 00 00 00 00 00 00 00 00 00 00	AND THE CONTRACT OF	Lower Upper	Lower Upper	W72421115-001 (1)	WT2421115-002 (1)	WT2421115-003 (1)	WT2421115-004
Sample Type Name				T	Water/Water	Water/Water	Water/Water	Water/Water
Name					DW1-1	DW1-2	DW2-1	DW2-2
Sampling Date					23-07-2024	23-07-2024	24-07-2024	24-07-2024
ALS ID					WT2421115-001	WT2421115-002	WT2421115-003	WT2421115-004
Test	10.00	7						
nest Anions and Nutrients	Unit	LOR		1				
Ammonia, total (as N)	mg/L	0.005	T		0.0066	0.0171		ACRESCO GRANDA
Gromide	mg/L	0.5			<0.50	<0.50	0.0054 <0.50	<0.0050
Chloride	mg/L		<=250		440	388	378	<0.50 344
Fluoride	mg/L	0.1		<=1.5	<0.100	<0.100	<0.100	<0.100
Nitrate (as N)	rng/L			<=10	2.24	2.05	1.37	1.31
Nitrate + Nitrite (as N)	mg/L			<=10	2.24	2.05	1.37	1.31
Nitrite (as N) Phosphate, ortho-, dissolved (as P)	mg/L	0.05		<=1	<0.050	<0.050	<0.050	<0.050
Sulfate (as 504)	mg/L mg/L	0.001	<=500		<0.0010	0.0049	<0.0010	0.0010
on Balance	Impr	entropies de la constante de l	1 <=500	L	25.8	22.1	22.8	22.6
Anian sum	mea/L			T .	17.8	16.3	16.8	15.8
Cation sum (total)	meq/L				17.1	15.4	16.8	16.0
on balance (APHA)	%				-2.00	0.306	0.0	0.629
on balance (cations/anions)	%				96.1	101	100	101
Vietals			400000000000000000000000000000000000000					
odium adsorption ratio [SAR]	ALL PRODUCTION CO.		1		6.68	6.55	8.66	7.86
Microbiological Tests oliforms, Escherichia coli (E. coli)	MPN/100ml	avonesiisisiilii			100000000000000000000000000000000000000			
oliforms, total	MPN/100mi	1		<1	<1	<1	<1	<1
Physical Tests	, H/ 100IIII		_	. <1	<1	1	1 21	55
Alkalinity, bicarbonate (as HCO3)	mg/L				284	293	343	340
Alkalinity, carbonate (as CO3)	mg/L	1			<1.0	<1.0	<1.0	S40 S1.0
Mkalinity, hydroxide (as OH)	mg/L	1			<1.0	<1.0	<1.0	<1.0
Nkalinity, total (as CaCO3)	mg/L		>=30 <=500		233	240	281	278
olour, apparent	cu	2	<=5		3.7	<2.0	<2.0	<2,0
Conductivity	μ5/cm				1780	1760	1720	1610
lardness (as CaCO3), from total Ca/Mg angelier Index (@ 20°C)	mg/L		>=80 <=100		287	776	211	216
angelier index (@ 4°C)		+			0.881	0.852	0.830	0.844
H	pH units		>=6.5 <=8.5	· · · · · · · · · · · · · · · · · · ·	0.638	0.608	0.586	0.600
H, saturation (@ 20°C)	pH units	1	7-6.3	***************************************	8.11 7.23	8.09 7.24	8.11	8.11
H, saturation (@ 4°C)	pH units	1-			7.23	7.48	7.28 7.52	7.27 7.51
olids, total dissolved (TDS)	mg/L	1	<=500		960	978	945	873
olids, total dissolved [TDS], calculated	mg/L	1			1160	1140	1120	1050
olids, total suspended [TSS]	mg/L	3			<3.0	<3.0	<3.0	<3.0
urbidity	ทาย		<=5		0.19	0.26	0.17	0.10
otal Metals						C. (C. (C. (C. (C. (C. (C. (C. (C. (C. (
Jurninum, total ntimony, total	mg/L		<=0.1		0.0177	0.0145	0.0086	0.0094
rsenic, total	mg/L	0.0001		<=0.006	<0.00010	<0.00010	<0.00010	<0.00010
arium, total	mg/L mg/L	+		<=0.01	0.00012	0.00013	0.00014	0.00013
eryllium, total	mg/L	0.00002		<=1	0.0452 <0.000070	0.0451	0.0372	0.0372
ismuth, total	mg/L	0.00005			<0.000050	<0.000020 <0.000050	<0.000020 <0.000050	<0.000020
oron, total	mg/L	10.00005		<=5	0.020	0.020	0.024	0.025
admium, total	mg/L	0.000005		<=0.005	0.0000055	<0.0000050	<0.0000050	<0.0000050
slcium, total	mg/L				90.4	86.3	66.3	67.6
esium, total	mg/L	0.00001			<0.000010	<0.00010	<0.000010	<0.000010
romium, total	mg/L	1		<×0.05	0.00119	0.00120	0.00175	0.00155
obalt, total	mg/L	0.0001			<0.00010	<0.00010	<0.00010	<0.00010
opper, total	mg/L	+	<=1		0.00056	0.00054	0.00073	0.00072
on, total ad, total	mg/L mg/L	0.00005	<=0.3		0.073	0.078	0.040	0.030
hium, total	mg/L	0.00005		<=0.01	<0.000050	<0.000050	<0.000050	<0.000050
agnesium, total	mg/L	0.001			0.0011 14.8	<0.0010 14.6	<0.0010	<0.0010
anganese, total	mg/L	t	<=0.05		0.00069	0.00083	11.0 0.00143	0.00100
olybdenum, Iotal	mg/L	t			0.000051	0.000055	0.00143	0.000100
ckei, total	mg/L	0.0005			<0.00050	<0.00050	<0.000118	<0.00050
osphorus, total	mg/L	0.05			<0.050	<0.050	<0.050	<0.050
tassium, total	mg/L				1.02	1.01	1.33	2.25
bidium, total	mg/L				0.00032	0.00031	0.00026	0.00027
lenium, total	mg/L		ļ	<=0.05	0.000927	0.000862	0.00105	0.000589
con (as SiO2), total con, total	mg/L				11.4	11.2	11.4	11.5
er, total	mg/L	\vdash			5.33	5.25	5.35	5.38
dium, total	mg/L mg/L	 	<=200		0.000027	0.000023	0.000017	0.000011
ontium, total	mg/L	_	K=400		260 0.262	250 0.257	289 0.209	266
fur, total	mg/L				9.04	9,41	0.209 8.74	0.212 8.79
lurium, total	mg/L	0.0002			<0.00020	<0.00020	<0.00020	<0.000zb
allium, total	mg/L	0.00001			<0.00020	<0.00000	<0.00020	<0.00020
orium, total	mg/L	0.0001			<0.00010	<0.00010	<0.00010	<0.00010
, total	mg/L	0.0001			<0.00010	<0.00010	<0.00010	<0.00010
anium, tota!	mg/L	0.0003			<0.00030	<0.00030	<0.00030	<0.00030
igsten, total	mg/L				0.00055	0.00048	0.00082	0.00061
nium, total	mg/L			<=0.02	0.000159	0.000161	0.000184	0.000179
nadium, total	mg/L	0.0005		77070	<0.00050	<0.00050	<0.00050	<0.00050
10010111, 10107								
c, total	mg/L	0.003	<=5		<0.0030	<0.0030	<0.0030 <0.00020	<0.0030

Evaluations
Pending Pending
No Spec No Spec
Within Limit
Within Warning Limit
Exceeds Limit
Result LOR > Limit
Result LOR > Limit
Result LOR < Limit
Result LOR < Limit

Disclaimer

Application of godelines in provided "as a" without wireway of any look, other expressed or implied, including, but not limited as faces for a particular project, or non-influencement. All assumes are proposability for error or emissions in the information. Godelines are non-adjusted for limited in the faces, and the project of the information of the project or expressions of the sample (the most conservable values are soled). Measurement uncertainty is not applied to lest results prior to comparison with historical soletion values.

Appendix E Laboratory Certificate of Analysis



ALS Canada Ltd.



CERTIFICATE OF ANALYSIS

Contact Project C-O-C number Client Sampler Address Work Order Telephone : 23-1097696 : 02405890 : 353 Bridge Street East : Kevin Bailey : Englobe Corp. : WT2421115 : Ross I Kitchener ON Canada N2K 2Y5 Date Analysis Commenced Issue Date Date Samples Received Address Account Manager Laboratory Telephone : 1 of 5 : 24-Jul-2024 17:40 : Gayle Braun : ALS Environmental - Waterloo : +1 519 886 6910 : 60 Northland Road, Unit 1 : 01-Aug-2024 18:59 Waterloo ON Canada N2V 2B8

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

This Certificate of Analysis contains the following information:

General Comments

Quote number

: KITCHENER/LONDON GW SOA

No. of samples received No. of samples analysed

Analytical Results

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

Signatories

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

4	i callon	Laboratory Department
Amanda Ganouri-Lumsden	Department Manager - Microbiology and Prep	Microbiology, Waterloo, Ontario
Great Forecast	Manager - Inorganics	Inorganics, Waterloo, Ontario
GIEG FUNGERY	Manager - Inorganics	Metals, Waterloo, Ontario
. On Fisher	Laboratory Analyst	Inorganics, Edmonton, Alberta
Nik Dorkio	Production Manager, Environmental	Inorganics, Waterloo, Ontario
Bliby Stippers	Senior Analyst	Inorganics, Waterloo, Ontario
Zeba Patel	Analyst Analyst	Microbiology, Waterloo, Ontario Microbiology, Waterloo, Ontario

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 2 of 5

 Work Order
 WT2421115

 Client
 Englobe Corp.

 Project
 02405890



General Comments

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

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

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference. Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances LOR: Limit of Reporting (detection limit).

Unit	Description
1	no units
%	percent
µS/cm	microsiemens per centimetre
CFU/100mL	colony forming units per hundred millilitres
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
MPN/100mL	most probable number per hundred millilitres
NTU	nephelometric turbidity units
pH units	pH units
	THE STREET OF THE PROPERTY OF

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION

Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical
	Conductivity.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).

3 of 5 WT2421115 Englobe Corp. 02405890

Analytical Results

Page Work Order Client Project

Sub-Matrix: Water (Matrix: Water)			Ω	Client sample ID	DW1-1	DW1-2	DW2-1	DW2-2	
			Client same	dina data / tima	20 1.1 2004 42.40				
Analyte		Method/I sh	100		20-0di-2024 10.10	23-301-2024 16:10	24-Jul-2024 11:25	24-Jul-2024 14:25	
	CAS Number II	<i>метоо</i> лгар	רטג	Unit	WT2421115-001	WT2421115-002	WT2421115-003	WT2421115-004	
				Occasion of the contract of th	Result	Result	Result	Result	-
Alkalinity, bicarbonate (as HCO3)	27 20 2 2000	ì					_		
Alkalinih, carbonato (co con	/ 1-32-3 C 20/VV	•		mg/L	284	293	343	340	
All-liny, carbonate (as CO3)	3812-32-6 E290/WT	¥1	1.0	mg/L	<1.0	<1.0	<u>^1</u> .0	^1	
Aikaiinity, nydroxide (as OH)	14280-30-9 E290/WT	T	1.0	mg/L	<1.0	^1	\ \ \ \		in order to
Alkalinity, total (as CaCO3)	E290/WT	\$	1.0	ma/l	233	0,00	2 -	1.0	-
Colour, apparent	E330/WT	₹	v 0	_ i	. 202	240	281	278	-
Conductivity	E100AA/T	AT	o (2 6	3.7	<2.0	<2.0	<2.0	
Hardness (as CaCO3), from total Ca/Mo				µs/cm	1780	1760	1720	1610	
Ha		700	0.50	mg/L	287	276	211	216	1
Solids, total dissolved ITDS1	E 100/VV	; ≧	0.10	pH units	8.11	8.09	8.11	8.11	
Solids total dissolved FTDS policity		. V	10	mg/L	960 pres	978 ^{blus}	945 0108	873 sara	-
Solide total engaged (Test) calculated	EC103A/WI	SAVVVI	1.0	mg/L	1160	1140	1120	1050	1
Turbidit.	E160/WT	NT -	3.0	mg/L	<3.0	<3.0	<3.0	^3 O	
l annelier index (@ acce)	E121MT	NT	0.10	NTO	0.19	0.26	0.17	0.10	
l angelier index (@ 4°C)	EC105AWT	AWT	0.010	1	0.881	0.852	0.830	0.844	
pu saturation (@ 4 c)	EC105A/WT	SA/WT	0.010	ı	0.638	0.608	0.586	0 800	
ph, saturation (@ 20°C)	EC105A/WT	AMT	0.010	pH units	7.23	7.24	7 28	7 27	
pn, saturation (@ 4°C)	EC105AWI	AWT	0.010	pH units	7.47	7.48	7 52	7	!
Anions and Nutrients								/.31	
Ammonia, total (as N)	7664-41-7 E298/EO	<u>:</u> O	0.0050	mg/L	0.0066	0 0171	0 005		
Bromide	24959-67-9 E235.Br/WT	3r/WT	0.10	mg/L	<0.50 pubs	<0.50 ptps	SOL 20 003	70.0000	-
Chloride	16887-00-6 E235.CI/WT	DIAWT	0.50	mg/L	ومام 440	388 ptps	378 800	70.00	ļ
Tiuoride	16984-48-8 E235.F/WT	TW	0.020	mg/L	<0.100 pus	<0 100 pps	<0.100 ptps	70 400 pps	-
Nitrate (as N)	14797-55-8 E235.NO3/WT	103/WT	0.020	mg/L	2.24 DLDS	2.05 0.05	1 37 000	1 21 DDS	
Nitrate + Nitrite (as N)	EC235.N+N/W	.N+N/W	0.0032	mg/L	2.24	2.05	1.37	Δ ω	
Nitrite (as N)	T 14797-65-0 E235.NO2/WT	IO2/WT	0 010	3	o Dibos	2	!	:	
Phosphate, ortho-, dissolved (as P)	14065 44 0 E378 II	TAAT	2	119/	70,000	<0.050	<0.050	<0.050 DLDS	-
Sulfate (as SOA)	14265-44-2 E3/8-U/W	J/WI	0,0010	mg/L	<0.0010	0.0049	<0.0010	0.0010	
Common (no OCT)	14808-79-8 E235.SO4/WT	O4/WT	0.30	mg/L	25.8 DLDS	22.1 pubs	22.8 ماناه	ومادة 22.6	
Coliforms, Escherichia coli F. coli								_	
Coliforms, total	E012 TC 0/T		۰ ــ	CFU/100mL	N R	N.R.	NR	NR.	1
				CFU/100mL	NR R	NR	NR.	NR.	

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Page Work Order Client

Project



Analytical Results

Sub-Matrix: Water		Cli	Client sample ID [DW(4 4	750.0			
(Matrix: Water)		Ç	Circ deripic ip		7-1.AA	DW2-1	DW2-2	l
		Client sampl	Client sampling date / time	23-Jul-2024 13:10	23-Jul-2024 16:10	24-Jul-2024 11:25	24111-2024 14:25	
Analyte	CAS Number Method/Lab	LOR	Unit	WT2421115-001	WT2421115-002	WT2421115-003	WT2421115-004	
Wilsonia Paris				Result	Result	Result	Result	-
Colifornia total							•	
Comornis, total	E010/WT	4	MPN/100mL	Not Detected		21	53	
collorms, total background	E012.BG.TC/		CFU/100mL	NR	N _R	NR	N.R.	-
Coliforms, Escherichia coli [E. coli]	E010/WT		MPN/100mL	Not Detected	Not Detected	Not Detected		
Wetals							I NOT Defected	1
Sodium adsorption ratio [SAR]	EC102/WT	0.10	•	6 68	9 77	ю П	7 86	
Ion Balance								-
Anion sum	EC101AWT	0.10	meq/L	17.8	16.3	16.8	15.8	
Cation sum (total)	EC101A/WT	0.10	meq/L	17.1	16.4	16.8	16.0	· · · · · · · · · · · · · · · · · · ·
Ion balance (APHA)	EC101A/WT	0.010	%	-2.00	0.306	0.0	0.629	•
ren senero (cunonstantons)	EC101AVVI	0.01	%	96.1	101	100	101	-
lotal weats Aluminum, total	7420 00 E E42000T	0 0000						
Antimony, total	7440-36-0 F42000T	0 00010	3 %	00000	0.0143	0.0086	0.0094	1
Arsenic, total	7440-38-2 E420/VI	0.00010	mg/r	0.00010	\$0.00010	<0.00010	<0.00010	-
Barium, total	7440-39-3 = 420/\/\tau	0.00010	g// c	0.00012	0.00013	0.00014	0.00013	*****
Beryllium, total	7440-41-7 F4200VT	0.00000	ווק/ר	0.0452	0.0451	0.0372	0.0372	
Bismuth, total	7440-69-9 [E420/WT	0.000050	g/r	10.000020	<0.000020	<0.000020	<0.000020	1
Boron, total	7440-42-8 E420/WT	0.010	m (4)	0.0000	0.0000	<0.000050	<0.000050	1
Cadmium, total	7440-43-9 E420/WT	0.0000050	ma/l	0 000055	0.020	0.024	0.025	-
Calcium, total	7440-70-2 E420/WT	0.050	ma/L	90 4	86 3	66.3	~0.0000000	
Cesium, total	7440-46-2 E420/WT	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, total	7440-47-3 E420/WT	0.00050	mg/L	0.00119	0.00120	0.00175	0.00155	
Cobalt, total	7440-48-4 E420/WT	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	
Copper, total	7440-50-8 E420/WT	0.00050	mg/L	0.00056	0.00054	0.00073	0.00072	
iron, total	7439-89-6 E420/WT	0.010	mg/L	0.073	0.078	0.040	0.030	
Lead, total	7439-92-1 E420/WT	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	
Lithium, total	7439-93-2 E420/WT	0.0010	mg/L	0.0011	<0.0010	<0.0010	<0.0010	
wagnesium, total	7439-95-4 E420/WT	0.0050	mg/L	14.8	14.6	11.0	11.6	1
wanganese, total	7439-96-5 E420/WT	0.00010	mg/L	0.00069	0.00083	0.00143	0.00100	
יייטיא אמפווטווי, נטנמו	7439-98-7 E420/WT	0.000050	mg/L	0.000051	0.000055	0.000118	0.000121	

Page : 5 of 5
Work Order : WT2421115
Client : Englobe Corp.
Project : 02405890

ALS

Analytical Results

Sub-Matrix: Water

Out-Iniation weater		Clien	Client sample ID	DW1-1	DW1-2	DW2-1	DW2-2	
(Matrix: Water)								[] { }
		Client sampling date / time	g date / time	23-Jul-2024 13:10	23-Jul-2024 16:10	24-Jul-2024 11:25	24-Jul-2024 14-25	
Analyte	CAS Number Method/Lab	LOR	Unit	WT2421115-001	WT2421115-002	WT2421115-003	WT2421115-004	4 5 7 1 1 2 1 2
				Result	Result	Result	Result	M-4
Nickel fotals								
Nickel, Lotal	7440-02-0 E420/WT	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	
Pnospnorus, total	7723-14-0 E420/WT	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	
Potassium, total	7440-09-7 E420/WT	0.050	mg/L	1.02	1.01	1.33	2 25	
Rubidium, total	7440-17-7 E420NVT	0.00020	mg/L	0,00032	0.00031	0.00026	0.00027	1
Seieilium, total	7782-49-2 E420WT	0.000050	mg/L	0.000927	0.000862	0.00105	0.000589	Mentaling
Silicoli, total	7440-21-3 E420/WT	0.10	mg/L	5.33	5.25	5.35	5.38	1
Silver, total	7440-22-4 E420WT	0.000010	mg/L	0.000027	0.000023	0.000017	0.000011	
Strong total	7440-23-5 E420/V/T	0.050	mg/L	260 ^{DIHC}	250 DLHC	289 ^{DUHC}	266 outc	
Sulfur total	7440-24-6 E420/WT	0.00020	mg/L	0.262	0.257	0.209	0.212	1
Tolling that	7704-34-9 E420/WT	0.50	mg/L	9.04	9.41	8.74	8.79	1
The Hillians A-4-1	13494-80-9 E420/WT	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	!
The district of the last of th	7440-28-0 E420WT	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	And the same of th
Tip Actal	7440-29-1 E420/WT	0.00010	mg/L	<0.00010	<0.00010	<0,00010	<0,00010	-
Titalian tabl	7440-31-5 E420/V/T	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	
Timester total	7440-32-6 E420/WT	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	
i uigaeii, total	7440-33-7 E420/WT	0.00010	mg/L	0.00055	0.00048	0.00082	0.00061	
Variable, total	7440-61-1 E420WT	0.000010	mg/L	0.000159	0.000161	0.000184	0.000179	1
valiacium, total	7440-62-2 E420/WT	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, total	7440-66-6 E420/WT	0.0030	mg/L	<0.0030	<0.0030	<0.0030	<0 0030	
zirconium, total	7440-67-7 E420/WT	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	
Silicon (as SIO2), total	7631-86-9 EC420.SiO2/	0.25	mg/L	11.4	11.2	11.4	11.5	
	VV							

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

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

ALS Canada Ltd.



QUALITY CONTROL INTERPRETIVE REPORT

No. of samples analysed	No. of samples received	Quote number	Site	Sampler	C-O-C number	PO	Project	lelephone		Address)rder
.4	.4	:KITCHENER/LONDON GW SOA		:Ross I	:23-1097696		:02405890		Kitchener ON Canada N2K 2Y5	∵353 Bridge Street East	:Kevin Bailey	: Englobe Corp.	WT2421115
					Tale Dale	Jeens Dato	Date Samples Received	Telephone		Address	Account Manager	Laboratory	Page
					: 01-Aug-2024 18:59	24-Jul-2024 17:40	: +1 519 886 6910	: 1 510 000 0010	Waterlee Optoble Const.	: 60 Northland Road Linit 4	: Cayle Brain	ALS Environmental Mataria	: 1 of 18

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

Key

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

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

DQO: Data Quality Objective.

LOR: Limit of Reporting (detection limit).

RPD: Relative Percent Difference.

Workorder Comments

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

Summary of Outliers

Outliers: Quality Control Samples

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

Outliers: Reference Material (RM) Samples

No Reference Material (RM) Sample outliers occur.

Outliers: Analysis Holding Time Compliance (Breaches) • No Analysis Holding Time Outliers exist. Outliers: Frequency of Quality Control Samples

Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Page : Work Order : Project Client 3 of 18 WT2421115 Englobe Corp. 02405890



Outliers: Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: Water Analyte Group

resuit Qualifiers			Anions and Nutrients	Method Blank (MB) Values	Analyte Group
			QC-1564710-001		Laboratory sample ID
		7			
	dissolved (ds F)	dissolved (co. b)			Analyte
		14265-44-2		O TO TROTTED CO	CAS Nimber
		E378-U		Mediod	Mothod
	mg/L	0.0016 B		Kesuit	
		0.001 mg/L		Limits	
	permitted value	Blank result exceeds		Comment	

	ū	ס 	Qualifier
blank level are considered reliable	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times		Description



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 Work Order
 WT2421115

 Client
 Englobe Corp.

 Project
 02405890

Analysis Holding Time Compliance

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

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

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

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

Matrix: Water

Analide Group - Analidical Hadrad					Eval	uation: x = 1	Evaluation: * = Holding time exceedance; < = Within Holding Time	edance;	/ = Within	Holding Time
Container / Client Cample ID(x)	Method	Sampling Date	Ext	raction / P	traction / Preparation			Analysis	sis	
Commission Sample (D(s)			Preparation	Holdin	Holding Times	Eval	Analysis Date	Holdin	Holding Times	Eval
Aprices and Mulicipal Country to the Country of the			Date	Rec	Actual			Rec	Actual	
Amber glass total (sulfuric acid) (ON MECE)										
DW2-1	E298	24-Jul-2024	01-Aug-2024	28 days	8 days	<	01-Aug-2024	28 days	8 days	<
Ambor class (culture can be seen as a second can be se										
DW2-2	E298	24-Jul-2024	01-Aug-2024	28 days	8 days	<	01-Aug-2024	28 days	8 days	<
Anions and Nutrients: Ammonia by Fluorescence										
DW1-1	E298	23-Jul-2024	01-Aug-2024	28 days	9 days	<	01-Aug-2024	28 days	9 days	\
Amber class total (sufficie acid) fON MECON										
DW1-2	E298	23-Jul-2024	01-Aug-2024	28	9 days	٠	01-Aug-2024	28 days	9 days	٠,
Anions and Nutrients : Bromide in Water by IC										
HDPE [ON MECP] DW2-1	E235.Br	24-Jul-2024	26-Jul-2024	28	2 days	٠	29-Jul-2024	28 days	5 days	<
Anions and Nutrients : Bromide in Water by IC										
DW2-2	E235.Br	24-Jul-2024	26-Jul-2024	28 days	2 days	٠,	29-Jui-2024	28 days	5 days	\
HDPE (ON MECP)										
DW1-1	E235.Br	23-Jul-2024	25-Jul-2024	28	2 days	٠	29-Jul-2024	28 days	6 days	٠,

days

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Evaluation: × =	
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e; ✓ = Within Holding Time	
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DW2-2	Anions and Nutrients: Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L) HDPE ION MECP1	DW2-1	HDPE (ON MECP)	DW1-2	HDPE [ON MECP]	DW1-1	HDPE [ON MECP]	DW1-2	HDPE (ON MECP)	Anions and Nutrients - Chloride in Wester Andio	HDPE [ON MECP]	Anions and Nutrients : Chloride in Water by IC	DW2-2	HDPE ION MECPT	DW2-1	HOPE ION MECON	DW1-2	HDPE [ON MECP]	Anions and Nutrients - Boomids in Water by 19	Commune I curit complie in(3)	Container / Client Sample ID(s)	Matrix: Water Analyte Group: Analytical Hethor
E378-U	elitions megls,	E378-U	(although might)	E378-U	Alideologi (migriz.)	E378-U	rahiditan yantibilar	E235.CI		E235.CI			E235.CI		E235.CI		E235.Br				Method	
24-Jul-2024		24-Jul-2024		23-Jul-2024		23-Jul-2024		23-Jul-2024		23-Jul-2024			24-Jul-2024		24-Jul-2024		23-Jul-2024				Sampling Date	
30-Jul-2024		30-ปน1-2024		27-Jul-2024		25-Jul-2024		26-Jul-2024		25-Jul-2024			26-Jul-2024		26-Jul-2024		26-Jul-2024		Date	Preparation	Ex	
7 days	700	7 days		7 days		7 days		28 days		28 days		1	28 days		28 days		28 days		Kec	Holdin	Extraction / Preparation	
6 days		6 days		4 days		2 days		3 days		2 days			2 days		2 days		3 days		Actual	Holding Times	reparation	Εv
٠,		•		4		<		<		•			•		4		4			Eval		aluation: × =
31-Jul-2024		31-Jul-2024		30-Jul-2024		26-Jul-2024		29-Jul-2024		29-ปนใ-2024			29-Jul-2024		29-Jul-2024		29-Jul-2024			Analysis Date		Evaluation: $x = \text{Holding time exceedance}$; $\sqrt{\ } = \text{Within Holding Time}$
7 days		7 days		7 days		7 days		28 days		28 days			28 days		28 days		28 days		Rec	Holdir	Analysis	edance ;
7 days		7 days		7 days		3 days		6 days		6 days			5 days		5 days		6 days		Actual	Holding Times	'SiS'	✓ = Within
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28 days 6 days 4 28 days 6 days 4 7 days 5 days 4 7 days 6 days 4 7 days 6 days 4	29-Jul-2024 29-Jul-2024 29-Jul-2024 29-Jul-2024 29-Jul-2024		2 days 2 days 2 days 2 days 3 days	28 days days 7 days 7 days	25-Jul-2024 26-Jul-2024 26-Jul-2024 25-Jul-2024 26-Jul-2024	23-Jul-2024 23-Jul-2024 24-Jul-2024 23-Jul-2024 23-Jul-2024	E235.F E235.NO3 E235.NO3 E235.NO3	Anions and Nutrients: Fluoride in Water by IC HDPE [ON MECP] DW1-1 Anions and Nutrients: Fluoride in Water by IC HDPE [ON MECP] DW1-2 Anions and Nutrients: Nitrate in Water by IC HDPE [ON MECP] DW2-1 Anions and Nutrients: Nitrate in Water by IC HDPE [ON MECP] DW2-2 Anions and Nutrients: Nitrate in Water by IC HDPE [ON MECP] DW1-1 Anions and Nutrients: Nitrate in Water by IC HDPE [ON MECP] DW1-1 Anions and Nutrients: Nitrate in Water by IC HDPE [ON MECP] DW1-2 Anions and Nutrients: Nitrate in Water by IC HDPE [ON MECP] DW1-2
28 days 5 days 🗸	29-Jul-2024		2 days	28 days	26-Jul-2024	24-Jul-2024	E235,F	HDPE [ON MECP] DW2-2
28 days 5 days	29-Jul-2024 2	•	2 days	28 days	26-Jul-2024	24-Jul-2024	E235.F	HIDPIS and Nutrients: Fluoride in Water by IC HDPE [ON MECP] DW2-1 Anions and Nutrients: Fluoride in Water by IC
Evaluation: * = Holding time exceedance; \(\times = \text{Within Holding Time} \) The exploration is the exceedance; \(\times = \text{Within Holding Times} \) Eval Analysis Date Holding Times Eval Rec Actual	Analysis Date	aluation: × = Eval	tton / Preparation Holding Times Rec Actual	Extraction / Preparation Holding Times Rec Actual	Preparation Date	Sampling Date	Method	Analyte Group: Analytical Method Container / Client Sample ID(s)

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Matrix: Water

DW2-1	Mildropiological Tests : E. colf (Mis-mFC:BC(G)) Sterile HDBE (Sodium thiographets) (ON MECON)	DW2-2	Sterile HDBE (Sedium this entabate) FON MECON	DW1-2	HDPE [ON MECP]	DW1-1	HDPE FON MECP1	DW2-2	HDPF ION MECEI	Anions and Nutrionic - Suifato in Maron In 16	DW2-1	Autoris and Nutrients: Suitate in Water by IC HDPE ION MECP1	DW1-2	HDDE (ON MECE) HDDE (ON MECE)	DW1-1	HIDE (ON MECE)	DW2-2	HDPE ION MECPI		Container / Client Sample ID(s)	Matrix: Water Analytic Group Analytical (1887) or
E012A.EC		E012A.EC		E235.SO4		E235.SO4		E235.SO4			E235.SO4		E235.NO2		E235.NO2		E235.NO2			Method	-
24-Jul-2024		24-Jul-2024		23-Jul-2024		23-Jul-2024		24-Jul-2024			24-Jul-2024		23-Jul-2024		23-Jul-2024		24-Jul-2024			Sampling Date	
				26-Jul-2024		25-Jul-2024		26-Jul-2024			26-Jul-2024		26-Jul-2024		25-Jul-2024		26-Jul-2024		Preparation Date	Εxi	
		l		28 days		28 days		28 days		days	28		7 days		7 days		7 days		Holdin Rec	Extraction / Preparation	
		l		3 days		2 days		2 days			2 days		3 days		2 days		2 days		Holding Times Rec Actual	reparation	Eva
				4		4		•			۲,		4		4		4		Eval		luation: × =
25-Jul-2024		25-Jul-2024		29-Jul-2024		29-Jul-2024		29-Jul-2024			29-Jul-2024		29-Jul-2024		29-Jul-2024		29-Jul-2024		Analysis Date		Evaluation: \times = Holding time exceedance ; \checkmark = Within Holding Time
48 hrs		48 hrs		28 days		28 days		28 days			28 days		7 days		7 days		7 days		Holdin Rec	Analysis	edance ;
25 hrs		22 hrs		6 days		6 days		5 days			5 days		6 days		6 days		5 days		Holding Times Rec Actual	sis	✓ = Within
4		٠		\		<		٠,			٠,		•		٠,		•		Eval		Holding Time

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DW1-2	Microbiological Tests: Total Coliforms and E. coli (Enzyme Substrate)	Sierie ruzze (Sodium thiosulphate) [ON MECP] DW2-1	Indicionological Tests: Total Coliforms and E. coli (Enzyme Substrate)	DW2-2	Sterile HDPE (Sodium thiosulphate) [ON MECP]	DW1-1	Sterile HDPE (Sodium thiosulphate) [ON MECP]	DW1-2	Sterile HDPE (Sodium thiosulbhate) [ON MECP]	DW2-1 Microbiological Toets - Total Coliforms (ME mc and a)	Sterile HDPE (Sodium thiosulphate) [ON MECP]	DW2-2	Sterile HDPE (Sodium thiosulphate) [ON MECP]	DW1-1	Starile HDBE (Sodium thiorniphoty) FON MECON	DW1-2	Sterile HDPE (Sodium thiosulphate) (ON MECP)	Microhiological Tasts : E soil (ME 1150 BOIO)	Container / Cheff Sample ID(S)	Contained Client Seconds Inc.	Matrix: Water Aralytical Method
E010		E010		E010		E012.TC		E012.TC		E012.TC		E012.TC		E012A.EC		E012A.EC				Method	
23-Jul-2024		24-Jul-2024		24-Jul-2024		23-Jul-2024		23-Jul-2024		24-Jul-2024		24-Jul-2024		23-Jul-2024		23-Jul-2024				Sampling Date	
				ļ												1		Date	Preparation	Ex	
[l														Rec	Holding Times	Extraction / Preparation	
						l								-				Actual	Times	paration	Eva
				************************															Eval		luation: × = F
.25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024			Analysis Date		Evaluation: $x = \text{Holding time exceedance}$; $V = \text{Within Holding Time}$
48 hrs		48 hrs		48 hrs		48 hrs		48 hrs		48 hrs		48 hrs		48 hrs		48 hrs		Rec	Holding	Analysis	edance ; v
44 hrs		24 hrs		21 hrs		47 hrs		44 hrs		25 hrs		22 hrs		47 hrs		44 hrs		Actual	Holding Times	is	′ = Within
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Matrix: Water				Eva	luation; × = F	tolding time exceed	Evaluation: $\star = \text{Holding time exceedance} : \checkmark = \text{Within Holding Time}$	dolding Time
Analyte Group - Analytical Method						9 6	A ALCOHOL	Signal Printer
	Method	Sampling Date	Extra	Extraction / Preparation			Analysis	
Commune / Chenn Sambre (D(S)			Preparation	Holding Times	Eval	Analysis Date	Holding Times	Eval
			Date	Rec Actual			Rec Actual	

Analyte Group - Analytical Method	Method	Sampling Date	Ext	Extraction / Preparation	reparation			Analysis		ANTERIOR FILE
Container / Client Sample ID(s)			02	Holdin	Holding Times	Eval	Analysis Date	Holdin	Holding Times	Eval
Microbiological Tests : Total Coliforms and E_coli (Enzyme Substrate)			Date	Vac	Acinal			Kec	Actual	
Sterile HDPE (Sodium thiosulphate) [ON MECP] DW1-1	E010	23-Jul-2024			1		25-Jul-2024	48 hrs	47 hrs	٠
Microbiological Tests: Total Coliforms Background (MF-mEndo)										
DW2-2	E012.BG.TC	24-Jul-2024	!				25-Jul-2024	48 hrs	22 hrs	٠,
Microbiological Tests: Total Coliforms Background (MF-mEndo) Sterile HDPE (Sodium thiosuphata) for MECC:										
DW2-1	E012.BG.TC	24-Jul-2024	l		l		25-Jul-2024	48 hrs	25 hrs	٠
Sterile HDPE (Sodium thiosulphate) ION MECEN										
DW1-2	E012.BG.TC	23-Jul-2024		l	ļ		25-Jul-2024	48 hrs	44 hrs	٠,
Sterile HDPE (Sodium thiosulphate) [ON MECP]										
DW1-1	E012.BG.TC	23-Jul-2024	-	ļ	l		25-Jul-2024	48 hrs	47 hrs	٠,
HDPE [ON MECP]										
DW1-1	E290	23-Jul-2024	25-Jul-2024	14 days	2 days	٠,	26-Jul-2024	14 days	3 days	`
HDPE [ON MECP]										
Dw2-1	E290	24-Jul-2024	26-Jul-2024	14 days	2 days	٠,	27-Jul-2024	14 days	3 days	۲
HDPE ION MECPI										
DW2-2	E290	24-Jul-2024	26-Jul-2024	14	2 days	۲	27-Jul-2024	14 days	3 days	•
Physical Tests : Alkalinity Species by Titration				days						
HDPE [ON MECP] DW1-2	E290	23-Jul-2024	26-Jul-2024	14	3 days	۲	27-Jul-2024	14 days	4 days	•
				days						

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DW1-1	HIDDE (ON MECE)	DW1-2	HDPE [ON MECP]	DW2-2 Physical Tests: Conductivity is Web-	HDPE [ON MECP]	DW2-1 Physical Tests : Conductivity in Water	HDPE [ON MECP]	DW1-1 Physical Tests : Conductivity in Water	HDPE [ON MECP]	DW1-1 Physical Tests : Conductivity in Water	HDPE [ON MECP]	DW1-2	HDPE [ON MECP]	DW2-1 Physical Tasts: Colour (Appropriet by Secretary)	HDPE [ON MECP]	DW2-2	HDPE [ON MECP]	Physical Tests : Colour (Annarent) by Spectrometer	Container / Cheft Sample IJ(s)	Containor / Client Carrell III/-	Matrix: Water Analyte Group: Analytical Method
E108		E100		E100		E100		E100		E330		E330		E330		E330				Method	
23-Jul-2024		23-Jul-2024		24-Jul-2024		24-Jul-2024		23-Jul-2024		23-Jul-2024		23-Jul-2024		24-Jul-2024		24-Jul-2024				Sampling Date	
25-Jul-2024		26-Jul-2024		26-Jul-2024		26-Jul-2024		25-Jul-2024				l						Date	Ö,	Ex	T
14 days		28 days		28 days		28 days		28 days		1]						Kec	Holdir	Extraction / Preparation	
2 days		3 days		2 days		2 days		2 days				l		1		-		Actual	Holding Times	reparation	m
<		•		4		4		4											Eval		valuation: × =
26-Jul-2024		27-Jul-2024		27-Jul-2024		27-Jul-2024		26-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024	-		Analysis Date		Evaluation: \times = Holding time exceedance; \checkmark = Within Holding Time
14 days		28 days		28 days		28 days		28 days		48 hrs		48 hrs		48 hrs		48 hrs		Rec	Holdin	Analysis	edance ;
3 days		4 days		3 days		3 days		3 days		48 hrs		45 hrs		25 hrs		22 hrs		Actual	Holding Times	sis	✓ = Withir
•		•		\		<		٠		٠		٠		٠		٠			Eval		1 Holding Time

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Muselmenion	Method	Sampling Date	Extr	Extraction / Preparation	aration			Analysis	
Cient Sample ID(s)			Preparation	Holding T	Times	Eval	Analysis Date	Holding Times	Eval
			Date	Rec /	Actual			Rec Actual	

DW2-2	Physical Tests: TSS by Gravimetry HDPF FON MECEI	DW2-1	HDPE (ON MECP)	DW1-2	HDPE [ON MECP]	DW1-1	HDPE (ON MECP)	DW2-2	HDDE FON MECDI	DW2-1 Physical Tasts - TDS by Gravington	HDPE [ON MECP]	DW1-2	HDPE (ON MECE)	DW2-2	HDPE (ON MECO)	DW2-1	HDPE [ON MECP]	Physical Tosts and by Mator	Container / Client Sample ID(s)	Analyke Globy - Analytical memore	Matrix: Water
E160		E160		E162		E162		E162		E162		E108		E108		E108				Method	
24-Jul-2024		24-Jul-2024		23-Jul-2024		23-Jul-2024		24-Jul-2024		24-Jul-2024		23-Jul-2024		24-Jul-2024		24-Jul-2024				Sampling Date	1
				-								26-Jul-2024		26-Jul-2024		26-Jul-2024		Date	Preparation	Ex	
		l		ı		-		1		ľ		14 days		14 days		14 days		Rec	Holding	Extraction / Preparation	
1]								3 days		2 days		2 days		Actual	Holding Times	eparation	Εv
												٠,	-	<		•			Eval		aluation: × =
26-Jul-2024		26-Jul-2024		26-Jul-2024		26-Jul-2024		26-Jul-2024		26-Jul-2024		27-Jul-2024		27-Jul-2024		27-Jul-2024			Analysis Date		Evaluation: \star = Holding time exceedance; \checkmark = Within Holding Time
7 days		7 days		7 days		7 days		7 days		7 days		14 days		14 days		14 days		Rec	Holdin	Analysis	edance;
2 days		2 days		3 days		3 days		2 days		2 days		4 days		3 days		3 days		Actual	Holding Times	is	/ = Within
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DW1-1	HDPE total (nitric acid)	DW2-2	HDPE total (nitric acid)	DW2-1	HDPE total (nitric acid)	DW1-4	HDPE [ON MECP]	DW1-2	HDPE (ON MECP)	DW2-1	HDPE [ON MECP]	DW2-2	HDPE [ON MECP]	DW1-2	HDPE (ON MECP)	DW1-1	HDPE [ON MECP]	Physical Tests: TSS by Gravimetry	Container / Chent Sample ID(s)	Costing City Control Michigan	Matrix: Water Analyte Group Analytical Matrix:
E420		E420		E420		E121		E121		E121		E121		E160		E160				Method	
23-Jul-2024		24-Jul-2024		24-Jul-2024		23-Jul-2024		23-Jul-2024		24-Jul-2024		24-Jul-2024		23-Jul-2024		23-Jul-2024				Sampling Date	
25-Jul-2024		25-Jul-2024		25-Jul-2024								-						Date	8	Ex	
180 days		180 days		180 days	1			1				l		1		l		Kec	Holdin	Extraction / Preparation	
2 days		1 days		1 days		I		1				1		-		1		Actual	Holding Times	reparation	m
•		4		4															Eval		/aluation: × =
25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		25-Jul-2024		26-Jul-2024		26-Jul-2024			Analysis Date		Evaluation: \star = Holding time exceedance; \checkmark = Within Holding Time
180 days		180 days		180 days		48 hrs		48 hrs		48 hrs		48 hrs		7 days		7 days		Rec	Holdir	Analysis	edance;
2 days		1 days		1 days		45 hrs		42 hrs		23 hrs		20 hrs		3 days		3 days		Actual	Holding Times	sis	✓ = Withir
\		٠,		<		`		٠		•		٠		<		٠			Eval		า Holding Time

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Project Client Matrix: Water Englobe Corp. 02405890

Legend & Qualifier Definitions

Total Metals: Total Metals in Water by CRC ICPMS

HDPE total (nitric acid)
DW1-2

Analyte Group : Analytical Method

Method

Sampling Date

Extraction / Preparation Holding Times
Rec Actual

Evaluation: * = Holding time exceedance; </ = Within Holding Time

Preparation Date

Eval

Analysis Date

Holding Times

Eval

Analysis

Rec Actual

E420

23-Jul-2024

25-Jul-2024

2 days

<

25-Jul-2024

days

180

2 days

<

days 180 Container / Client Sample ID(s)

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

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Quality Control Parameter Frequency Compliance

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

Matrix: Water

Evaluation: $\kappa = QC$ frequency outside specification; $\checkmark = QC$ frequency within specification.

		Evaluation	$n: \kappa = QC frequ$	luation: $\times = QC$ frequency outside specification; $\checkmark = QC$ frequency within specification	cification; ✓ = Q	C frequency with	hin specification.
Admits Control Satisfie Type			S)	Count		Frequency (%)	
Analytical Methods	Method	QC Lot#	QC	Regular	Actual	Expected	Evaluation
Alkalinity Species by Titration	F300	1564704	_ _	2			
Ammonia by Fluorescence	E298	1575545	1	20 02	8.0		<
Bromide in Water by IC	E235.Br	1564708	ν -	13	15.3	л c.c	
Chloride in Water by IC	E235.CI	1564704	2	29	6.0	50	
Colour (Apparent) by Spectrometer	E330	1564067		16	6.2	5.0	\
Conductivity in Water	E100	1564702	2	16	12.5	5.0	
Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1564710	3	52	5.7	50	, ,
E. coli (MF-mFC-BCIG)	E012A.EC	1564208	0	5	0.0	5.0	, <
Fluoride in Water by IC	E235.F	1564705	2	17	11.7	5.0	
Nitrate in Water by IC	E235.NO3	1564706	2	28	7.1	5.0	
Nitrite in vvater by IC	E235.NO2	1564707	2	27	7.4	5.0	
Sulfate in Water by IC	E108	1564700	2	36	5.5	5.0	۷.
TDS by Gravimetry	E235.SU4	1564/03	2	29	6.9	5.0	<
Total Coliforms (MF-mEndo)	E162	1566392		20	5.0	5.0	<
Total Coliforms and E. coli (Enzyme Substrate)	E012.1C	1564215		25	4.0	5.0	×
Total Coliforms Background (MF-mEndo)	E012.BG.TC	1564216	0	20	0.0	50	: <
Too by CRC ICPMS	E420	1562886	_	20	5.0	5.0	
Turbidity by Nobbles to	E160	1563337	2	39	5.1	4.7	۷.
Caboning by traditioningly	E121	1563499		20	5.0	5.0	<
Alkalinity Species by Titration							
Ammonia by Fluorescence	E208	1575575		25	8.0		<
Bromide in Water by IC	E235 Br	1564708	0 -	12	5.0		<
Chloride in Water by IC	E235.CI	1564704	2	29	6 6	50	
Colour (Apparent) by Spectrometer	E330	1564067		16	6.2		
Conductivity in Water	E100	1564702	2	16	12.5	5.0	
Dissolved Ortrophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)	E378-U	1564710	ω	52	5.7	5.0	
Nitrate in Water by IC	E235.F	1564705	2	17	11.7	5.0	<
Nitrite in Water by IC	E235.NO3	1564706	2	28	7.1	5.0	<
pH by Meter	E235.NO2	1564707	2	27	7.4	5.0	<
Sulfate in Water by IC	E332 804	1564700	3 12	36	5.5	5.0	<
TDS by Gravimetry	E162	1566392	ا د	90	л (.)	n (.	
Total Metals in Water by CRC ICPMS	E420	1562886	_	20	50	50	
I so by Gravimetry	E160	1563337	2	39	5.1	4.7	۷,

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Project

(ALS)	

Absolution Michigates Mathrod COLUS COUNT Frequency (%) Frequency (%) Libridaty of Nethrocates E121 15554000 CL CLUS COLUS Actival Exposited (%) Exposited (%)						. 1000		
Imples (LCS)- Continued Petry E121 E230 E123 E123 E123 E123 E235 Br E330 E235 Cl E330 E235 Cl E330 E34706 E235 NO2 E354706 E235 NO2 E354706 E235 NO2 E012 NE C Cl (Frzyme Substrate) E012 Re E010 E012 Re E012 Re E012 Re E012 Re E012 Re E013 Re E014 Re E012 Re E014 Re E012 Re E016 1564708 E018 Re E018 Re E018 Te E04708 E04708 E04709	<	5.0	6.9	29	2	1564703	E235.SO4	Total Metals in Water by CRC ICPMS
Indition Method QC Lot # metry E121 1563499 Itiration E290 1564701 Bence E298 157545 IC E235 Br 1564702 Spectrometer E330 1564702 Spectrometer E378-U 1564702 Shafe by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Shafe by Colourimetry (Ultra Trace Level 0.001 mg/L) E235.NO3 1564703 C E235.NO3 1564703 C E235.NO3 1564703 E162 E235.NO3 1564703 E163 E162 1564703 E164 E235.NO3 1564703 E164 E235.NO3 1564703 E165 E160 1564703 E160 E235.NO3 1564703 E161 E64703 1564703 E162 1564703 1564703 E163 E164705 1564703 E164 E235.R 1564704 E235.R	<	5.0	7.4	27	2	1564707	E235.NO2	Sulfate in Water by IC
Imples (LCS) - Continued Method QC Lot # metry E121 1563499 Itration E290 1564701 Bence E298 1575545 IC E235.Br 1564701 Spectrometer E330 1564087 Spectrometer E100 1564702 Spectrometer E100 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E235.RO 1564703 C E235.NO2 1564703 E235.NO2 1564703 1564703 E160 E235.NO2 1564703 E160 E235.NO2 1564703 E160 E235.NO2 1564703 E160 E235.SO4 1564703 E160 E235.NO2 1564703 E160 1564703 1564703 E160 1564703 1564703 E160 1564216 156286 E160 156286 E160 156286 E160 156286 E160 1563337	4	5.0	7.1	28	2	1564/06	E235,NO3	Nitrite in Water by IC
pbes (UCS) - Continued Method QC Lot # stry E121 1563499 tration E290 1564701 nce E298 1575545 E235.Br 1564708 E235.Cl 1564708 E235.Cl 1564708 E235.Cl 1564708 E235.Cl 1564708 E330 1564087 E330 1564087 E3378-U 1564702 E235.NO3 1564703 E235.NO2 1564703 E235.NO3 1564703 E235.NO3 1564703 E301 (Enzyme Substrate) E338.NO2 1564703 E162 E235.NO3 1564703 E162 1564218 E012.RG.TC 1564218 yCRC ICPMS E160 1564218 yCRC ICPMS E160 1563337 E17 1564218 1564218 yCRC ICPMS E238. Rr 1563338 E182 1564218 1564218 yCRC ICPMS E238.	<	5.0	11.7	17		1504705	FOOT NO	Nitrate in Water by IC
Initial (LCS) - Continued Method QC Lot # atry E121 1563499 tration E290 1564701 nce E298 1575545 E235.Br 1564704 E235.Br 1564708 E235.Br 1564708 E235.Cl 1564708 E235.Cl 1564704 E330 1564708 E235.Cl 1564708 E235.F E100 1564705 E235.F E235.F 1564706 E235.NO2 1564706 E235.NO2 1564706 E235.NO2 1564706 E162 1564706 E235.SO4 1564706 E235.SO4 1564706 E6192.E 1564706 E6192.E 1564706 E012.R 1564706 E012.BG.TC 156408 E012.BG.TC 1564216 1564216 1564216 1564216 1564216 1564216 1564216	<	5.0	5.7	52	S (4	1504710	E370-0	Fluoride in Water by IC
Ibles (LCS) - Continued Method QC Lo! # atry E121 1563499 tration E290 1564701 nce E298 1575545 E298 1575545 1564704 E298 1575545 1564704 E298 15764704 E235.Br 1564704 pectrometer E330 1564704 1564705 E100 1564705 1564706 1564706 E235.F 1564708 E235.NO3 1564708 E235.NO3 1564706 E235.NO3 1564708 E235.NO3 1564708 E235.NO3 1564708 E235.NO3 1564708 E235.NO3 1564708 E235.NO3 1564708 E235.NO3 1564708 E162 1564708 E235.NO3 1564708 E162 1564708 E235.NO3 1564708 E162 1564708 E235.NO3 1564708 E162 1564708 E235.NO3 1564708 E164 E160 <		5.0	6.9	29	5 2	1564740	E270 ()	Dissolved Orthophosphate by Colourimetry (Ultra Trace Level 0.001 mg/L)
poles (LCS) - Continued Method QC Lof # stry E121 1563499 tration E280 1564701 nce E298 1575545 E235.Br 1564704 E235.Br 1564704 E235.Br 1564704 E235.Br 1564704 E330 1564087 E100 E378-U 1564702 E378-U 1564703 1564703 E612A.EC 1564703 1564703 E235.NO3 1564703 1564703 E235.NO3 1564703 1564703 E162 E235.NO2 1564703 E162 E235.NO2 1564703 E162 E162 1564703 E162 E162 1564703 E012.TC 1564703 1564703 E012.TC 1564215 1564008 VCRC ICPMS E012.H 1563337 E150 1563337 1563337 E150 1563339 1563339 E153	<		15.3	3	2	1564704	E225 C1	Chloride in Water by IC
Imples (LCS) - Continued Method QC Lof # netry E121 1563499 Itiration E290 1564701 ence E298 1575545 C E235.Br 1564704 Spectrometer E100 1564704 Spectrometer E100 1564706 Spectrometry (Ultra Trace Level 0.001 mg/L) E1012A.EC 1564706 C E235.NO3 1564706 C E235.NO3 1564707 Spectrometry (Ultra Trace Level 0.001 mg/L) E012A.EC 1564708 C E235.NO3 1564708 E162 15643703 1564703 E162 15643703 1564703 E163 E012.TC 1564703 E160 1564215 1564008 Dy CRC ICPMS	<		5.0	20	-	1564708	F035 Br	Bromide in Water by IC
Imples (LCS) - Continued Method QC Lof # netry E121 1563499 Itiration E290 1564701 ence E298 157545 C E235 Br 1564704 Spectrometer E330 1564708 Spectrometer E100 1564708 C E378-U 1564708 Spectrometer E100 1564708 C E235, F 1564708 Spectrometer E235, F 1564708 C E235, F 1564702 hate by Colourimetry (Ultra Trace Level 0.001 mg/L) E012A, EC 1564702 E235, NO3 1564703 E235, NO3 1564703 E235, NO3 1564705 E235, NO3 1564706 E235, NO3 1564706 E235, NO3 1564703 E162 E162 1564703 1564703 E164703 E235, NO3 1564703 1564703 E164704 E235, SO4 1564703 1564703 E164705 E235, NO3			n)	30	<u> </u>	1575545	€298	Ammonia by Fluorescence
Imples (LCS) - Continued Method QC Lof # netry E121 1563499 Itiration E290 1564701 ence E238. Br 1575455 C E238. Br 1564708 C E235. Cl 1564708 Spectrometer E100 1564708 Spectrometry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 hate by Colourimetry (Ultra Trace Level 0.001 mg/L) E012A.EC 1564702 coll (E127me Substrate) E235.NO3 1564703 E235.NO3 1564703 1564703 E235.NO3 1564703 1564703 E110 E235.NO3 1564703 E235.NO3 1564703 1564703 E235.NO3 1564703 1564703 E235.NO3 1564703 1564703 E335.SO4 1564703 1564703 E355.NO3 1564703 1564703 E35.NO3 1564703 1564703 E35.NO3 1564703 1564703 E35.NO3 1564703	<		0.0					Matrix Spikes (MS)
Imples (LCS): Continued Method QC Lof # netry E121 1563499 Iltration E290 1564701 ence E298 1575545 C E235.Br 1564708 Spectrometer E330 1564767 Spectrometery (Ultra Trace Level 0.001 mg/L) E978-U 1564702 3) E012A EC 1564703 C E235.NO3 1564706 3) E235.NO3 1564706 3) E235.NO3 1564706 3) E235.NO3 1564706 4 E235.NO3 1564706 5 E235.NO3 1564706 6 E235.NO3 1564706 7 E162 1564706 8 E235.SO4 1564706 9 E235.SO4 1564703 1564703 1564706 1564703 1564703 1564703 1564703 1564704 E012.TC 1564216 1564705 E012.BG.TC 1564216		50	50	20		1563499	E121	Turbidity by Nephelometry
Imples (LCS) - Continued Method QC Lof # netry E121 1563499 litration E290 1564701 ence E298 1575545 C E235.Br 1564704 Spectrometer E100 1564704 Spectrometry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 hate by Colourimetry (Ultra Trace Level 0.001 mg/L) E012A.EC 1564703 C E235.NO3 1564706 B E235.NO3 1564706 E E235.NO3 1564706 E E235.SO4 1564706 E E235.SO3 1564706 E E235.SO3 1564706 E E235.SO3 1564706 E E235.SO3 1564706 E E012.TC 1564703 E E012.TC 1564215 E E012.TC 1564008 By CRC ICPMIS E012.BG.TC 1564216 By CRC ICPMIS E0152.BG.TC 1564216		4.7	5.1	39	2	1563337	E160	Turbilly Glavillieny
Imples (LCS) - Continued Method QC Lot # netry E121 1563499 Fitration E290 1564701 ence E235 Br 1575545 C E235 Br 1564708 Spectrometer E100 1564704 Spectrometery (Ultra Trace Level 0.001 mg/L) E378-U 1564702 shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E012A,EC 1564703 C E235,NO3 1564706 C E235,NO3 1564706 E235,NO3 1564706 1564706 E235,NO3 1564706 1564706 E235,NO3 1564706 1564703 E160 E235,NO3 1564706 E235,NO3 1564703 1564703 E162 E358,NO3 1564703 E162 1564703 1564703 E163 E012,TC 1564215 Coli (Enzyme Substrate) E012,BC,TC 1564216 E012,BG,TC 1564216 1564216		5.0	5.0	20	>	1562886	E420	TOO by Craimate.
Intertry Method QC Lot # netry E121 1563499 Filtration E290 1564701 ence E298 1575545 C E235.Br 1564708 C E330 1564708 Spectrometer E100 1564702 Spectrometry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Spectrometry (Ultra Trace Level 0.001 mg/L) E35.NO3 1564703 C E235.NO3 1564706 C E235.NO3 1564706 E E235.NO3 1564706 C E235.NO3 1564703 C E235.NO3 1564703 E E235.NO3 1564703 E E35.SO4 1564703 E E35.SO4 1564703 E E35.SO3 1564703 E E35.SO3 1564703 E E35.SO3 1564703 E E35.SO3 1564703 E E36201 1564201	<	5.0	5.0	20		1564216	E012.BG.TC	Total Metals in Water by CRO ICDMS
Intertry E121 1563499 Iffiration E290 1564701 ence E298 1575545 C E235.Br 1564704 Spectrometer E330 1564704 Spectrometer E100 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564703 C E35.NO3 1564703 1564703 C E235.NO3 1564703 1564703 E162 E364703 1564703 1564703 E163 E35.NO3 1564703 1564703 E164 E35.NO3 1564703 1564703 E012.TC 1566392 1564703 1564703 E016.TC E35.NO3 1564703 1564703 <td><</td> <td>5.0</td> <td>5.0</td> <td>20</td> <td></td> <td>1564008</td> <td>E010</td> <td>Total Coliforms Background (MF-mEndo)</td>	<	5.0	5.0	20		1564008	E010	Total Coliforms Background (MF-mEndo)
Imples (LCS) - Continued Method QC Lot # netry E121 1563499 Titration E290 1564701 ence E298 1575545 C E235.Br 1564708 Spectrometer E35.Cl 1564704 Spectrometer E100 1564704 Spectrometery (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E012A.EC 1564703 Spectrometry (Ultra Trace Level 0.001 mg/L) E235.NO3 1564706 E235.NO3 1564706 E235.NO3 1564706 E235.SO4 1564706 E235.SO4 1564707 E6039 E6039 1564707 E235.SO4 1564703 E6039 E604704 1564703 1564703	<	5.0	8.0	25	2	1364215	10.2.10	Total Coliforms and E. coli (Enzyme Substrate)
Imples (LCS) - Continued Method QC Lot # netty E121 1563499 Titration E290 1564701 ence E298 1575545 C E235.Br 1564708 Spectrometer E330 1564704 Spectrometer E100 1564705 shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 c E235.NO3 1564705 c E235.NO3 1564706 c 1564706 1564703 c 1564703 1564703	<	5.0	5.0	20	-	1000000	1040	Total Coliforms (MF-mEndo)
Imples (LCS) - Continued Method QC Lot # netty E121 1563499 Titration E290 1564701 ence E298 1575545 C E235.Br 1564708 Spectrometer E330 1564704 Spectrometer E100 1564704 Spectrometer E100 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Spectrometer E235.F 1564703 Spectrometer E235.NO3 1564706 E235.NO3 1564706 E235.NO3 1564706 E235.SO4 1564703	<	5.0	0.9	3 8	١ ـ	1566302	E160	TDS by Gravimetry
Imples (LCS) - Continued Method QC Lot # netry E121 1563499 Titration E290 1564701 ence E298 1575545 C E235.Br 1564708 Spectrometer E330 1564704 Spectrometer E100 1564704 Spectrometer E100 1564702 Shate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 Spectrometer E235.F 1564708 C E235.NO3 1564706 E235.NO2 1564706 E235.NO2 1564707			60	20	S	1564703	E235.SO4	Sulfate in Water by IC
amples (LCS) - Continued Method QC Lot # metry E121 1563499 Titration E290 1564701 cence E298 1575545 IC E235. Br 1564708 IC E330 1564704 Spectrometer E100 1564704 Spectrometer E100 1564702 phate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 phate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 E235. F 1564705 E235.NO3 1564705		50	7.4	27	2	1564707	E235.NO2	Nitrite in Water by IC
Incles (LCS) - Continued Method QC Lot # atry E121 1563499 tration E290 1564701 nce E298 1575545 E235.Br E235.Br 1564708 pectrometer E330 1564704 pectrometer E100 1564702 sate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 bettog E235.F 1564708		50	7.1	28	2	1564706	E235.NO3	Nitiate in Water by IC
Incles (LCS) - Continued Method QC Lot # atry E121 1563499 tration E290 1564701 nce E298 1575545 E235.Br 1564708 pectrometer E330 1564704 pectrometer E100 1564702 ate by Colourimetry (Ultra Trace Level 0.001 mg/L) E378-U 1564702 E012A.EC 1564208		5.0	11.7	17	2	1564705	E235.F	Nitration in Water by IC
### Continued Method QC Lot #	٠,	5.0	20.0	ъ	_,	1564208	E012A.EC	Fluoride in Water by IC
tion	`	5.0	5.7	52	ω	1564710	E378-U	E coli (ME-med Bolo)
Method QC Lot # es (LCS) - Continued E121 1563499 tion E290 1564701 e E298 157545 E235.Br 1564708 E235.Cl 1564704 E330 1564704 E330 1564067	<	5.0	12.5	16	2	1564702	E100	Dissolved Orthophosphate by Colourimetry (11th Toppe 1 person of the colouring of the colou
es((LCS) - Continued E121 1563499 tion E290 1564701 E235.Br 1564708 E235.Cl 1564704	<	5.0	6.2	16	_	1564067	E330	Conductivity in Waster
es (LCS) - Continued Method QC Lot #	<		6.9	29	2	1564704	E235.CI	Colour (Apparent) by Spectrometer
es (LCS) - Continued E121 1563499 tion E298 1575545 E298 1575545	<		15.3	13	2	1554/08	E235.BF	Chloride in Water by IC
es((LCS) - Continued Method QC Lot #	۷		5.0	20) _	1073000	L230	Bromide in Water by IC
es (LCS) - Continued E121 1563499 tion F290 1564701	~		0.0	2	7 1	1676616	TI SOO	Ammonia by Fluorescence
es (LCS) - Continued			9)n	s	1564701	E290	Alkalinity Species by Titration
es:(LCS) - Continued	•							Method Blanks (MB)
es (LCS) - Continued QC Lot #			5.0	20	→	1563499	E121	Turbidity by Nephelometry
Method QC Lot #							100 mg/s	Laboratory Control Samples (LCS) - Continued
	Evaluation	Expected	Actual	- 1		QC Lot #	Method	Analytical Methods
		Frequency (%)		unt	S			Annal, 43: 1 Annal, 43: 1

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 Client
 Englobe Corp.

 Project
 02405880



Methodology References and Summaries

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

			Waterloo	
			ALS Environmental -	
of the filtrate at 180 ± 2°C for 16 hours or to cons				
Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre	APHA 2540 C (mod)	Water	E162	IDS by Gravimetry
methods are available for these types of samples.				
brackish waters) may produce a positive bias by this method. Alternate analysis			Waterloo	
filtered solids. Samples containing very high dissolved solid content (i.e. seawaters,			ALS Environmental -	
nent o			2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre	APHA 2540 D (mod)	Water	E160	ISS by Gravimetry
			Waterloo	1
			ALS Environmental -	
er defined conditions.			•	
Turbidity is measured by the nephelometric method, by measuring the intensity of light	APHA 2130 B (mod)	Water	E121	Turbidity by Nephelometry
			Waterloo	
pH should be measured in the field within the recommended 15 minute hold time			ALS Environmental -	
initied by potentionneric measurement with a	, , , , , , , , , , , , , , , , , , ,	į	1	
is determined by potentiametric monocurations.	APHA 4500-H (mod)	Water	E108	pH by Meter
יייין ווייייין ווייייין ווייייין ווייייין ווייייין איזייין איזיין אייין איזיין איזיין איזיין איזיין איזיין אייין אייין אייין אייין אייין איין אייין איייין אייין איייין איייין אייין אייין איייין אייייין איייין אייין איייין איייין איייין איייין איייין איי			Waterloo	
Ó.			ALS Environmental -	
v immersion of a conductivity cell with platform electrodes into a water				
Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance is	APHA 2510 (mod)	Water	E100	Conductivity in Water
			Waterloo	
general and distillation			ALS Environmental -	
characteristic morphology of the target organism are enumerated				
Following filtration (0.45 µm), and incubation at 44.5±0.2°C for 24 hours colonies	APHA 9222D (mod)	Water	E012A.EC	E. coli (MF-mFC-BCIG)
			Waterloo	
			ALS Environmental -	
characteristic morphology of the target organism are enumerated				
and inclination of an oronge for all hours	APHA 9222B (mod)	Water	E012.TC	Total Coliforms (MF-mEndo)
			Waterloo	
			ALS Environmental -	
Noncoliform bacteria observed on Total Coliform plates are enumerated.	APHA 9222B (mod)	Water	E012.BG.TC	Total Coliforms Background (MF-mendo)
rougent bace).			Waterloo	1
mL sample after incubation at 35.0 ±0.5°C for either 18 or 24 hours (dependent on			ALS Environmental -	
	APHA 9223 (mod)	Water	E010	Total Collidrins and E. coll (Enzyme Substrate)
(REMonate Section 1)	Melitari Nelejanica	Mello	Weldelos / Asas	Total California and Fig. 12. 12.
			lor A.	Applidical Methods

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 Work Order
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 Englobe Corp.

 Project
 02405890

ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Unional EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Unional EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Unional EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Unional EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Unional EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Unional EPA 300.1 (mod) Inoganic anions are analyzed detection. ALS Environmental - Unional EPA 300.1 (mod	paniping:				
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ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography with conductivity and/or detection. ALS Environmental - Water EPA 300.1 (mod) Inoganic anions are analyzed by lon Chromatography wit				ALS Environmental -	(oliva Hace Fevel olov) Hight)
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EC100A Water APHA 2340B "Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium ALS Environmental - Waterloo Water APHA 2340B "Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium Also CaCO3 equivalents. "Total Hardness" to the sum of Calcium and Magnesium Hardness. Hardness is normally or preference and calculated from dissolved Calcium and Magnesium concentrations, because it	dissolved divalent cations. Hardness from total Ca/Mg				
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EC100A Water APHA 2340B "Hardness	Magnesium concentrations, expressed in CaCO3 equivalents. "Total Hardness" refers			У С П	
	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and	APHA 2340B	Water	EC100A	Gustanas (oncomment) non total catalog
by this method.					Hardness (Calculated) from Total Calling
Waterloo Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered				Waterloo	
ALS Environmental - (Lincu) Collision/Reaction Cell ICPMS.	Collision/Reaction Cell ICPMS.	(mba)		ALS Environmental -	
E420 vale EPA 200.2/6020B	Water samples are digested with nitric and hydrochloric acids, and analyzed	EPA 200.2/6020B	v vale	C420	
EASO Water Francisco		FP4 000 0 100000	Mator	UC.V.	Total Metals in Water by CRC ICPMS

ALS Canada Ltd.



QUALITY CONTROL REPORT

Site :		umber	PO :		Kitchener ON Canada N2K 2Y5	Address :353 Bridge Street East		Client : Englobe Corp.	Work Order : WT2421115	
					da N2K 2Y5	ast				
		Issue Date	Date Samples Received	Telephone		Address	Account Manager	Laboratory	Page	
	G	: 25-Jul-2024 : 01-Aug-2024 18:59	: 24-Jul-2024 17:40	:+1 519 886 6910	Waterloo, Ontario Canada N2V 2B8	:60 Northland Road, Unit 1	Gayle Braun	· Al S Environmental Materio	: 1 of 16	

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

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives

No. of samples analysed

. . 4

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

Signatories

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

Oignatories	Position	Laboratory Department
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	Analyst	Waterloo Microbiology, Waterloo, Ontario



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 Work Order:
 WT2421115

 Client:
 Englobe Corp.

 Project:
 02405890

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key:

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

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

DQO = Data Quality Objective.

LOR = Limit of Reporting (detection limit).

RPD = Relative Percent Difference

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

Workorder Comments

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



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Laboratory Duplicate (DUP) Report

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

Sub-Matrix: Water							Laborat	Laboratory Duplicate (DUP) Report	IP) Report		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original	Duplicate	RPD(%) or	Duplicate	Qualifier
Physical Tests (QC Lot: 1563337)	ot: 1563337)						Kesuit	Result	Difference	Limits	
WT2420817-002 A		Solids, total suspended [TSS]	-	E160	3.0	mg/L	3.9	3.5	0.4	Diff <2x LOR	
ල (බර	Lot: 1563499)										
WT2421000-001 A	Anonymous	Turbidity		E121	0.10	ZI C	2.16	2.38	9.25%	15%	
Physical Tests (QC Lo	(QC Lot: 1564067)										
WT2421033-001 A	Anonymous	Colour, apparent		E330	2.0	 	2.5	2.7	0.2	Diff <2x LOR	1
77	(QC Lot: 1564700)										
WT2421000-001 A		pH	-	E108	0.10	pH units	8.00	8.01	0.125%	4%	
Physical Tests (QC Lo	(QC Lot: 1564701)										
WT2421000-001		Alkalinity, total (as CaCO3)	1	E290	2.0	mg/L	259	261	0.738%	20%	:
Physical Tests (QC Lot: 1564702)	ot: 1564702)										
	Anonymous	Conductivity	1	E100	2.0	µS/cm	662	659	0.454%	10%	1
7,	(QC Lot: 1565826)										
33		рH	v	E108	0.10	pH units	8.09	8.11	0.247%	4%	
7)	(QC Lot: 1565827)										
700-611742144		Alkalinity, total (as CaCO3)		E290	1.0	mg/L	240	240	0.0333%	20%	
Physical Tests (QC Lot: 1565828)								W			
Z00-c1112+2144		Conductivity		E100	1.0	µS/cm	1760	1750	0.285%	10%	
Physical Tests (QC Lo	(92)										
7 × 1 C4 C000 - 000		Solids, total dissolved [TDS]		E162	20	mg/L	134	136	2	Diff <2x LOR	1
Ø	(QC Lot: 1566399)										
W12421019-013 A		Solids, total suspended [TSS]	• ***	E160	3.0	mg/L	4.1	3.5	0.6	Diff <2x LOR	
utrients	(QC Lot: 1564703)	Girls Communication of the Com									
W12421033-001 A		Sulfate (as SO4)	14808-79-8	E235.SO4	1.50	mg/L	1030	1030	0.322%	20%	
utrients	(QC Lot: 1564704)										
VVI 2421033-001 A		Chloride	16887-00-6	E235.CI	2.50	mg/L	3.63	3.56	0.07	Diff <2x LOR	
lutrients	(QC Lot: 1564705)										
VV 1 242 1033-001	Anonymous	Fluoride	16984-48-8	E235.F	0.100	mg/L	0.874	0.879	0.005	Diff <2x LOR	
Anions and Nutrients (QC Lot: 1564706	(QC Lot: 1564706)	-6 - 1 (m)									
W12421033-001 A		Nitrate (as N)	14797-55-8	E235.NO3	0.100	mg/L	0.245	0.230	0.016	Diff <2x LOR	
Anions and Nutrients (QC Lot: 1564707)	(G) (1547/07)										



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				LOIA WEIAIS (QC LOI: 1562886)				VVI 2421115-001	Microbiological Tes	HAZ401/39-001	Anions and Nutrien	W12421115-003	Anions and Nutrien	HAZ401745-001	Anions and Nutrien	T00-661.LZ4Z11AA	Anions and Nutrien	VV1Z4Z1155-001	Anions and Nutrien	VV12421155-001	Anions and Nutrien	WT2421155-001	Anions and Nutrien	WI2421155-001	Anions and Nutrien	WT2421155-001	Anions and Nutrien	HA2401656-001	Anions and Nutrien	WT2421033-001	Anions and Nutrien	WT2421033-001	Anions and Nutrien	Laboratory sample ID	Sub-Matrix: Water
			Aironymous	1562886)	Allonymous	WIT2421155,002		DW1-1	Microbiological Tests (QC Lot: 1564008)	Anonymous	Anions and Nutrients (QC Lot: 1575545)	DW2-1	Anions and Nutrients (QC Lot: 1570752)	Anonymous	Anions and Nutrients (QC Lot: 1567874)	Anonymous	Anions and Nutrients (QC Lot: 1565825)	Anonymous	Anions and Nutrients (QC Lot 1565824)	Anonymous	Anions and Nutrients (QC Lot: 1565823)	Anonymous	Anions and Nutrients (QC Lot: 1565822)	Anonymous	Anions and Nutrients (QC Lot: 1565821)	Anonymous	Anions and Nutrients (QC Lot: 1565820)	Anonymous	Anions and Nutrients (QC Lot: 1564710)	Anonymous	Anions and Nutrients (QC Lot: 1564708)	Anonymous	Anions and Nutrients (QC Lot: 1564707) - continued	Client sample ID	
Barium, total	Arsenic, total	Antimony, total	Aluminum, total		Coliforms, total		Coliforms, total	Coliforms, Escherichia coli [E. coli]		Ammonia, total (as N)		Phosphate, ortho-, dissolved (as P)		Phosphate, ortho-, dissolved (as P)		Nitrite (as N)		Nitrate (as N)		Fluoride		Bromide		Chloride		Sulfate (as SO4)		Phosphate, ortho-, dissolved (as P)		Bromide		Nitrite (as N)	ontinued	Analyte	
7440-39-3	7440-38-2	7440-36-0	7429-90-5		-		*****	-		7664-41-7		14265-44-2		14265-44-2		14797-65-0		14797-55-8		16984-48-8		24959-67-9		16887-00-6		14808-79-8		14265-44-2		24959-67-9		14797-65-0		CAS Number	
E420	E420	E420	E420		E012.TC		E010	E010		E298		E378-U		E378-U		E235.NO2		E235.NO3		E235.F		E235.Br		E235.CI		E235.SO4		E378-U		E235,Br		E235.NO2		Method	
0.00010	0.00010	0.00010	0.0030		1			_		0.0050		0.0010		0.0020		0.010		0.020		0.020		0.10		0.50		0.30		0.0010		0.50		0.050		LOR	
mg/L	mg/L	mg/L	mg/L		CFU/100mL		MPN/100mL	MPN/100mL		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		mg/L		Unit	
0.00696	0.00026	<0.00010	0.0059		<u>^</u>		Δ			<0.0050		<0.0010		<0.0020		<0.010		0.296		0.565		<0.10		16.6		15.6		0.0096		<0.50		<0.050		Original Result	Labora
0.00688	0.00025	<0.00010	0.0061		4		<u>^</u>	<u>^</u>		<0.0050		<0.0010		<0.0020		<0.010		0.303		0.572		<0.10		16.5		15.7		0.0099		<0.50		<0.050	, recourt	Duplicate	Laboratory Duplicate (DUP) Report
1.05%	0.000007	0	0.0002		0		0	0		0		0		0		0		2.26%		1.14%		0		0.817%		0.0921%		0.0003		0		0	pinerence	RPD(%) or	UP) Report
20%	Diff <2x LOR	Diff <2x LOR	Diff <2x LOR		Diff <2x LOR		Diff <2x LOR	Diff <2x LOR		Diff <2x LOR		Diff <2x LOR		Diff <2x LOR		Diff <2x LOR		20%		20%		Diff <2x LOR		20%		20%		Diff <2x LOR		Diff <2x LOR		Diff <2x LOR	Fillits	Duplicate	or an interest to the contract of the contract
		1			1		1	1				1																				1		Qualifier	

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Sub-Matrix: Water							Labora	Laboratory Duplicate (DUP) Report	UP) Report		STREET CONTRACTOR CONTRACTOR
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	LOR	Unit	Original Result	Duplicate	RPD(%) or	Duplicate	Qualifier
HA2401721-001	Oia Meiais (QC Lot 1562886) - continued	-86) vectorit	Difference	Limits	
TAZ4017Z1-001	Anonymous	Beryllium, total	7440-41-7	E420	0.000020	mg/L	<0.000020	<0.000020	0	Diff <2x LOR	!
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	
		Boron, total	7440-42-8	E420	0.010	mg/L	<0.010	<0.010	0	Diff <2x LOR	1
		Cadmium, total	7440-43-9	E420	0.00000050	mg/L	0.0000068	0.0000061	0.0000007	Diff <2x LOR	
		Calcium, total	7440-70-2	E420	0.050	mg/L	13.6	14.0	3.18%	20%	
		Cesium, total	7440-46-2	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	***************************************
		Chromium, total	7440-47-3	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	1
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.0311	0.0309	0.571%	20%	
		Iron, total	7439-89-6	E420	0.010	mg/L	0.062	0.061	0.0008	Diff <2x LOR	
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000349	0.000347	0.000001	Diff <2x LOR	İ
		Lithium, total	7439-93-2	E420	0.0010	mg/L	<0.0010	<0.0010	0	Diff <2x LOR	1
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	1.77	1.77	0.292%	20%	!
		Manganese, total	7439-96-5	E420	0.00010	mg/L	0.00213	0.00217	1.69%	20%	
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000131	0.000144	0.000013	Diff <2x LOR	l
		Nickel, total	7440-02-0	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	i
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.637	0.671	5.13%	20%	!
		Potassium, total	7440-09-7	E420	0.050	mg/L	0.539	0.536	0.418%	20%	
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00060	0.00067	0.00007	Diff <2x LOR	1
		Selenium, total	7782-49-2	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	
		Silicon, total	7440-21-3	E420	0.10	mg/L	1.88	1.89	0.0682%	20%	1
		Silver, total	7440-22-4	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	l
		Sodium, total	7440-23-5	E420	0.050	mg/L	25.1	24.9	0.840%	20%	
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0949	0.0938	1.24%	20%	1
		Sultur, total	7704-34-9	E420	0.50	mg/L	14.1	14.0	1.38%	20%	•
		l ellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	-
		I nallium, total	7440-28-0	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	****
		i norium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	-
		lin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	*******
		illanium, total	7440-32-6	E420	0.00030	mg/L	<0.00030	<0.00030	0	Diff <2x LOR	•
		Luigsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	1
		Uranium, total	7440-61-1	E420	0.000010	mg/L	<0.000010	<0.000010	0	Diff <2x LOR	l
		Zinc total	7440-62-2	E420	0.00050	mg/L	<0.00050	<0.00050	0	Diff <2x LOR	1
		בוויל, ועומו	/440-66-6	E420	0.0030	mg/L	0.247	0.247	0.0606%	20%	!



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HA2401721-001 Anonymous	Total Wetals (@@ 1601; 15628		Laboratory sample ID Client sample ID	Sub-Matrix: Water
	(86) - continued			
Zirconium, total			Analyte	
7440-67-7 E420			CAS Number Method	
E420			Method	
0.00020			LOR	
mg/L			Unit	
<0.00020		Result	Original	Laborat
<0.00020		Result	Duplicate	Laboratory Duplicate (DUP) Report
0		Difference	RPD(%) or	JP) Report
Diff <2x LOR	O CONTRACTOR OF THE CONTRACTOR	Limits	Duplicate	
			Qualifier	





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Method Blank (MB) Report

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

st samples. Method Blank results are used to monitor and control for potential

Analyte CAS Number Method	ethod	LOR	Unit	Result	Qualifier
FrityStical Flests (LCLOH-1568837)	60	3	mg/L	<3.0 —	
Physical Tests (QCLot: 1563499)		_			
Turbidity E121	2.1	0.1	UTU	<0.10	-
(QCLot: 1564067)			. –	_	
Physical Tasts (OCI of: 1567704)				<2.0	1
Alkalinily, total (as CaCO3) —— E290	290	_	ma/l	<u> </u>	
Physical Tests (QCLot: 1564702)			-		
Conductivity E100	00		µS/cm	<1.0	444
Physical Tests (QCLot: 1565827)		_	_		
Alkalinity, total (as CaCO3) E290	290		mg/L	<1.0	
Physical Tests (QCLot: 1565828) Conductivity E100	00	-	in in	 2	
Physical Tests (QCLot: 1566392)					
Solids, lotal dissolved [1 DS] E162	62	10	mg/L	<10	
Physical Tests (QCLot: 1566399) Solids, total suspended [TSS] E160	160	ω		\ - -	
Anions and Nutrients (QCLot: 1564703)			; ;		;
Sulfate (as SO4) 14808-79-8 E2	E235.SO4	0.3	mg/L	<0.30	II
Anions and Nutrients (QCLot: 1564704)		-	***		
16887-00-6	E235.Cl	0.5	mg/L	<0.50	
nd Nutrients (QCLot: 1564705)			_	_	
16984-48-8		0.02	mg/L	<0.020	
Anions and Nutrients (QCLot: 1564706) Nitrate (as N) 14797-55-8 E235 NO3	35.NO3	0.00			
Anions and Nutrients (QCLot: 1564707)		_			
Nitrile (as N) 14797-65-0 E235.NO2	:35.NO2	0.01	mg/L	<0.010	!
nd Nutrients (QCLot: 1564708)		_	-		
24959-67-9 E235.Br	235.Br	0.1	mg/L	<0.10	1
t: 1564710)				-	
Anione and Mitriago (OC) of JEGGOO)	3/6-U	0.001	mg/L	# 0.0016	80
Anions and Nutrients (QCLot: 1565820)			-	-	

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Analyte CAS Nu	CAS Number Method	LOR	Unit	Result	Qualifier
Anions and Nutrients (QCLot: 1565820) - continued Sulfate (as SO4) 14808-79-8	79-8 E235.SO4	0.3	mo/l	۸n ۹n	
Anions and Nutrients (QCLot: 1565821) Chloride	00.6 (E235 C)	, 1	:		
nd Nutrients (QCLot. 1565822)			110/1		
Bromide 24959-67-9	67-9 E235.Br	0.1	mg/L	<0.10	
Anions and Nutrients (QCLot: 1565823) Fluoride 16984-48-8	48-8 E235.F	0.02	mg/L	<0.020	
Anions and Nutrients (QCLot: 1565824) Nitrate (as N) 14797-55-8	55-B E235,NO3	000			
Nutrients (QCLot: 1565825)			ē,	70.020	!
Nitrite (as N) 14797-65-0	65-0 E235.NO2	0.01	mg/L	<0.010	
Anions and Nutrients (QCLot: 1567874) Phosphate, ortho-, dissolved (as P) 14285-44-2	44-2 E378-U	0.001			
t: 1570752)		-	ŭ I		:
Phosphate, ortho-, dissolved (as P) 14265-44-2	44-2 E378-U	0.001	mg/L	<0.0010	
ns (QCLot: 1575545)		_	-	_	
Ammonia, Total (as N) 7664-41-7	41-7 E298	0.005	mg/L	<0.0050	
Microbiological Tests (QCLot: 1564008) Coliforms, Escherichia coli [E. coli]	E010	-	MPN/100ml		
Coliforms, total	E010		MPN/100mL	Δ.	
Microbiological Tests (QCLot: 1564208) Coliforms, Escherichia coli (E. coli)	E012A.EC	-	CFU/100mL		
Microbiological Tests (QCLot: 1564215) Coliforms, total	E012.TC	A		<u>.</u>	
Microbiological Tests (QCLot: 1564216)		_	-		
coliforms, total background	E012.BG.TC	→ ·	CFU/100mL		
Microbiological Tests (QCLot: 1564217) Colforms, total	E012.TC	<u></u>	CE1440031		
		-	-		
Total Metals (QCLot: 1562886) Aluminum, total 7429-90-5	90-5 E420	0.003	mg/L	<0.0030	
Antimony, total 7440.	7440-36-0 E420	0.0001	mg/L	<0.00010	
Arsenic, total 7440-38-2	38-2 E420	0.0001	mg/L	<0.00010	-
Barium, total 7440-39-3	39-3 E420	0.0001	mg/L	<0.00010	-
Beryllium, total 7440-41-7	41-7 E420	0.00002	mg/L	<0.000020	
Bismuth, total 7440.	7440-69-9 E420	0.00005	mg/L	<0.000050	1

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Challe (OCC) cots 1562398) continued CASA Number (Method LOB Unit Incidea 7440-42-8 [6202 0.01 mg/L mg/L Incideal 7440-42-8 [6202 0.00 mg/L mg/L mg/L Incideal 7440-42-8 [6202 0.00005 mg/L mg/L						
7440-42-8 E420 0.001 mgl. 7440-42-8 E420 0.00005 mgl. 7440-43-9 E420 0.00005 mgl. 7440-43-2 E420 0.00005 mgl. 7440-43-2 E420 0.00005 mgl. 7440-43-2 E420 0.00005 mgl. 7440-43-2 E420 0.00005 mgl. 7439-83-3 E420 0.00005 mgl. 7439-83-5 E420 0.0001 mgl. 7449-83-7 E420 0.0001 mgl. 7440-23-1 E420 0.0005 mgl. 7440-23-2 E420 0.0005 mgl. 7440-23-3 E420 0.0005 mgl. 7440-23-4 E420 0.0005 mgl. 7440-23-5 E420 0.0005 mgl. 7440-23-6 E420 0.0005 mgl. 7440-23-7 E420 0.0005 mgl. 7440-33-7 E420 0.0001 mgl. </th <th>Analyte</th> <th>CAS Number Method</th> <th>LOR</th> <th>Unit</th> <th>Result</th> <th>Qualifier</th>	Analyte	CAS Number Method	LOR	Unit	Result	Qualifier
Ball 7440-43-9 E420 0.00005 mg/L all 7440-77-2 E420 0.00005 mg/L all 7440-47-2 E420 0.00001 mg/L 101 7440-48-2 E420 0.00001 mg/L 1440-48-3 E420 0.00001 0.0001 mg/L 1440-48-3 E420 0.00005 0.0001 mg/L 1440-48-3 E420 0.00005 0.0001 mg/L 1440-48-3 E420 0.00005 0.001 mg/L 1440-48-3 E420 0.00005 0.001 mg/L 1440-48-3 E420 0.00005 0.0001 mg/L 1440-48-4 E420 0.00005 0.0001 mg/L 1440-48-2 E420 0.00005 0.0001 mg/L 1440-48-2 E420 0.00005 0.0000 mg/L 1440-48-2 E420 0.00005 0.0000 mg/L 1440-48-2 E420 0.0000 0.0000	lotal weitals (QCLot: 1562886) - continued Boron, total	7440-42-8 E420	0.01	mo/		
7440-70-2 E420 0.05 mg/L 7440-48-2 E420 0.0001 mg/L 7440-48-2 E420 0.00001 mg/L 7440-48-3 E420 0.00001 mg/L 7440-88-6 E420 0.00005 mg/L 7438-88-1 E420 0.00005 mg/L 7438-88-1 E420 0.00005 mg/L 1438-88-1 E420 0.00005 mg/L 1438-88-1 E420 0.00005 mg/L 1440-88-8 E420 0.00005 mg/L 1440-88-8 E420 0.00005 mg/L 1440-88-1 E420 0.00001 mg/L	Cadmium, total	7440-43-9 E420	0.000005	mg/L	<0.0000050	
1440-46-2 6420	Calcium, total	7440-70-2 E420	0.05	mg/L	<0.050	
	Cesium, total	7440-46-2 E420	0.00001	mg/L	<0.000010	1
7440-48-4 [220 0.0001 mg/l. 7439-89-6 [220 0.0005 mg/l. 7439-89-6 [220 0.0005 mg/l. 7439-89-7 [220 0.0005 mg/l. 7439-89-7 [220 0.0005 mg/l. 1439-89-7 [220 0.0005 mg/l. 1440-29-7 [220 0.0005 mg/l. 14	Chromium, total	7440-47-3 E420	0.0005	mg/L	<0.00050	!
7445.504 [420] 7439.924 [420] 00005 mg/L 7439.925 [420] 00005 mg/L 7439.925 [420] 00005 mg/L 7439.925 [420] 00005 mg/L 7439.925 [420] 000005 mg/L 7439.925 [420] 000005 mg/L 7439.925 [420] 000005 mg/L 7440.025 [420] 000005 mg/L 7440.025 [420] 000005 mg/L 7440.225 [420] 000005 mg/L 7440.225 [420] 000005 mg/L 7440.225 [420] 000005 mg/L 7440.225 [420] 000000 mg/L 7440.226 [420] 00000 mg/L 7440.226 [420] 00000 mg/L 7440.226 [420] 00000 mg/L 7440.226 [420] 00000 mg/L 7440.227 [420] 00000 mg/L 7440.226 [420] 00000 mg/L 7440.227 [420] 00000 mg/L 7440.226 [420] 00000 mg/L 7440.226 [420] 00000 mg/L 7440.227 [420] 00000 mg/L 7440.226 [420] 00000 mg/L 7440.227 [420] 00000 mg/L 7440.226 [420] 00000 mg/L	Cobalt, total	7440-48-4 E420	0.0001	mg/L	<0.00010	
7439.694 6420 0.01 mg/L 7439.697 6420 0.0005 mg/L all 7439.697 6420 0.0005 mg/L all 7439.697 6420 0.0001 mg/L all 7439.697 6420 0.0001 mg/L all 7440.697 6420 0.0005 mg/L 7440.772 6420 0.0005 mg/L 7723.140 6420 0.0005 mg/L 77440.77 6420 0.0005 mg/L 77440.773 6420 0.0005 mg/L 77440.773 6420 0.0005 mg/L 77440.7740.773 6420 0.0005 mg/L 77440.7740.7740.7740.7740 6420 0.0005 mg/L 77440.7740.7740.7740.7740.7740.7740.774	Copper, total	7440-50-8 E420	0.0005	mg/L	<0.00050	-
7439927 E420 0.00005 mg/L 7439932 E420 0.0005 0.0005 mg/L 7439932 E420 0.0001 0.0005 mg/L 1439947 E420 0.0005 0.0001 0.0001 all 7439947 E420 0.0005 0.0005 0.0001 all 7440202 E420 0.0005 0.0005 0.0001 all 7440217 E420 0.0005 0.0005 0.0001 7440213 E420 0.00005 0.0001 0.0001 7440213 E420 0.00005 0.0001 0.0001 7440224 E420 0.00005 0.0001 0.0001 7440224 E420 0.0000 0.0001 0.0001 7440235 E420 0.0002 0.0001 0.0001 7440248 E420 0.00001 0.0001 7440249 E420 0.00001 0.0001 7440249 E420 0.00001 0.0001 7440251 E420 0.00001 0.0001 7440251 E420 0.00001 0.0001 7440251 E420 0.00001 0.0001 7440251 E420 0.00001 0.0001 7440252 E420 0.00001 0.0001 7440262 E420 0.00001 0.0001 7440565 E420 0.00001 0.0001	Iron, total	7439-89-6 E420	0.01	mg/L	<0.010	1
1439-83-2 2420	Lead, total	7439-92-1 E420	0.00005	mg/L	<0.000050	l
1	Lithium, total	7439-93-2 E420	0.001	mg/L	<0.0010	-
ali 1439-96-5 [420 0.0001 mg/L 139-96-7 [420 0.0005 mg/L 1440-02-0 [420 0.0005 mg/L 1743-98-7 [420 0.0005 mg/L 1743-98-7 [420 0.0005 mg/L 1743-98-7 [420 0.0005 mg/L 1743-98-9 [420 0.0005 mg/L 17440-17-7 [420 0.0005 mg/L 17440-21-3 [420 0.0005 mg/L 17440-21-3 [420 0.0005 mg/L 17440-23-5 [420 0.0001 mg/L 17440-23-5 [420 0.0001 mg/L 17440-23-5 [420 0.0001 mg/L 17440-33-5 [420 0.0001 mg/L 17440-	Magnesium, total	7439-95-4 E420	0.005	mg/L	<0.0050	1
Idal 7439-867 E420 0,00005 mg/L al 7440-02-0 E420 0,0005 mg/L 7440-02-7 E420 0,005 mg/L 7440-03-7 E420 0,05 mg/L 7440-17-7 E420 0,000 0,000 mg/L 7440-17-7 E420 0,000 0,000 mg/L 7440-18-9-2 E420 0,000 0,000 mg/L 7440-23-5 E420 0,000 0,000 mg/L 7440-24-6 E420 0,000 0,000 mg/L 7440-24-8 E420 0,000 0,000 mg/L 7440-28-0 E420 0,000 mg/L mg/L 7440-28-0 E420 0,000 mg/L mg/L 7440-28-1 E420 0,000 mg/L mg/L 7440-31-5 E420 0,000 mg/L mg/L 7440-81-1 E420 0,000 0,000 mg/L 7440-81-2 E420 <td>Manganese, total</td> <td>7439-96-5 E420</td> <td>0.0001</td> <td>mg/L</td> <td><0.00010</td> <td>-</td>	Manganese, total	7439-96-5 E420	0.0001	mg/L	<0.00010	-
all 7440-02-0 E420 0.0005 mg/L 1 7723-14-0 E420 0.05 mg/L 7400-03-7 E420 0.05 mg/L 7400-17-7 E420 0.050 mg/L 7400-17-7 E420 0.00005 mg/L 7400-23-5 E420 0.00001 mg/L 7400-23-5 E420 0.0002 mg/L 7400-23-6 E420 0.0002 mg/L 7400-23-7 E420 0.0002 mg/L 7400-23-1 E420 0.0002 mg/L 7400-23-1 E420 0.0002 mg/L 7400-23-1 E420 0.0001 mg/L 7400-23-1 E420 0.0001 mg/L 7400-23-1 E420 0.0001 mg/L 7400-23-2 E420 0.0001 mg/L 7400-23-3 E420 0.0001 mg/L 7400-23-4 E420 0.0001 mg/L 7400-23-5 E420 0.0003 mg/L 7400-23-6 E420 0.0003 mg/L 7400-23-7 E420 0.0003 mg/L 7400-23-8 E420 0.0003 mg/L 7400-23-9 E42	Molybdenum, total	7439-98-7 E420	0.00005	mg/L	<0.000050	-
all 7723-14-0 [420 0.05 mg/t 7440-09-7 [420 0.002 mg/t 7460-17-7 [420 0.002 mg/t 7782-49-2 [420 0.0002 mg/t 7782-49-2 [420 0.0002 mg/t 7460-21-3 [420 0.00005 mg/t 7440-21-3 [420 0.00005 mg/t 7440-23-5 [420 0.00001 mg/t 7704-34-9 [420 0.0002 mg/t 7440-28-1 [420 0.0002 mg/t 7440-31-5 [420 0.0001 mg/t 7440-31-5 [420 0.0001 mg/t 7440-31-7 [420 0.0001 mg/t 7440-31-7 [420 0.0001 mg/t 7440-68-6 [420 0.0001 mg/t 0.0001	Nickel, total	7440-02-0 E420	0.0005	mg/L	<0.00050	***
7440-08-7 E420 0.05 mg/L 7440-17-7 E420 0.0002 mg/L 7782-48-2 E420 0.0002 mg/L 7440-21-3 E420 0.00005 mg/L 7440-22-4 E420 0.00001 mg/L 7440-22-4 E420 0.00001 mg/L 7440-23-5 E420 0.0002 mg/L 7704-34-9 E420 0.0002 mg/L 7440-28-0 E420 0.0002 mg/L 7440-28-1 E420 0.0001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0001 mg/L 7440-33-7 E420 0.0001 mg/L 7440-33-7 E420 0.0003 mg/L 7440-81-1 E420 0.0001 mg/L 7440-81-2 E420 0.0001 mg/L 7440-81-3 E420 0.0003 mg/L 7440-81-4 E420 0.0003 mg/L	Phosphorus, total	7723-14-0 E420	0.05	mg/L	<0.050	-
7440-17-7 E420 0,0002 mg/L 7782-49-2 E420 0,00005 mg/L 7440-21-3 E420 0,00005 mg/L 7440-22-4 E420 0,00001 mg/L 7440-23-5 E420 0,000 mg/L 7704-34-9 E420 0,000 mg/L 13494-380-9 E420 0,000 mg/L 7440-28-0 E420 0,000 mg/L 7440-31-7 E420 0,000 mg/L 7440-33-7 E420 0,000 mg/L 7440-43-1 E420 0,000 mg/L 7440-33-7 E420 0,000 mg/L 7440-49-1 E420 0,000 mg/L 7440-69-1 E420 0,000 mg/L 7440-69-2 E420 0,000 mg/L 7440-69-1 E420 0,000 mg/L <td>Potassium, total</td> <td>7440-09-7 E420</td> <td>0.05</td> <td>mg/L</td> <td><0.050</td> <td> </td>	Potassium, total	7440-09-7 E420	0.05	mg/L	<0.050	
7782-49-2 E420 0.00005 mg/L 7440-21-3 E420 0.1 mg/L 7440-22-4 E420 0.00001 mg/L 7440-23-5 E420 0.0002 mg/L 7704-34-9 E420 0.0002 mg/L 13494-80-9 E420 0.0002 mg/L 7440-28-1 E420 0.0001 mg/L 7440-29-1 E420 0.0001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0003 mg/L 7440-31-7 E420 0.0001 mg/L 7440-32-8 E420 0.0003 mg/L 7440-31-7 E420 0.0001 mg/L 7440-61-1 E420 0.0003 mg/L 7440-61-2 E420 0.0003 mg/L 7440-61-3 E420 0.0003 mg/L 7440-61-4 E420 0.0003 mg/L 7440-61-6 E420 0.0003 mg/L 7440-61-7 E420 0.0003 mg/L 7440-61-7 E420 0.0003 mg/L	Rubidium, total	7440-17-7 E420	0.0002	mg/L	<0.00020	-
7440-21-3 E420 0,1 mg/L 7440-22-4 E420 0,00001 mg/L 7440-23-5 E420 0,00001 mg/L 7440-24-6 E420 0,0002 mg/L 7704-34-9 E420 0,0002 mg/L 7440-28-0 E420 0,0002 mg/L 7440-29-1 E420 0,0001 mg/L 7440-31-5 E420 0,0001 mg/L 7440-31-7 E420 0,0001 mg/L 7440-31-8 E420 0,0001 mg/L 7440-31-9 E420 0,0001 mg/L 7440-31-1 E420 0,0001 mg/L 7440-61-1 E420 0,0001 mg/L 7440-61-7 E420 0,0003 mg/L	Selenium, total	7782-49-2 E420	0.00005	mg/L	<0.000050	
7440-22-4 E420 0.00001 mg/L 7440-23-5 E420 0.000 mg/L 7440-23-6 E420 0.0002 mg/L 7704-34-9 E420 0.0002 mg/L 13494-80-9 E420 0.0002 mg/L 7440-28-0 E420 0.00001 mg/L 7440-29-1 E420 0.0001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0001 mg/L 7440-33-7 E420 0.0001 mg/L 7440-61-1 E420 0.0001 mg/L 7440-62-2 E420 0.0001 mg/L 7440-63-6 E420 0.0001 mg/L 7440-60-1 E420 0.0001 mg/L 7440-60-1 E420 0.0005 mg/L 7440-60-6 E420 0.0005 mg/L 7440-60-6 E420 0.0005 mg/L	Silicon, total	7440-21-3 E420	0.1	mg/L	<0.10	
7440-23-5 E420 0.05 mg/L 7440-24-6 E420 0.0002 mg/L 7704-34-9 E420 0.0002 mg/L 7440-28-0 E420 0.0002 mg/L 7440-28-1 E420 0.00001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0001 mg/L 7440-81-1 E420 0.0001 mg/L 7440-62-2 E420 0.0001 mg/L 7440-68-6 E420 0.0003 mg/L 7440-68-6 E420 0.0003 mg/L 7440-69-7 E420 0.0003 mg/L	Silver, total	7440-22-4 E420	0.00001	mg/L	<0.000010	-
7440-24-6 E420 0.0002 mg/L 7704-34-9 E420 0.5 mg/L 13494-80-9 E420 0.0002 mg/L 7440-28-0 E420 0.00001 mg/L 7440-29-1 E420 0.0001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0003 mg/L 7440-61-1 E420 0.0001 mg/L 7440-62-2 E420 0.0001 mg/L 7440-66-6 E420 0.0003 mg/L 7440-67-7 E420 0.0003 mg/L 7440-67-7 E420 0.0003 mg/L	Sodium, total	7440-23-5 E420	0.05	mg/L	<0.050	****
7704-34-9 E420 0.5 mg/L 13494-80-9 E420 0.0002 mg/L 7440-28-0 E420 0.00001 mg/L 7440-29-1 E420 0.0001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0003 mg/L 7440-31-1 E420 0.0001 mg/L 7440-61-1 E420 0.0001 mg/L 7440-62-2 E420 0.0003 mg/L 7440-66-6 E420 0.0003 mg/L 7440-67-7 E420 0.0002 mg/L	Strontium, total	7440-24-6 E420	0.0002	mg/L	<0.00020	****
13494-80-9 E420 0.0002 mg/L 7440-28-0 E420 0.00001 mg/L 7440-29-1 E420 0.0001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0003 mg/L 7440-33-7 E420 0.0001 mg/L 7440-61-1 E420 0.0001 mg/L 7440-62-2 E420 0.0005 mg/L 7440-66-6 E420 0.0002 mg/L 7440-67-7 E420 0.0002 mg/L	Sulfur, total	7704-34-9 E420	0.5	mg/L	<0.50	
7440-28-0 E420 0.00001 mg/L 7440-29-1 E420 0.0001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0003 mg/L 7440-33-7 E420 0.0001 mg/L 7440-62-2 E420 0.0001 mg/L 7440-62-6 E420 0.0003 mg/L 7440-63-7 E420 0.0003 mg/L 7440-63-7 E420 0.0003 mg/L 7440-63-7 E420 0.0002 mg/L	Tellurium, total	13494-80-9 E420	0.0002	mg/L	<0.00020	-
7440-29-1 E420 0.0001 mg/L 7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0003 mg/L 7440-33-7 E420 0.0001 mg/L 7440-61-1 E420 0.0001 mg/L 7440-62-2 E420 0.0005 mg/L 7440-66-6 E420 0.003 mg/L 7440-67-7 E420 0.0002 mg/L	Thallium, total	7440-28-0 E420	0.00001	mg/L	<0.000010	•
7440-31-5 E420 0.0001 mg/L 7440-32-6 E420 0.0003 mg/L 7440-33-7 E420 0.0001 mg/L 7440-61-1 E420 0.0001 mg/L 7440-62-2 E420 0.0005 mg/L 7440-66-6 E420 0.003 mg/L 7440-67-7 E420 0.0002 mg/L	Thorium, total	7440-29-1 E420	0.0001	mg/L	<0.00010	
7440-32-6 E420 0.0003 mg/L 7440-33-7 E420 0.0001 mg/L 7440-61-1 E420 0.00001 mg/L 7440-62-2 E420 0.0005 mg/L 7440-66-6 E420 0.003 mg/L 7440-67-7 E420 0.0002 mg/L	Tin, total	7440-31-5 E420	0.0001	mg/L	<0.00010	-
7440-33-7 E420 0.0001 mg/L 7440-61-1 E420 0.00001 mg/L 7440-62-2 E420 0.0005 mg/L 7440-66-6 E420 0.0003 mg/L 7440-67-7 E420 0.0002 mg/L	Tilanium, total	7440-32-6 E420	0.0003	mg/L	<0.00030	
7440-61-1 E420 0.00001 mg/L 7440-62-2 E420 0.0005 mg/L 7440-66-6 E420 0.0003 mg/L 7440-67-7 E420 0.0002 mg/L	Tungsten, total	7440-33-7 E420	0.0001	mg/L	<0.00010	!
7440-62-2 E420 0.0005 mg/L 7440-66-6 E420 0.003 mg/L 7440-67-7 E420 0.0002 mg/L	Uranium, total	7440-61-1 E420	0.00001	mg/L	<0.000010	
7440-66-6 E420 0.003 mg/L 7440-67-7 E420 0.0002 mg/L	Vanadium, total	7440-62-2 E420	0.0005	mg/L	<0.00050	-
7440-67-7 E420 0.0002 mg/L	Zinc, total	7440-66-6 E420	0.003	mg/L	<0.0030	
	Zirconium, total	7440-67-7 E420	0.0002	mg/L	<0.00020	-



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 Work Order:
 WT2421115

 Client:
 Englobe Corp.

 Project:
 02405890



8	Qualifier	Qualifiers
Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.	Description	



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 Work Order :
 WT2421115

 Client :
 Englobe Corp.

 Project :
 02405890

Laboratory Control Sample (LCS) Report

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

				Laboratory Cor	Laboratory Control Sample (LCS) Report	Report	
			Spike	Recovery (%)	Recovery Limits (%)	Limits (%)	
Analyte CAS Number Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: (563337)) Solids Interested ITSS							
	u	mg/L	150 mg/L	104	85.0	115	-
al Tests (QCLot: 1563499)				-	-		
E121	0.1	NTC	200 NTU	89.5	85.0	115	
Physical Tests (QCLot: 1564067)				· .			
Colour, apparent E330	2	င	25 CU	98.4	70.0	130	
Physical Tests (QCLot: 1564700)						-	
PH E108	Parket.	pH units	7 pH units	100	98.0	102	
Physical Tests (QCLot: 1564701)				_			
Alkalinity, total (as CaCO3)	<u></u>	mg/L	150 mg/L	98.7	85.0	115	
Physical Tests (QCLot: 1564702)					_		
Conductivity —- E100		µS/cm	1410 µS/cm	101	90.0	110	!
Physical Tests (QCLot: 1565826)							
E108	1	pH units	7 pH units	100	98.0	102	-
Physical Tests (QCLot: 1565827)				-	_	·	,
Auxalimity, total (as CaCO3) [E290	-	mg/L	150 mg/L	100	85.0	115	
Tests (QCLat: 1565828)				-	_		
conditionally E100		µS/cm	1410 µS/cm	100	90.0	110	****
ot: (1566392)				-	-	_	
E162	10	mg/L	1000 mg/L	101	85.0	115	
Physical Tests (QCLot: 1566399)					-		
Surius, oual suspended [188]	ω	mg/L	150 mg/L	86.8	85.0	115	-
Anions and Nutrients (QCLot: 1564703)							
Sulfate (as SO4) 14606-79-8 E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	
Anions and Nutrients (QCLot: 1564704)				_	_		
Chioride 16887-00-6 E235,Cl	0.5	mg/L	100 mg/L	99.2	90.0	110	-
					-		W-1-1-1-1-1-1-1-1
16364-48-6 [E235].F	0.02	mg/L	1 mg/L	99.0	90.0	110	-
Nitrate (as N) 14797-55-8 5925-8002	2						
d Nutrients (OCI of 1564707)	0.02	III9/r	∠.5 mg/L	99.1	90.0	110	1
Nitrite (as N) 14797-65-0 E235 NO2	0.01	mg/L	0.5 mg/L	99.7	90 0	-	
	_		Č	-		č	

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 Work Order:
 WT2421115

 Client:
 Englobe Corp.

 Project:
 02405890

Sub-Matrix: Water					Laboratory Con	Laboratory Control Sample (LCS) Report	eport	
				Spike	Recovery (%)	Recovery Limits (%)	imits (%)	
Analyte	CAS Number Method	LOR	Unit	Target Concentration	LCS .	Low	High	Qualifier
Anions and Nutrients (QCLot: 1564708)								
bromide	24959-67-9 E235.Br	0.1	mg/L	0.5 mg/L	103	85.0	115	-
Anions and Nutrients (QCLot: 1564710) Phosphale, ortho-, dissolved (as P)	14265-44-2 E378-U	0.001	mg/L	0.05 ma/L	100	80 0	1300	
Anions and Nutrients (QCLot: 1565820)								
Sulfate (as SO4)	14808-79-8 E235.SO4	0.3	mg/L	100 mg/L	102	90.0	110	-
Anions and Nutrients (QCLot 1565821)					_			
Chloride	16887-00-6 E235.CI	0.5	mg/L	100 mg/L	100	90.0	110	1
Anions and Nutrients (QCLot: 1565822)						*****		*****
Bromide	24959-67-9 E235.Br	0.1	mg/L	0.5 mg/L	103	85.0	115	
Anions and Nutrients (QCLot: 1565823)					-			
Fluoride	16984-48-8 E235.F	0.02	mg/L	1 mg/L	99.8	90.0	110	
Anions and Nutrients (QCLot: 1565824)					-	_		
Nitrate (as N)	14797-55-8 E235.NO3	0.02	mg/L	2.5 mg/L	100	90.0	110	-
Anions and Nutrients (QCLot: 1565825)					-	_	-	
	T COULTER TO THE COURT OF THE C	0.01	шд/г	υ.5 mg/L	100	90,0	110	1
Anions and Nutrients (QCLot: 1567874) Phosphate, ortho-, dissolved (as P)	14265-44-2 E378-U	0.001	mo/l	0.05	4			
Anions and Nutrients (QCLot: 1570752)			,		-	-	-	
Phosphate, ortho-, dissolved (as P)	14265-44-2 E378-U	0.001	mg/L	0.05 mg/L	98.4	80.0	120	
Anions and Nutrients (QCLot: 1575545)					_	_		
Arimonia, (otal (as N)	7664-41-7 E298	0.005	mg/L	0.2 mg/L	107	85.0	115	
Total Metals (QCLot: 1562886)								
Aluminum, total	7429-90-5 E420	0.003	mg/L	0.1 mg/L	102	80.0	120	
Anumony, (otal		0.0001	mg/L	0.05 mg/L	103	80.0	120	
Arsenic, total	7440-38-2 E420	0.0001	mg/L	0.05 mg/L	108	80.0	120	!
Banum, total	7440-39-3 E420	0.0001	mg/L	0.012 mg/L	100	80.0	120	
Beryllium, total	7440-41-7 E420	0.00002	mg/L	0.005 mg/L	94.0	80.0	120	-
Bismurn, total	7440-69-9 E420	0.00005	mg/L	0.05 mg/L	104	80.0	120	
Boron, total	7440-42-8 E420	0.01	mg/L	0.05 mg/L	97.3	80.0	120	
Cadmium, total	7440-43-9 E420	0.000005	mg/L	0.005 mg/L	99.0	80.0	120	
Calcium, lotal	7440-70-2 E420	0.05	mg/L	2.5 mg/L	99.4	80.0	120	-
Cesium, total	7440-46-2 E420	0.00001	mg/L	0.002 mg/L	101	80.0	120	1
Chromium, total	7440-47-3 E420	0.0005	mg/L	0.012 mg/L	104	80.0	120	<u> </u>
Copair, total	7440-48-4 E420	0.0001	mg/L	0.012 mg/L	102	80.0	120	
copper, total	7440-50-8 E420	0,0005	mg/L	0.012 mg/L	102	80.0	120	1

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Work Order:
Client:
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Sub-Matrix: Water

Sub-pratitix: vvater					Laboratory Cont	Laboratory Control Sample (LCS) Report	Report	
				Spike	Recovery (%)	Recoven	Recovery Limits (%)	
Analyte	CAS Number Method	LOR	Unit	Target Concentration	LCS	Том	High	Qualifier
Total Metals (QCLot: 1562886) - continued	nued							
Iron, total	7439-89-6 E420	0.01	mg/L	0.05 mg/L	99.7	80.0	120	
Lead, total	7439-92-1 E420	0.00005	mg/L	0.025 mg/L	98.6	80.0	120	
Lithium, total	7439-93-2 E420	0.001	mg/L	0.012 mg/L	89.4	80.0	120	1
Magnesium, total	7439-95-4 E420	0.005	mg/L	2.5 mg/L	112	80.0	120	
Manganese, total	7439-96-5 E420	0.0001	mg/L	0.012 mg/L	103	80.0	120	
Molybdenum, total	7439-98-7 E420	0.00005	mg/L	0.012 mg/L	103	80.0	120	
Nickel, total	7440-02-0 E420	0,0005	mg/L	0.025 mg/L	101	80.0	120	1
Phosphorus, total	7723-14-0 E420	0.05	mg/L	0.5 mg/L	102	80.0	120	
Potassium, total	7440-09-7 E420	0.05	mg/L	2.5 mg/L	97.6	80.0	120	
Rubidium, total	7440-17-7 E420	0,0002	mg/L	0.005 mg/L	103	80.0	120	!
Selenium, total	7782-49-2 E420	0.00005	mg/L	0.05 mg/L	106	80.0	120	
Silicon, total	7440-21-3 E420	0.1	mg/L	0.5 mg/L	104	80.0	120	
Silver, total	7440-22-4 E420	0.00001	mg/L	0.005 mg/L	92.0	80.0	120	
Sodium, total	7440-23-5 E420	0.05	mg/L	2.5 mg/L	108	80.0	120	-
Strontium, total	7440-24-6 E420	0.0002	mg/L	0.012 mg/L	101	80.0	120	
Sultur, total	7704-34-9 E420	0.5	mg/L	2.5 mg/L	109	80.0	120	!
Tellurium, total	13494-80-9 E420	0,0002	mg/L	0.005 mg/L	103	80.0	120	!
Thailium, total	7440-28-0 E420	0.00001	mg/L	0.05 mg/L	102	80.0	120	
norium, total	7440-29-1 E420	0.0001	mg/L	0.005 mg/L	94.1	80.0	120	
Tin, total	7440-31-5 E420	0.0001	mg/L	0.025 mg/L	102	80.0	120	
litanium, total	7440-32-6 E420	0.0003	mg/L	0.012 mg/L	102	80.0	120	1
lungsten, total	7440-33-7 E420	0.0001	mg/L	0.005 mg/L	96.6	80.0	120	
Cranium, total	7440-61-1 E420	0.00001	mg/L	0 mg/L	99.9	80.0	120	!
Vanadium, total	7440-62-2 E420	0.0005	mg/L	0.025 mg/L	103	80.0	120	į
Zinc, total	7440-66-6	0.003	mg/L	0.025 mg/L	99.4	80.0	120	1
Zirconium, total	7440-67-7 E420	0.0002	mg/L	0.005 mg/l	95.8	000	120	1



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 Englobe Corp.

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Matrix Spike (MS) Report

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

Sub-Matrix: Water

Sub-Matrix: Water						Matrix Spik	Matrix Spike (MS) Report		
I shorter sample in Client sample in				Spike	ke	Recovery (%)	Recovery Limits (%)	imits (%)	
raporatory sample in chem sample in	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 1564703)									
WT2421033-001 Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	ND mg/L		ND	75.0	125	
Anions and Nutrients (QCLot: 1564704)		e de la companya de l							
WT2421033-001 Anonymous	Chloride	16887-00-6	E235.CI	513 mg/L	500 mg/L	102	75.0	125	
Anions and Nutrients (QCLot: 1564705)	S)								
WT2421033-001 Anonymous	Fluoride	16984-48-8	E235.F	5.14 mg/L	5 mg/L	103	75.0	125	-
Anions and Nutrients (QCLot: 1564706)									
WT2421033-001 Anonymous	Nitrate (as N)	14797-55-8	E235,NO3	12.6 mg/L	12.5 mg/L	101	75.0	125	
Anions and Nutrients (QCLot: 1564707)									
WT2421033-001 Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	2.53 mg/L	2.5 mg/L	101	75.0	125	de constante
Anions and Nutrients (QCLot: 1564708)									
WT2421033-001 Anonymous	Bromide	24959-67-9	E235.Br	2.49 mg/L	2.5 mg/L	99.6	75.0	125	
Anions and Nutrients (QCLot: 1564710)	0)								
HAZ401656-001 Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0199 mg/L	0.02 mg/L	102	70.0	130	th services
HILL	9)	10.00							
VVI 2421155-001 Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	103 mg/L	100 mg/L	103	75.0	125	To the desire
THE COLUMN	0)								
Anonymous Anonymous	Chloride	16887-00-6	E235.CI	102 mg/L	100 mg/L	102	75.0	125	
uu (e	2)								
WF2421155-001 Anonymous	Bromide	24959-67-9	E235.Br	0.50 mg/L	0.5 mg/L	99.6	75.0	125	
utrie	3								
W12421155-001 Anonymous	Fluoride	16984-48-8	E235.F	1.03 mg/L	1 mg/L	103	75.0	125	
Anions and Nutrients (QCLot: 1565824)									
W12421155-001 Anonymous	Nitrate (as N)	14797-55-8	E235.NO3	2.65 mg/L	2.5 mg/L	106	75.0	125	
Anions and Nutrients (QCLot: 1565825)	5)								
WT2421155-001 Anonymous	Nitrite (as N)	14797-65-0	E235.NO2	0.434 mg/L	0.5 mg/L	86.8	75.0	125	
Anions and Nutrients (QCLot: 1567874)									
HA2401745-001 Anonymous	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0171 mg/L	0.02 mg/L	87.1	70.0	130	
lumie I	2)								
W12421115-003 DWZ-1	Phosphate, ortho-, dissolved (as P)	14265-44-2	E378-U	0.0195 mg/L	0.02 mg/L	99.5	70.0	130	-
Anions and Nutrients (QCLot: 1575545)									

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Sub-Matrix: Water

					Matrix Spik	e (MS) Report		
Anglisto			Sp	ke	Recovery (%)	Recovery I	imits (%)	
	CAS Mulliper	Wethod	Concentration	Target	MS	Гом	High	Qualifier
) - continued								
Ammonia, total (as N)	7664-41-7	E298	0.109 mg/L	0.1 mg/L	109	75 N	105	
							1.50	
Aluminum, total	7429-90-5	E420	0.0970 ma/l	0.1 mg/l	0.70	700		
Antimony, total	7440-36-0	E420	0.0521 mg/L	0.05 mg/L	104	70.0	300	-
Arsenic, total	7440-38-2	E420	0.0530 mg/L	0.05 mg/L	106	70.0	130	-
Barium, total	7440-39-3	E420	0.0114 mg/L	0.012 mg/L	91.2	70.0	130	
Beryllium, total	7440-41-7	E420	0.00446 mg/L	0.005 ma/L	89.1	70.0	130	-
Bismuth, total	7440-69-9	E420	0.0485 mg/L	0.05 mg/L	97.1	70.0	3 3	-
Boron, total	7440-42-8	E420	0.048 mg/L	0.05 ma/l	95.1	70.0	300	
Cadmium, total	7440-43-9	E420	0.00488 mg/L	0.005 mg/l	97.7	70.0	130	
Calcium, total	7440-70-2	E420	ND mg/L		N :	70.0	130	
Cesium, total	7440-46-2	E420	0.00253 mg/L	0.002 mg/L	101	70.0	130	İ
Coromium, total	7440-47-3	E420	0.0125 mg/L	0.012 mg/L	100	70.0	130	
Copart total	/440-48-4	E420	0.0124 mg/L	0.012 mg/L	99.1	70.0	130	!
Iron total	7430 80 6	E420	ND mg/L	1	ND	70.0	130	
Lead, total	7439-92-1	1 T T T T T T T T T T T T T T T T T T T	NU mg/L		N D	70.0	130	
Lithium, total	7439-93-2	E420	0.0239 mg/l	0.023 mg/L	95.7	70.0	130	
Magnesium, total	7439-95-4	E420	2.74 mg/L	2.5 ma/L	109	70.0	130	
Manganese, total	7439-96-5	E420	0.0124 mg/L	0.012 ma/L	99 1	70.0	3 0	
Molybdenum, total	7439-98-7	E420	0.0128 mg/L	0.012 mg/L	102	70.0	130	
Nickel, total	7440-02-0	E420	0.0246 mg/L	0.025 mg/L	98.4	70.0	130	;
Potassium total	7/23-14-0	E420	ND mg/L		N N	70.0	130	İ
Rubidium total	7440-09-7	E420	2.32 mg/L	2.5 mg/L	92.9	70.0	130	
Selenium, total	7783 40 3	E420	0.00493 mg/L	0.005 mg/L	98.7	70.0	130	1
Silicon, total	7440-21-3	E420	0.0527 mg/L	0.05 mg/L	105	70.0	130	Ì
Silver, total	7440-22-4	E420	ND mg/L		ND	70.0	130	-
Sodium, total	7440-23-5	E420	ND may	0.005 mg/L	88.2	70.0	130	
Strontium, total	7440-24-6	E420	ND mo/l		3 6	70.0	130	
Sulfur, total	7704-34-9	E420	ND mg/L	-	5 8	70.0	130	1
Tellurium, total	13494-80-9	E420	0.00495 mg/L	0.005 mg/l	9 7	70.0	130	,
Thallium, total	7440-28-0	E420	0.0486 mg/L	0.05 mg/L	97.2	70.0	130	
Thorium, total	7440-29-1	E420	0.00482 mg/L	0.005 mg/L	96 5 i	70.0	130	ì
Tin, total	7440-31-5	E420	0.0252 mg/L	0.025 mg/L	101	70.0	130	1
Titanium, total	7440-32-6	E420	0.0122 mg/L	0.012 mg/L	97.5	70.0	130	1
lungsten, total	7440-33-7	E420	0.00484 mg/L	0.005 mg/L	96.7	70.0	130	
Cranium, total	7440-61-1	E420	0.000255 mg/L	0 mg/L	102	70.0	130	
Zinc total	7440-62-2	E420	0.0251 mg/L	0.025 mg/L	100	70.0	130	
Zirconium lotal	7440-65-5	E420	ND mg/L		ND	70.0	130	
The control of the control	1-10-01-1	E420	0.00476 mg/L	0.005 mg/L	95.2	70.0	130	1
	(QCLot: 1575545) - continued ymous Anninum, total Antimony, total Antimony, total Arsenic, total Beryllium, total Beryllium, total Cacium, total Cacium, total Cosium, total Copper, total Iron, total Lead, total Manganese, total Manganesium, total Phosphorus, total Rubidium, total Selenium, total Selenium, total Thallium, total Titanium, total Titanium, total Titanium, total Tin, total	al (as N) lal lal lal otal otal otal	tal (as N) 7664-41-7 Tal (as N) 7664-41-7	CAS Number Method Concentration all (as N) 7664 41-7 E298 0.109 mg/L all 7429-90-5 E420 0.0870 mg/L all 7440-35-0 E420 0.0521 mg/L 7440-43-2 E420 0.0521 mg/L 7440-43-3 E420 0.0486 mg/L 7440-42-8 E420 0.0486 mg/L 7440-43-9 E420 0.0486 mg/L 7440-43-9 E420 0.0486 mg/L 7440-43-9 E420 0.0048 mg/L 7440-43-9 E420 0.0048 mg/L 7440-43-9 E420 0.0048 mg/L 7440-43-3 E420 0.00283 mg/L 7440-43-3 E420 0.00283 mg/L 7440-43-3 E420 0.00283 mg/L 7440-43-3 E420 0.00283 mg/L 101al 7439-92-1 E420 0.00283 mg/L 101al 7440-22-3 E420 0.0124 mg/L 101al 7440-23-5 E420 0.0238 mg/L 101al 7440-23-5	Spike CAS Number Method Concentration	Spike Record Recitor Recitor Record CAS Number Method Concentration Target Method Spike Method Spike Method Method Spike Method Method Spike Method Met		



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 Englobe Corp.

 Project:
 02405890



Chain of Custody (COC) / Analytical Request Form

Sanada Toll Free: 1 800 668 9878

COC Number: 23 -

Page 🖊 of 🍃

1097696

Work Order Reference WT2421115 Environmental Division Waterloo

A Bookine [R] if neceived by 3pm 14-F - no surcharges apply
4 day [P4] if neceived by 3pm 14-F - 20% rush surcharge minimum
3 day [P3] if neceived by 3pm 14-F - 25% rush surcharge minimum
2 day [P2] if neceived by 3pm 14-F - 20% rush surcharge minimum
1 day [E] if neceived by 3pm 14-F - 100% rush surcharge minimum
1 day [E] if neceived by 3pm 14-F - 100% rush surcharge minimum
Seme day [E2] if neceived by 10mm 14-F - 200% rush surcharge minimum

Turnaround Time (TAT) Requested

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Select Report Format:

Contact and company name below will appear on the final report

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Reports / Recipients

Merge QC/QCI Reports with COA 😿 YES 🗍 NO 📋 N/A Compare Results to Criteria on Report - provide details below if box checked

MAIL FAX

DIANIL.

Select Distribution:

Company address below will appear on the final report

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Additional fees may apply to rush requests on weekends

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Email 3

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Date and Time Required for all E&P TATs:

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FINAL SHIPMENT RECEPTION (ALS use only) Received by: YELLOW - CLIENT COPY Ime INITIAL SHIPMENT RECEPTION (ALS USE ONLY Date: WHITE - LABORATORY COPY Received by:

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Date:

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NA Semple Custody Seals Intact:

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Cooler Custody Seals Intact: YES INTIME COOLER TEMPERATURES 10

PREATO (THENES)

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SAMPLE RECEIPT DETAILS (ALS use only)

NONE OF ICE ICE PARKS I MOZBN

Cooling Method:

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

Drinking Water (DW) Samples 1 (client use)

mples taken from a Regulated DW System?

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mples for human consumption/ use?

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COOLING INITIATED

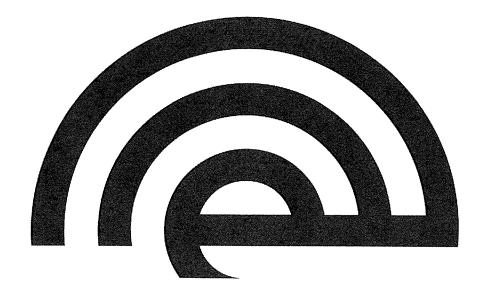
complete all portions of this form may deley analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the teach page of the write - report copy.

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

TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

SHIPMENT RELEASE (client use)

Appendix F Statement of Limitations



STATEMENT OF LIMITATIONS

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This Report should be considered in its entirety; selecting specific portions of the Report may result in the misinterpretation of the content.

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This Report has been prepared for the specific site, development, building, design or building assessment objectives and/or purposes that were described to the Company by the Client. The applicability and reliability of the content of this Report, subject to the limitations provided herein, are only valid to the extent that there has been no material alteration or variation thereto, and the Company expressly disclaims any obligation to update the Report. However, the Company reserves the right to amend or supplement this Report based on additional information, documentation or evidence made available to it.

The Company makes no representation concerning the legal significance of its findings, nor as to the present or future value of the property, or its fitness for a particular purpose and hereby disclaims any responsibility or liability for consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

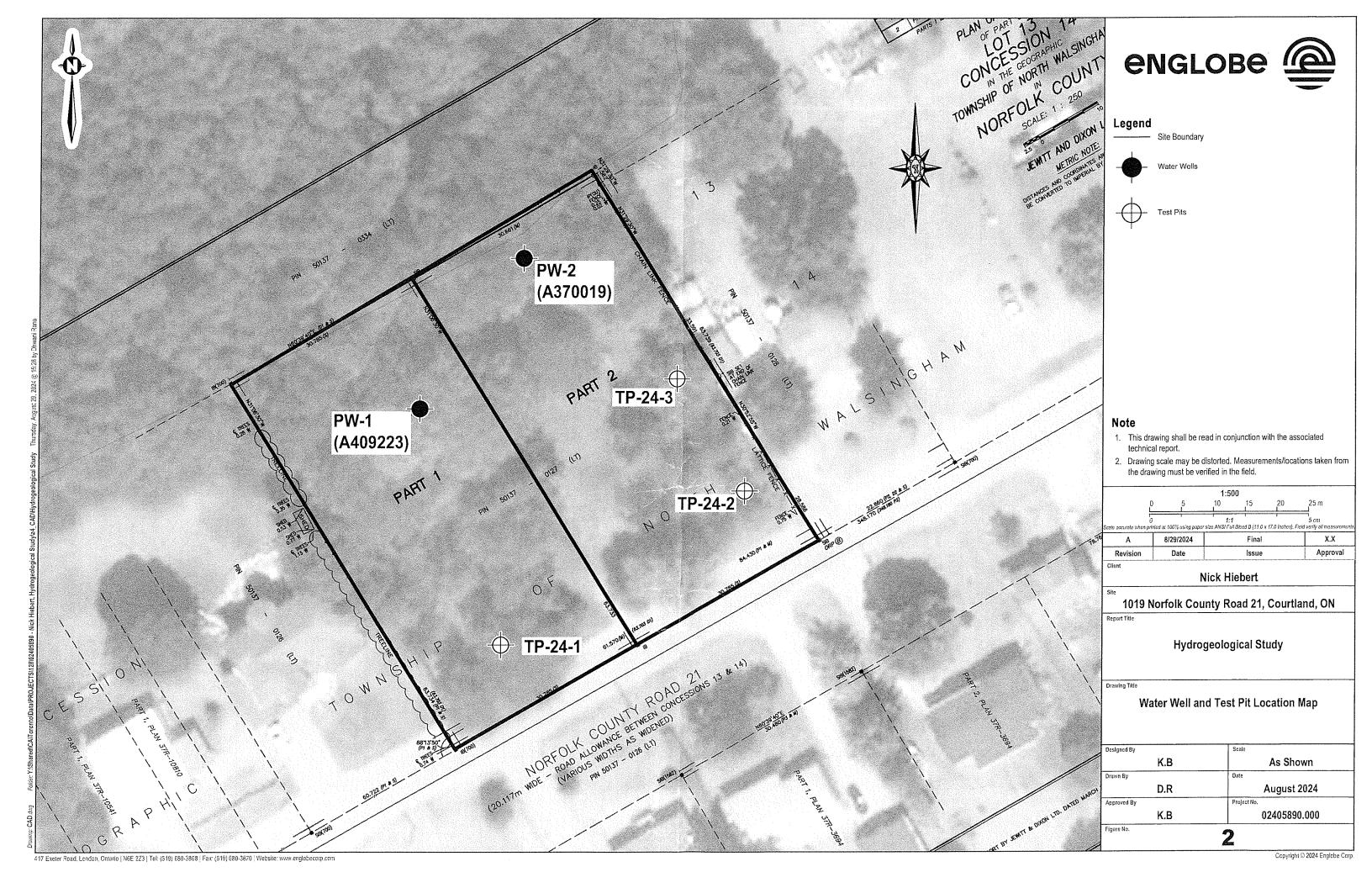
Since the passage of time, natural occurrences, and direct or indirect human intervention may affect the views, conclusions and recommendations (if any) provided in this Report, it is intended for immediate use.

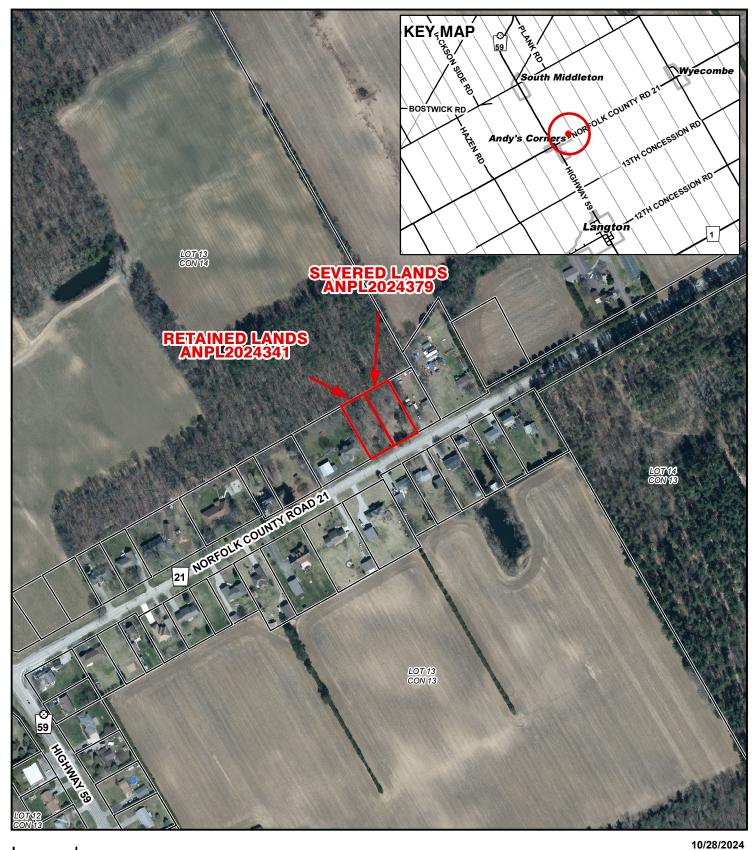
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In preparing this Report, the Company has relied in good faith on information provided by others and has assumed that such information is factual, accurate and complete. The Company accepts no responsibility or liability for any deficiency, misstatement or inaccuracy in this Report resulting from the information provided, concealed or not fully disclosed by those individuals.

Any description of the site and its physical setting documented in this Report is presented for informational purposes only, to provide the reader a better understanding of the site and scope of work. Any topographic benchmarks and elevations are primarily to establish relative elevation differences between sampling locations and should not be used for other purposes such as grading, excavation, planning, development, or similar purposes.

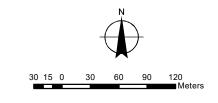
Any results from laboratory or other subcontractors reported herein have been carried out by others, and the Company cannot warrant their accuracy.





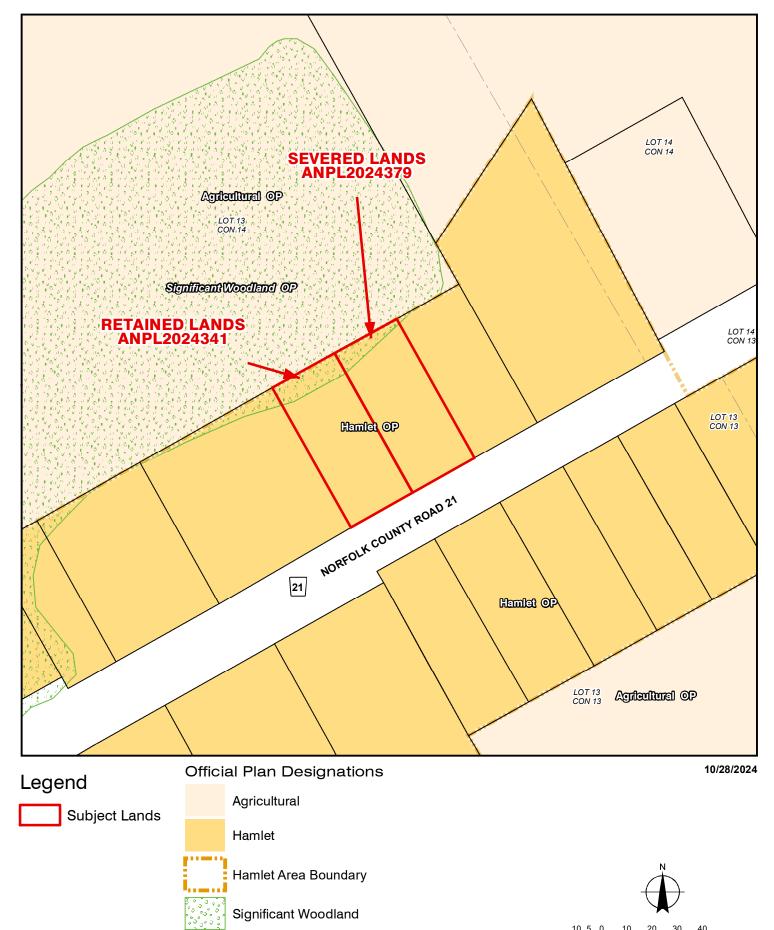
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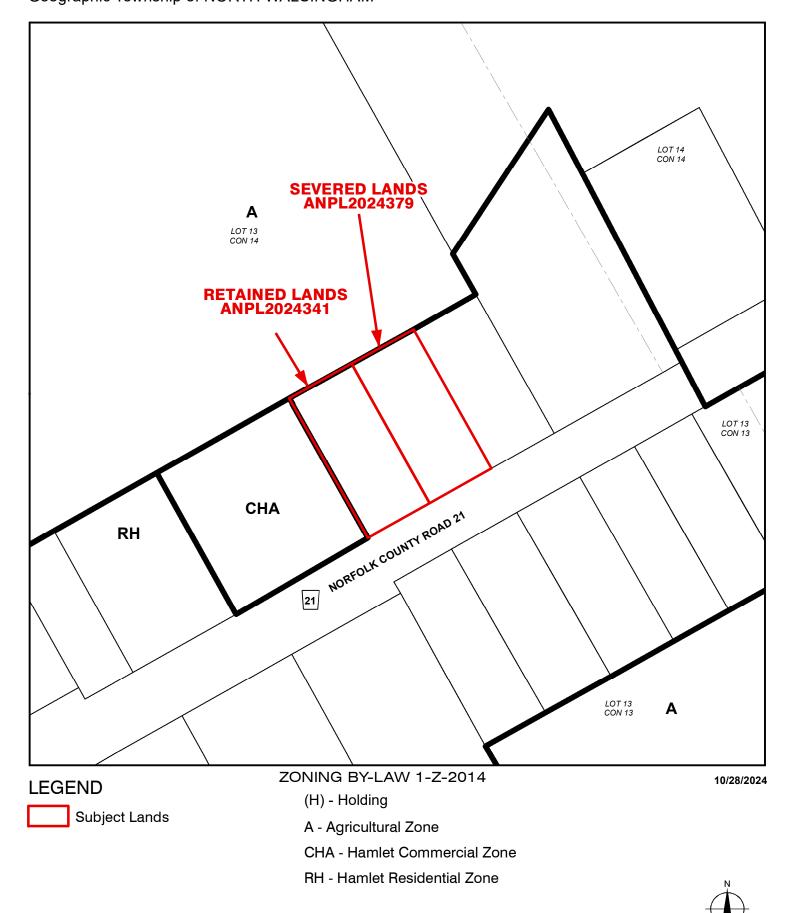
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Geographic Township of NORTH WALSINGHAM



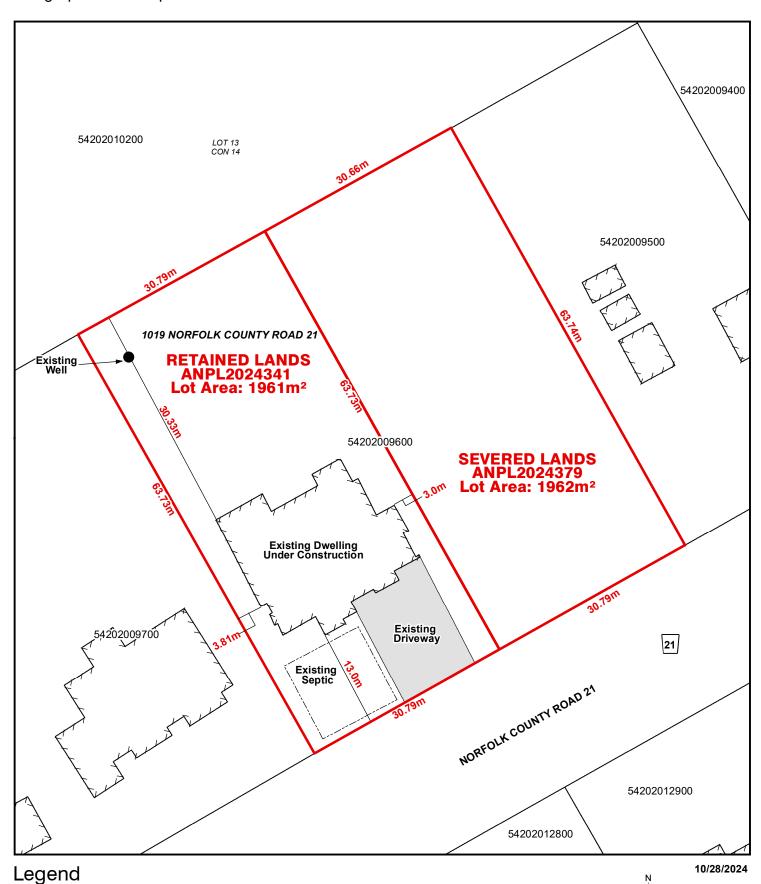
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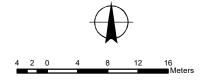


BNPL2024340 ANPL2024341 ANPL2024379

Geographic Township of NORTH WALSINGHAM







LOCATION OF LANDS AFFECTED

CONCEPTUAL PLAN

Subject Lands

Geographic Township of NORTH WALSINGHAM

BNPL2024340 ANPL2024341 ANPL2024379

> 16 ■ Meters

