Englobe
Soils Materials Environment

Town of Yarmouth

Environmental Investigation
2014 Lake George Road, Lake George, Nova Scotia

Report

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Englobe

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Report | 21347

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EXECUTIVE SUMMARY

Englobe Corp. (Englobe) was retained by the Town of Yarmouth to undertake an Environmental Assessment at the property identified by Civic No. 2014 Lake George Road, in Lake George, Nova Scotia. The Environmental Assessmemt was recommended to assess items of environmental concern identified during the initial surface water and groundwater testing program. The scope of the investigation was further defined by a background investigation of the activities on the property.

The background investigation reviewed past land use and ownership of the site and surrounding area. Using the results of the background investigation and results from the February 23, 2016 report, an intrusive investigation program was designed to determine potential chemicals and sources present at the site, assess the spatial extents of the impacts and assess the human harm or ecological harm that needs to be repaired, monitored or buffered in some capacity.

The Environmental Assessment was carried out by Englobe based on the principles and practices outlined in CSA Standard Z769-00, “Phase II Environmental Site Assessment”. The environmental investigation consisted of a soil, potable water, groundwater, surface water and sediment assessment involving the advancement of test pits, boreholes installed as monitoring wells, shallow piezometers and collection and analysis of select soil, sediment, groundwater, surface water and potable water samples. Select samples were submitted to Maxxam Analytics Inc. (Maxxam) laboratory for petroleum hydrocarbons (PHCs), metals, polycyclic aromatic hydrocarbons (PAHs), phenols (water), acid-base neutral (ABN) compounds (soil), coliforms (potable water) and general chemistry (water). The analytical results were compared to the applicable Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for a site with agricultural and residential receptors, potable groundwater, coarse grained soils, and freshwater surface water and sediment.

In general , there was:

- No evidence of phenol or cresol wood treatment; the low detections of total phenol in potable water are from natural sources
- No evidence of widespread contamination
- No evidence of contamination in the compost (other than the metal and plastic debris)
- Water flow (shallow within soil and deeper within bedrock) is radial away from the center of the site
- Metals in groundwater at the site are adhered to fine natural sediment
- Surface water leaves the site from the north end and the south end
- No evidence of contamination in the organic sediment collected from the wetlands

More details on the findings are summarized in the following table:

ITEM OF CONCERN		RECOMMENDATION	MAGNITUDE OF CONCERN
Soil			
Arsenic levels in soil at one subsurface location and in sediment in a drain pipe exceed the generic Tier 1 EQS.	Likely from the wood treatment products. Is very isolated and does not appear to be mobile in soil.	Verify no human health and environment exposure pathways through review of detailed site specific guidelines.	None; there is no opportunity for humans to contact the material with elevated arsenic levels.
Selenium and vanadium levels at one subsurface location exceed the generic Tier 1 EQS.	Likely the quality of the fill used to infill the former pond. Very isolated and not mobile.	Verify no human health and environment exposure pathways through review of detailed site specific guidelines.	None; there is no opportunity for humans to contact the material with elevated selenium and vanadium levels.
Groundwater			
Elevated arsenic levels in groundwater in the monitor wells near the former dip tank and the drilled well at [redacted] Lake George Road.	Likely from the wood treatment products. The extent is limited because arsenic is not elevated in downgradient locations and is only present in one domestic well.	Conduct additional monitoring (to collect 1 year of data) of the onsite monitor wells to confirm the validity of the results. Recommendations for potable water use are provided below.	Low; the arsenic impacts are limited to the sawmill site (with the exception of the backup drilled well at [redacted] Lake George Road).
Cobalt levels in groundwater at several locations exceed the generic Tier 1 EQS.	The guideline is based on surface water protection, not potable water consumption.	Continue to monitor the surface water to confirm there is no migration pathway between groundwater and surface water.	None; the cobalt impacts are limited to the sawmill site, the guideline is not based on human health and there is no cobalt in the surface water tested.
Surface Water			
In the northern end of the site, elevated aluminium, arsenic, cadmium, copper, iron and lead levels, and depressed pH were identified at various locations.	Some parameters are consistent with background surface water quality, some (lead and depressed pH) appear to be related to a release.	Conduct additional monitoring (to collect 1 year of data) to further understand seasonal effects and which parameters are considered natural.	Aquatic Environment - Moderate to Low; the metals levels are decreasing and the pH is increasing at the downgradient locations sampled; however, more data is needed to fully assess. Human Health – Low; the only well that is potentially receiving surface water from this location is at [redacted] Lake George Road; it is being independently addressed.

ITEM OF CONCERN		RECOMMENDATION	MAGNITUDE OF CONCERN
In the southern end of the site, elevated aluminium, cadmium, copper, iron and lead levels, and depressed pH were identified at various locations.	Some parameters are consistent with background surface water quality, some (lead and depressed pH) appear to be related to a release.	Conduct additional monitoring (to collect 1 year of data) to further understand seasonal effects and which parameters are considered natural.	Aquatic Environment - Moderate to Low; the metals levels are decreasing and the pH is increasing at the downgradient locations sampled; however, more data are needed to fully assess. Human Health – Low; there are no potable wells that are impacted by this surface water.
Potable Water			
Lead levels were compliant at [redacted] and [redacted] Lake George Road.	At [redacted] Lake George Road, plumbing may have contributed to the elevated lead. At 2065 Lake George Road, the lead level appears to be seasonally controlled. There is also elevated turbidity at [redacted] which is similar to other drilled wells, and is naturally occurring from the bedrock.	Conduct additional monitoring (to collect 1 year of data) to further understand seasonal effects and which parameters are considered natural.	Low; Water at [redacted] Lake George Road is treated for lead, water at [redacted] Lake George Road has always been compliant for lead.
Total coliforms were present at [redacted] and [redacted] Lake George Road.	Related to recharge and possible infiltration of surface water; not related to activities at the sawmill site.	The individual home owners should follow the NSE recommended treatment and testing schedule to be protective of coliforms in their drinking water.	Moderate
Arsenic was elevated at the drilled well at 2014 Lake George Road, adjacent to [redacted] Lake George Road.	Likely related to sawmill activities. There is some question to the ownership of this well and it is not used on a regular basis	The well decommissioned or treated. If treatment is chosen, conduct additional monitoring (to collect 1 year of data) to further understand seasonal effects.	Moderate to High; the well is not used on a regular basis and the guidelines are based on continued use, not a point source exposure.

1 INTRODUCTION

At your request, Englobe Corp. (Englobe) has conducted an evaluation of historic operations and the environmental condition at the site identified by Civic No. 2014 Lake George Road (PID No. 90149808) in Lake George, Yarmouth County, Nova Scotia. The request was also to determine the potential for offsite migration of impacts.

This report provides the methodology and results achieved from the program.

2 BACKGROUND

The Town of Yarmouth purchased the former J. Ibbitson Sawmills Inc. lands in 2005. The sawmill reportedly operated between the early 1990s and 2005, when it was purchased and subsequently decommissioned.

The land has been vacant since the purchase. In September 2015, the site was selected for reclamation, and compost produced from a Town of Yarmouth composting facility (municipal green bin program) was transported to the site and spread across areas of the site.

Recently, residents living adjacent to the site expressed concern with the debris (plastics, metals, etc.) in the compost, and the effect the compost may have on the drinking water and surface water in the surrounding area.

A groundwater and surface water study was carried out by Englobe in February 2016 to evaluate the potential for impacts in the compost to affect the environmental conditions of the surrounding surface water and groundwater resources. The results of the investigation revealed no concern with the environmental quality of the compost and its effect of the surrounding environment; however, review of the results and the history of the Ibbiston site suggest that the elevated metals (and depressed pH) in surface water and groundwater near the site are from historic activities at the site, most likely related to wood preservative use. Further evaluation of the source and magnitude of the impacts that were identified was recommended.

Also, elevated lead concentrations were detected in potable water at select residential dwellings. Further evaluation of the water supply sources was recommended to assess other contributing sources to the elevated lead.

3 SCOPE OF WORK

The Environmental Assessment was carried out by Englobe following the Nova Scotia Environment (NSE) *Contaminated Sites Regulations*. The Environmental Assessment was designed to assess items of environmental concern identified during the initial surface water

and groundwater testing program. The scope of the investigation was further defined by a background investigation of the activities on the property.

The background investigation included review of property ownership information available at the Registry of Deeds (online), including plans of survey for the subject site and neighbouring sites. This information was supplemented by a review of geologic maps and aerial photographs on file with Service Nova Scotia and Municipal Relations (SNSMR). Historic Google Earth aerial imagery, available on line, was also reviewed. No fire insurance plans were available for the subject area at the Public Archives of Nova Scotia in Halifax. Previous environmental reports were also reviewed. Information was requested from NSE through the *Freedom of Information and Protection of Privacy* (FOIPOP) Act. Englobe conducted interviews with persons knowledgeable of the site including: Chad Leblanc (Town of Yarmouth Public Works), Robert Gray (relative of the former property owner) and former workers at the sawmill.

The intent of the investigation was to determine potential chemicals and sources present at the site, assess the spatial extents of the impacts and assess the human harm or ecological harm that needs to be repaired, monitored or buffered in some capacity. In conjunction with the background review, the program included:

- A second full round of potable water sampling (of the nine homes already sampled) and adding [redacted] (PW10) Lake George Road for more representative background assessment. As part of this sampling program, a plumbing inspection and collection of static water levels at [redacted] (PW3) and [redacted] (PW8) Lake George Road;
- Assessment of the drain tile field at the sawmill site to more thoroughly evaluate surface water flow patterns;
- Assessment of the area identified in the previous Phase I ESA as a “burial site”;
- Assessment of the former pond;
- Assessment of other areas in the north area of the site and in the south area of the site to look for any other sources/tanks, sawdust infill areas;
- Delineation the four adjacent wetlands and look at their hydrology (for surface water flow patterns) and assess the environmental quality of the surface water and organic matter;
- A second full round of surface water sampling, including additional locations to further assess the surface flow pathways and a background surface water location within the local water shed; and
- Assessment of the shallow and deeper groundwater (at the sawmill site).

The environmental investigation consisted of a soil, potable water, groundwater, surface water and sediment assessment involving the advancement of test pits, boreholes installed as monitoring wells, shallow piezometers and collection and analysis of select soil, sediment, groundwater, surface water and potable water samples. Maxxam Analytics Inc. laboratory (Maxxam) conducted chemical analysis of the samples for petroleum hydrocarbons (PHCs),

metals, polycyclic aromatic hydrocarbons (PAHs), phenols (water), acid-base neutral (ABN) compounds (soil), coliforms (potable water) and general chemistry (water).

Details of the field program are provided in Section 6.

4 PROPERTY DESCRIPTION

4.1 Site Description

The current area of interest is identified as the Ibbitson property, PID No. 90149808 (Civic No. 2014 Lake George Road) in Lake George, Yarmouth County, Nova Scotia. The entire property is approximately 379,000m^2 (93.6 acres) and the affected area (over which compost was spread) is approximately 39,400 m^2 (9.74 acres). A site location map is presented in Figure 4-1. A site plan is provided in Appendix 1 (Figure 1).

Figure 4-1. Site Location Map, Lake George Road, Lake George, NS.

Currently, the subject property is undeveloped and vacant. A sawmill, kiln and associated storage and treatment areas had been located on the western part of the site between the early-1990s and 2005. The eastern portion of the property forms a portion of the Lake George Protected Water Area.

During the site inspection, the former sawmill portion of the site had been decommissioned. This area had been spread with a 100 to 150 mm thick layer of compost during the reclamation

activities. There was debris (plastic, metal, etc.) observed throughout the compost. The former sawmill portion of the site was inferred by a lack of vegetation and areas of tree clearing.

The only remaining evidence of the site's past use as a sawmill were four monitor wells (that were installed during an environmental site assessment of a former fungicide underground storage tank in 2005) and a crock that collected shallow surface water. Based on discussion with the local residents, a drain tile system had been installed at the site during former operations, and drained surface water away from product laydown and spraying areas. A holding pond had been excavated in the northwest corner of the sawmill area to store water used in spraying activities. The discharge pipes of a drainage system were observed entering the crock that remains at the site.

The former sawmill area is a localized topographic high; topography slopes downward radially from the center of the disturbed area. Surface water drainage left the disturbed areas through localized drainage pathways and channels, some manmade and some naturally formed.

Access to the site is via Lake George Road from the west. Neighboring properties include undeveloped tree-covered lands to the north, east and south; Lake George is further to the east. Residential properties are located to the west along Lake George Road, including [redacted] Lake George Road which was the former residence of the sawmill owner, and is immediately adjacent to the site.

5 HISTORICAL REVIEW

5.1 Property Ownership

The current parcel of interest (Civic No. 2014 Lake George Road, PID No. 90149808, Lake George, NS) has been owned by the Town of Yarmouth since 2005. Past ownership information of the subject property uncovered by Englobe as part of this assessment is provided in Table 5-1.

No other information for the subject property prior to 1968 was discovered by Englobe during the preliminary title search conducted for this report. Ownership information was obtained through cursory review of select online deeds and is not intended to be a legal title search.

Table 5-1 Ownership History – Civic No. 2014 Lake George Road, PID No. 90149808, Lake George, NS

OWNER	YEARS HELD
Town of Yarmouth	2005 – Present
Goodman Rosen Inc.	2004 - 2005
Dale Ibbitson	1991 - 2004
Ronald and Carol Gray	1968 - 1991
Ernest and Hazel Robinson	Prior to 1968

5.2 Historical Land Use

Aerial photographs for the years 1978, 1988, 2000 and 2006 were available for viewing. Google Earth aerial images from 2002, 2005, 2010, 2011, 2012, and 2013, available online, were reviewed. Select copies of the images are provided in Appendix 2. Fire insurance plans were researched at the Nova Scotia Archives in Halifax; however, no plans were available in the subject area. Plans of Survey for the subject site and neighbouring properties from 1985 to 1989 were reviewed. The following previous reports were also reviewed:

- Phase I ESA, 2014 Lake George Road, Lake George, Nova Scotia, prepared by Jacques Whitford Associates (JWA), March 2, 2004;
- Phase II ESA, 2014 Lake George Road, Lake George, Nova Scotia, prepared by JWA, April 21, 2004;
- Phase III ESA, 2014 Lake George Road, Lake George, Nova Scotia, prepared by JWA, June 8, 2004; and
- Groundwater Assessment, 2014 Lake George Road, Lake George, Nova Scotia, prepared by JWA, February 17, 2005.

Review of the aerial photograph from 1978 reveals that the subject property was undeveloped, although some portions had been cleared, likely for agricultural purposes. By 1988, several small camps had been constructed at the site and these were later demolished.

By 2000, the sawmill had been in operation for approximately 10 years and in the 2005 Google Earth image just prior to decommissioning, the site was occupied with the main sawmill, a drying building, several roofed areas to cover the wood treatment tanks. There was a large pond for spraying lumber in the north corner of the site, and at least two pump houses that reportedly drew water from the lake to maintain the pond. The driveway for the residential dwelling at 2012 Lake George Road was the main site entrance. In the 2000 aerial photo, unprocessed wood was stored (and actively sprayed) in the northern area of the site, and what appears to be processed lumber was stored along the eastern treeline. The staining in the 2000 aerial photograph is likely wet bark from the logs. In the 2005 Google Earth image, it appears that on the northern portion of the site, surface water was directed along the eastern treeline, and from the pond via ditching into wooded areas north and east of the site. Between 2000 and 2005, it appears that the southern area of the site was progressively infilled.

From discussions with former employees of the sawmill, we understand that the unprocessed wood was sprayed to maintain moisture contents prior to its processing and that there were haul roads and a permanent sprinkler system between the wood rows. The raw material was processed through the mill and wood chips and sawdust were collected in hoppers at the rear of the mill (south side). These by-products were then trucked off-site for re-use at the Bowater facility in Liverpool, NS. We also understand that the main saw line in the mill had a concrete lined trench where sawdust and water collected, the water subsequently drained from this

trench via underground stormwater piping to a crock south of the mill. Other areas including the sawdust hopper also had underground piping that discharged to this crock.

The fungicide tanks were located in secondary containment cells and were roofed. There was a control valve and plumbing between the two tanks to control liquid levels. From our review of the NSE operating approval, the approved product in the tanks was Sapstain and/or PQ-8 (copper quinolinolate product), and it was recommended that the tanks be dosed with borate to adjust pH (upwards). Reportedly, pallets of lumber would be treated and left to drip over the tank system before being moved to their storage location. We understand that the kiln was constructed in 2005, just before the facility closed and it is unclear if it was even functioning before operations terminated.

From review of the previous reports and discussions with former employees, we understand that the facility initially operated from diesel fueled generators, however, switched to NSP supplied (3 phase) power prior to the site's decommissioning.

The site went into receivership in 2004, and JWA, at the request of the bank, conducted a Phase I, II and III ESA at the site. The site history at this point becomes unclear. We understand that NSE conducted several site visits to inspect the site and former operations, and collected liquid that remained in the dip tanks and secondary containment system. The results of the NSE site inspections and sample analyses appear to have resulted in summary offence tickets to Ibbitson Sawmill and the Business Development Bank, although the charges are unclear since this information was not provided in the FOIPOP response. During 2005, we understand the receiver (Business Development Bank) subdivided several land parcels from the sawmill site, including the residential dwelling at 2012 Lake George Road. The residential dwelling was purchased outright and the former sawmill was purchased by the Town of Yarmouth. The remaining infrastructure was removed and/or demolished although there were no records to confirm the exact details of the site decommissioning.

By 2006, based on the aerial photograph, most of the infrastructure had been removed from the site (the dip tanks remained), and by 2010 the site was completely vacant except for the four monitor wells installed in 2005 and the crock. During the Englobe site visits (February and March 2016), no significant changes were noted on the site when compared to 2010 to 2015 aerial images.

The surrounding land use is residential and agricultural in nature, although a church and a currently unused barn occupy two of the nearby properties. By 2000, all of the existing dwellings currently present had been constructed, except for the dwelling at 2065 Lake George Road, which was constructed between 2000 and 2005. The pond between the road and 2012 Lake George was present in the 2000 aerial photograph; there were anecdotal accounts that local residents constructed this pond for skating, although this could not be confirmed.

5.3 Geology

The Lake George area of Yarmouth County is underlain by glacial deposits known regionally as Beaver River Till. In the Lake George area, the Beaver River Till is comprised of Slate till drumlin facies that are described as moderately compact, greyish olive, sandy materials with abundant gravel, cobble and boulder sizes. Thickness of the till unit varies from 2 to 20 metres.

Geologic mapping of the area indicates that the site is underlain by the Meguma Supergroup of metasediments. The site is in close proximity to the contact between the Acacia Brook Formation of the Halifax Group and the Bloomfield Formation of the Goldenville Group. Based on the mapping, the Bloomfield Formation underlies the site; however, the Acacia Formation is present between the site and Lake George. Church Point Formation (Goldenville Group) is expected to be on the western side of Lake George Road.

The Bloomfield Formation consists of maroon and green to grey, thin to medium-bedded metasiltstone to slate, rare thin-bedded, fine-grained metasandstone, minor mafic sills. The Acacia Brook Formation consists to grey to dark grey, laminated slate with minor, thin beds and lenses of light grey metasiltstone, medium bedded, crosslaminated, fine-to medium-grained metasandstone; sulphide minerals are common.

5.4 Compost

The compost that was transported to the site is reportedly a Category B compost product that is produced at a Town of Yarmouth facility from green bin materials, yard waste and paper products. Analysis of the compost was carried out by Dr. Paul Arnold of Bio-logic Environmental Systems. The analysis revealed there were too many sharps and debris inclusions to be classified Category B compost, although the material did satisfy the Category B criteria for metals and pathogens.

6 ENVIRONMENTAL INVESTIGATION FIELD PROGRAM

The investigation consisted of:

- Ground Penetrating Radar (GPR) survey;
- Delineation of wetlands and assessment of surface water drainage;
- Excavation of 40 test pits;
- Drilling of 14 boreholes;
- Installation of 14 monitor wells (5 deep and 11 shallow) and sampling of groundwater;
- Installation of 5 wetland piezometers and sampling of sediment and shallow surface water;
- Sampling of on-site and off-site surface water; and
- Sampling of off-site potable groundwater.

Based on the background review and analytical results collected in February 2016, the potential chemicals of concern included wood preservatives such as PQ-8, sapstain (ammonia based) and other metals based products. Given the operation period of the mill, it was unlikely that pentachlorophenol (PCP) was used since it was phased out in the late 1980s; however, these chemicals were included as potential contaminants until chemical testing confirmed their absence. Also, it was unlikely that cresol treatment was used at this site; however, it also was included as a potential contaminant until chemical testing confirmed its absence. These chemicals could all be present as spilled product or in sawdust buried at the site. There was potential for buried ash to be present (from the former kiln). Although there was some discussion of minor petroleum staining in a NSE inspection report, in general there did not appear to be a concern with PHCs, and these chemicals would be chemically assessed only if field evidence of their presence was observed.

6.1 GPR and Service Locates

Prior to the commencement of the Environmental Investigation, Englobe contacted public utility companies (power) with services in the area to have any underground infrastructure at the site located. A private utility service locater also surveyed the site to identify private power and underground utilities. The purpose of the utility clearances is to reduce the risk of property damage and personal injury by identifying the locations of any buried lines to avoid contacting them during drilling activities.

The utility service locates were supplemented by a GPR survey to map underground stormwater infrastructure.

6.2 Wetlands and Surface Water Features

From our February 2016 assessment, we observed drainage from the north and northeast portions of the site to discharge via surface water features and enter a suspected wetland, then flow easterly towards Lake George as a watercourse. A suspected wetland was observed adjacent to the northwest corner of the former holding pond. Discharge from this wetland extended towards (and beneath) Lake George Road. Another suspected wetland was observed downgradient of the crock (to the west), and water from the crock was discharged via a pipe into the wetland and from the wetland into a ditch that extended parallel and westerly to a holding pond prior to discharge beneath Lake George Road. Other areas of the site drained westerly from the site, although there were no defined channels.

The wetland determination included a desktop review of aerial photographs, topographic maps, provincial wetland mapping and significant habitats database. This was supplemented with field reconnaissance on March 14 and 15, 2016 to ground truth the presence of wetlands. At encountered wet areas, Englobe evaluated the three criteria, vegetation, hydrology and soil, which are necessary for wetland determinations. Soil probes and vegetation surveys were conducted at all of the potential wetlands. Where all required wetland characteristics were

present, the wetland boundaries were determined by Englobe, delineated with flagging tape, and the positions were acquired by a subcontracted land surveyor. The general functional character of the wetlands was also determined.

Surface water discharge from the wetlands and surface water migration from other areas of the site were also flagged and acquired by a subcontracted land surveyor.

6.3 Test Pit Program and Soil Sampling

The test pit portion of the field program was carried out on March 14 and 15, 2016, with the excavation of 40 test pits at 2014 Lake George Road. The test pits were positioned to assess the environmental quality of the soil at the site and to evaluate the subsurface conditions at known features such as the former dip tanks, the mill, features from the GPR survey (underground stormwater services), the holding pond, inferred drainage pathways and infilled areas.

The test pit locations are indicated as TP1 to TP40 on Figure 2, Appendix 1. The Test Pit locations were acquired in the field by a subcontracted land surveyor. The test pits were excavated with a tracked excavator supplied by a local contractor (Rose Valley).

The field investigation was carried out by qualified technical personnel, who positioned and logged the test pits and sampled the *insitu* soils. The test pits were excavated to assess the potential for impacts resulting from historical activities at the site, including material storage and infilling.

An explanation of symbols and terms used in the logging of test pits is provided in Appendix 3. A summary of encountered geologic conditions is provided in the Test Pit Logs in Appendix 3. It should be noted that the stratigraphic boundaries on the Test Pit Logs typically represent a transition of one soil type to another and do not necessarily indicate an exact plane of geologic change. Subsurface conditions may vary between and beyond the test pit locations.

The test pits were excavated to depths within undisturbed site-native soil or refusal of the excavator bucket on (inferred) bedrock. Grab samples were obtained from various strata at each location. Soil samples were placed in lab-supplied containers and stored in ice-packed coolers. Following the work, the test pits were reinstated and levelled. Based on field observations select soil samples were submitted for PHCs, metals (including hexavalent chromium (Cr VI)), PAHs, ABN compounds (which includes PAHs) at Maxxam Analytics Inc. laboratory (Maxxam) in Bedford, Nova Scotia.

Observations and laboratory test results from the investigation are discussed in Section 7.

6.4 Drilling Program and Soil Sampling

The drilling program was conducted from March 14 to 19, 2016 and consisted of the advancement of 14 boreholes, all of which were completed as groundwater monitor wells. The borehole locations are indicated as MW1 to MW12 (including shallow (S) and deep (D)

locations) on Figure 2, Appendix 1. The monitor well locations were acquired in the field by a subcontracted land surveyor. The boreholes were drilled using a truck-mounted drill rig supplied by Nova Drilling of Mount Uniacke, Nova Scotia.

The field investigation was carried out by qualified technical personnel who positioned and logged the boreholes and sampled the *insitu* soils. Borehole locations were chosen to provide an indication of subsurface conditions and assess the potential for impacts to the soil and groundwater quality from impacts related to historical activities. At five locations, the boreholes were extended to 18m to assess deeper bedrock conditions.

A summary of encountered geologic conditions is provided in the Monitor Well Logs in Appendix 3. An explanation of terms and symbols used in the logs is also provided in Appendix 3. It should be noted that the stratigraphic boundaries on the Borehole and Monitor Well Logs typically represent a transition of one soil type to another and do not necessarily indicate an exact plane of geologic change. Subsurface conditions may vary between and beyond the test locations.

The boreholes were advanced through the overburden using solid stem augers. Standard Penetration Testing and soil sampling was performed at borehole MW-4S in the overburden using a 50-mm OD split-spoon sampler. At MW-4S, soil samples were taken at nominal depth intervals of 0.6 m, often continuously. Soil samples from borehole MW-4S were placed in lab-supplied containers and stored in ice-packed coolers. Select soil samples were submitted to Maxxam. The details of the sample analyses are summarized in Section 6.8 and observations and discussion of laboratory test results from the investigation are discussed in Section 7.

6.5 Monitor Well Installation and Groundwater Sampling

During the drilling program, 14 monitor wells were installed for the purpose of providing water quality sampling stations. Of the 14 monitor wells, five were deep boreholes completed to 18m (identified as MW-1D to MW-4D and MW-6D on Figure 2, Appendix 1) the remainder of the monitor wells were shallow and completed to the refusal of the bedrock. The wells consisted of 50-mm OD polyvinyl chloride (PVC) threaded Schedule 40 casing and 20 slot screen (Deep) or 5 casing and 15 slot screen (Shallow). The screened intervals were positioned to intersect the groundwater table and the annular space around the screen was filled with clean No. 2 silica sand. Each installation was sealed with a bentonite plug, a minimum thickness of 0.6 metre, above the sand pack to prevent migration of the surface flow into the well. At the deep monitor wells, the annular space from the bedrock interface to the ground surface was sealed with bentonite to prevent migration of shallow groundwater into the deeper aquifer. The wells were capped with J-plugs and above-ground metal protectors. Monitor well construction details are included on the logs in Appendix 3.

During the drilling program, the wells were developed by purging a minimum of ten well pore volumes using dedicated hand bailers or a pump.

On March 20, 2016, Englobe personnel measured the static water levels in the monitor wells using a *Solinst* water level indicator. In accordance with laboratory sampling protocols, groundwater samples were collected; using 120mL plastic containers for metals (filtered and preserved with nitric acid in the field), 120mL plastic containers for total lead (preserved with nitric acid in the field), 200mL plastic containers for general inorganic chemistry, 100mL amber glass bottles with sulfuric acid preservative for ammonia and Total Organic Carbon (TOC), 150mL plastic bottles (preserved with NH4) for Cr VI, 100mL amber glass bottle (preserved with potassium dichromate) for mercury, 2-250mL glass bottles for PAHs and 2-1000mL amber glass bottles for phenols. Groundwater samples were collected from the monitor wells in lab-supplied glass bottles, immediately placed in an ice-packed cooler and transported to Maxxam for analyses of metals (total lead, Cr VI and mercury), PAHs, phenols, ABN compounds and general chemistry.

Hydraulic conductivity testing (by water removal) was conducted on four wells (MW4D, MW4S, MW1S, MW7).

The details of the sample analyses are summarized in Section 6.8 and observations and discussion of laboratory test results from the investigation are discussed in Section 7.

6.6 Surface Water and Sediment Sampling

From review of topography mapping, wet area mapping (WAM) and aerial photography review, predicted drainage pathways were identified as potential sampling locations. These locations were verified in the field, and adjusted based on site specific conditions. Between March 14 and 16, 2016, 12 surface water sample locations were established at Lake George Road. The test locations are identified as SW1 through SW12 and are presented on Figure 2 (Appendix 1). A background sample was also collected.

As discussed above, surface water was observed discharging from the north end of the site in three locations. The northwest portion of the site drains into a wetland, and eventually discharges from the wetland as channelized flow beneath Lake George Road and to the rear of 2065 Lake George Road. This wetland is separated from the adjacent dwellings on Lake George Road by a ridge of upland, such that any surface water leaving the sawmill enters the wetland and ultimately discharges at the cross culvert on Lake George Road (at SW1). A surface water sample location was established where this wetland discharges (SW11).

A surface water sample was collected on the downgradient side of Lake George Road (SW1). This water feature is then directed into a fish pond at 2065 Lake George Road, which discharges to a wetland that also collects surface water drainage on the south side of the dwelling. The wetland discharges into a surface water feature farther downgradient of the dwelling at 2065 Lake George Road where another sample (SW4) was collected.

On the north end of the sawmill site, the other surface water discharge locations entered a wetland a short distance from the disturbed area, near the former pond (SW9) and along the

eastern tree line (SW8 and SW10). Mapping of the water feature along the eastern tree line predicted that it flowed northward and westward before discharging to ponded water at 2104 Lake George Road (fire pond near the road); however, ground truthing verified a watercourse instead flowed easterly towards Lake George from the wetland. A sample was collected where the watercourse discharged from the wetland (SW2) and farther downgradient of this water feature (SW7), closer to Lake George.

Shallow surface water from the central portion of the site appeared directed towards a crock (remnant from the sawmill activities) via a drain tile system. Water was discharging the crock from a pipe and entering a wetland (wetland 2) to the west. Water from wetland 2 then appeared to migrate into a downgradient ditch via discharge and seepage through the ditch backslope. This ditch was present on the available mapping that was reviewed and ground truthing verified that it extended along Lake George Road towards a pond that then discharged via a culvert beneath Lake George Road (between 2046 and 2012 Lake George Road). Occasionally during heavy rain, water would also discharge from this pond at the access road to the sawmill site, and then enter the roadside ditch before discharging through the culvert. A sample was collected from the ditch, prior to the pond (SW3), at the pond discharge (SW5) and further downgradient in the field on the west side of Lake George Road (SW6).

Wetland 2 extended along the southern extent of the sawmill site and had a second discharge that migrated southwesterly towards Lake George Road, a surface water station (SW12) was established at the discharge.

A background surface water station was established on PID No. 90149865 (Lot 3), adjacent to an access road to Lake George; surface water was flowing southwesterly towards the sawmill site.

On March 19, 2016, five wetland surface water samples were also collected. The wetland surface water stations (P1A, P1B, P2A, P2B and P3) consisted of a manual borehole advanced with a hand auger, that was installed with 25mm OD polyvinyl chloride (PVC) threaded Schedule 20 slot screen. At the piezometer locations, sediment (peat) samples were also collected from the hand auger. The piezometers are the permanent station locations.

Field parameters were measured at each surface water and piezometer location and the laboratory supplied bottles were carefully immersed to prevent mobilization of settled bed sediment. In accordance with laboratory sampling protocols, surface water samples were collected; using 120mL plastic containers for metals (preserved with nitric acid in the field), 200mL plastic containers for general inorganic chemistry, and 100mL amber glass bottles with sulfuric acid preservative for ammonia and Total Organic Carbon (TOC), 150mL plastic bottles (preserved with NH4) for Cr VI, 100mL amber glass bottle (preserved with potassium dichromate) for mercury, 2-250mL glass bottles for PAHs and 2-1000mL amber glass bottles for phenols. The samples were placed in cool storage and transported to Maxxam for analysis

as detailed above. The sediment samples were collected into laboratory supplied jars, placed in cool storage and were transported to Maxxam for analysis of PAHs, chlorinated phenols and metals.

The details of the sample analyses are summarized in Section 6.8 and observations and discussion of laboratory test results from the investigation are discussed in Section 7.

Details of the surface water sample locations are summarized in Table 6-1. The surface water locations were acquired in the field by a subcontracted land surveyor.

Table 6-1. Surface Water Sample Locations.

ID	LOCATION
SW1	Wetland discharge, at downgradient side of the culvert beneath Lake George Road, between 2087 and 2065 Lake George Road
SW2	Watercourse that discharged from wetland that collected surface water from north and northeast portion of the disturbed area
SW3	Ditch downgradient of wetland and onsite water collection crock
SW4	Downgradient of SW1 (below fish pond at 2065 Lake George Road)
SW5	Pond discharge downgradient of SW3
SW6	Downgradient of SW5, discharges to wetland and ultimately Killams Lake
SW7	Downgradient from SW2 at the wetland edge
SW8	Northeast corner of cleared area where flow discharges to wetland
SW9	Discharge from infilled pond area
SW10	Upgradient of SW8, adjacent to former dip tank location
SW11	Upgradient of SW1 at discharge from wetland 1
SW12	Wetland 2 discharge south of the site
BACKGROUND	Surface flow to the north of the site, flowing northeast to southwest
P1A	Piezometer in wetland 2
P1B	Piezometer in wetland 2
P2A	Piezometer in wetland 1
P2B	Piezometer in wetland 1
P3	Piezometer in wetland 1

6.7 Potable Water Sampling

On March 16, 2016, Englobe personnel measured field parameters at 10 potable wells (PW1 through PW10). The water was allowed to run for 5 minutes (or more) before collection from a tap, prior to any water treatment systems. The residents had also been running the water in advance of the sampling program. On March 20, 2016, water was collected from an additional well (PW2A) located at 2014 Lake George Road, which is adjacent to the dwelling at Civic No. [redacted] (PW2) Lake George Road. The plumbing at [redacted] (PW8) and [redacted] (PW3) Lake George Road was inspected and static water levels were measured in the wells; the wells were shock chlorinated following the inspection.

Water samples were collected for general chemistry and metals analysis (at all locations) and total and *E.coli* coliforms (at [redacted] (PW8) and [redacted] (PW3) Lake George Road, with installed water treatment systems) following standard sampling protocols for potable water.

In accordance with laboratory sampling protocols, water samples were collected; using 120mL plastic containers for metals (preserved with nitric acid in the field), 200mL plastic containers for general inorganic chemistry, and 100mL amber glass bottles with sulfuric acid preservative for ammonia, Total Phenol and Total Organic Carbon (TOC) and 300mL (preserved with sodium thiosulphate) plastic bottles for coliforms. The water sample containers were immediately placed in ice-packed coolers and were transported to Maxxam for detailed chemical analysis as listed above.

Following the potable water sampling, on April 20, 2016, total phenol samples were collected from all 11 potable wells and additional exterior assessment of the residential potable wells was undertaken to evaluate results that were elevated and not necessarily attributable to the sawmill site (such as total coliforms at [redacted] (PW7) Lake George Road).

6.8 Laboratory Analysis

Soil and wetland organics, sediment, potable water, groundwater and surface water samples collected during the intrusive investigation were submitted to Maxxam for coliforms, metals, PHCs, chlorinated phenols, ABN, general chemistry and PAH analyses.

Selected samples were chosen for lab analysis based on visual observations made by field personnel. All samples were transported under cool storage to Maxxam. The following denotes the analysis performed on selected soil, sediment, groundwater and surface water samples.

- 32 soil samples (including one blind field duplicate) were submitted for metals and Cr VI analysis;
- 17 soil samples (including one blind field duplicate) were submitted for ABN analysis;
- 1 soil sample was submitted for PHC analysis;
- 5 sediment (peat) samples were submitted for metals and chlorinated phenol analyses;
- 4 sediment (peat) samples were submitted for PAH analysis;
- 18 groundwater samples (including a blind field duplicate) for general chemistry and metals (including mercury and total lead);
- 12 groundwater samples for chlorinated phenols;
- 5 groundwater samples for PAHs;
- 21 surface water samples (including a blind field duplicate) for general chemistry and metals (including mercury);
- 9 surface water samples (including a blind field duplicate) for Cr VI;
- 10 surface water samples (including a blind field duplicate) for chlorinated phenols;

- 6 surface water samples for PAHs;
- 12 potable water samples for general chemistry, metals and total phenol; and
- 2 potable water samples for total and *E.coli* coliforms; 1 total and *E.coli* coliform sample was collected by Town of Yarmouth water treatment plant staff.

6.9 QA/QC Sampling

Blind field duplicates were collected by Englobe for approximately 10% of the samples analyzed. Maxxam also completed lab duplicates on selected samples. Table 6-2, below, summarizes the samples that were duplicated either in the field by Englobe personnel or in the lab by Maxxam.

Table 6-2. Field & Laboratory Duplicates.

COLLECTION LOCATION	FIELD DUPLICATE ID	ANALYSIS	LAB DUPLICATE ID
SOIL			
TP2/1	-	ABN	TP2/1 Lab Duplicate
TP5/1	-	Metals	TP5/1 Lab Duplicate
TP6/1	--	Cr VI	TP6/1 Lab Duplicate
TP22/1	-	TPH (gas range only)	TP22/1 Lab Duplicate
TP22/2	-	Metals	TP22/2 Lab Duplicate
TP35/2	-	Metals	TP35/2 Lab Duplicate
PIPE	-	Cr VI	PIPE Lab Duplicate
P2A	-	Phenolics	P2A Lab Duplicate
TP5/1	DUP 1	Metals, ABN	-
GROUNDWATER			
MW3D	-	General Chemistry, Metals	MW3D Lab Duplicate
MW4S	-	PAHs	MW4S Lab Duplicate
MW5	-	Phenolics	MW5 Lab Duplicate
MW7	-	Ammonia Nitrogen	MW7 Lab Duplicate
MW10	-	Ammonia Nitrogen	MWDUP Lab Duplicate
MW10	MWDUP	General Chemistry, Metals, Phenolics	-
MW11		Conductivity	MW11 Lab Duplicate
MW12		pH, Metals	MW12 Lab Duplicate
SURFACE WATER			
SW1	-	PAHs	SW1 Lab Duplicate
SW3	-	Conductivity, pH	SW3 Lab Duplicate
SW9	SWDUP	General Chemistry, Metals, Phenolics	-
SW10	-	Ammonia Nitrogen	SW10 Lab Duplicate
BACKGROUND	-	Phenolics	BACKGROUND Lab Duplicate
P1B	-	Conductivity	P1B Lab Duplicate
POTABLE WATER			

COLLECTION LOCATION	FIELD DUPLICATE ID	ANALYSIS	LAB DUPLICATE ID
PW1	-	Metals	PW1 Lab Duplicate
PW2A	-	Total Organic Carbon	PW2A Lab Duplicate
PW3	PWDUP	General Chemistry, Metals	-
PW6	-	Total Organic Carbon	PW6 Lab Duplicate
PW9	-	General Chemistry	PW9 Lab Duplicate

The evaluation and results of the QA/QC assessment are discussed in Section 7.6.

7 RESULTS

7.1 Service Locates and GPR Survey

Decommissioned aboveground power was located at the power pole adjacent to 2012 Lake George Road; there were no other aboveground or underground power services identified.

At the crock, four underground drains were found to drain into the structure, and one underground pipe discharged (to the wetland). From selective test pit excavation, the drains were a combination of rigid ABS or corrugated plastic (i.e. “big O”). From discussion with former employees of the mill, these drains serviced the wood chip and sawdust hopper, the saw trench in the main building and an area near the dip tanks. The drain infrastructure was intersected in several test pits, and pipe sediment from the saw trench drain was collected.

On the northern side of the site, an anomalous field was identified. The field appeared to be linear features that were orientated in a north-northeast to south-southwest arrangement. From selective test pit excavation, this area appeared to be the haul roads (supported by plastic geo-grid) with “big O” drain tile adjacent to some of the haul roads. The drain infrastructure was intersected in several test pits, and soil from beneath one of the drain was collected.

7.2 Wetland

Wetland field reconnaissance was conducted on March 14, 2016. At encountered wet areas within the site boundaries, Englobe evaluated the three criteria, vegetation, hydrology and soil, which are necessary for wetland determinations. Soil probes and vegetation surveys were conducted at all of the potential wetlands. Where wetlands were delineated, Englobe hung flags for the subcontracted land surveyor to acquire.

Five wetlands were observed in the study area defined by the provided survey plan (Figure 2, Appendix 1). The wetlands observed in the northwest (wetland 1) and southwest (wetland 2) portions of the site were mainly shrub and treed swamps dominated by black spruce, alders and sphagnum mosses, and extended off property; the full boundaries were not acquired by Englobe. A similar shrub swamp (wetland 3) was also observed at the headwaters for the unnamed creek flowing to Lake George (downgradient of wetland 1); the full boundaries were

not acquired since the wetland was limited to the immediate area of the watercourse. Soils in the swamps consisted of saturated organic material at depths ranging from 5cm to 30cm. Water was observed at 10cm below ground surface. The swamp to the northwest (wetland 1) receives water from overland flow and discharges to the west via subsurface flow that turns into the watercourse at SW11 and to the east via subsurface flow to the unnamed watercourse (SW2) that flows to Lake George. The swamp to the southwest (wetland 2) receives water from overland flow and from a pipe connected to the crock and ultimately discharges to Killams Lake to the west via ditching (SW3, SW5 and SW6) and wetlands. Wetland 2 also discharges to the southwest (SW12) towards Lake George Road.

The wetlands located in the northeast (wetland 4) and southeast (wetland 5) portions of the site were shrub bogs dominated by black spruce saplings, leatherleaf, Labrador tea and sphagnum mosses. Soils in the bogs consisted of saturated organic material at depths ranging from 30cm to in excess of 1m. Standing water was observed. The bog (wetland 4) to the northeast receives water from wetland 1, wetland 3 and the unnamed watercourse (SW2 and SW7) and ultimately discharges to Lake George; this wetland is provincially mapped and its boundaries were not acquired by Englobe. The bog to the southeast (wetland 5) receives water from overland flow and towards discharges to Lake George via a small watercourse; this wetland extends off-site and its full boundaries were not acquired by Englobe.

The upland topography surrounding the wetlands was generally characterized by slightly steeper slopes that mark the boundary between the wetland and the uplands. The upland areas observed were populated with various hardwood trees (maple, birch), fir and black spruce. The shrub layer consisted of saplings, rhodora, sheep laurel and wild raisin. Soils were consistent with upland mixed woods.

7.3 Geologic Conditions

Conditions at the test pits and boreholes consisted of topsoil (rootmat, compost or organics) underlain by fill, native till and bedrock (at some locations). The underlying fill material was variable and generally appeared to be re-worked site native material consisting of silty sand to sandy silt with trace to some gravel, trace of clay and occasional cobbles. The fill was generally loose to dense, moist to saturated and variable in colour (light brown, orange brown, dark brown, purple, grey).

At test pits TP16, TP17, TP19, TP20, TP22, TP23, the fill was a mix of organic soils with variable debris (wood saw, woodchips, logs, grubbing, seamless vinyl, etc.) and cobbles. Diesel odours were present at test pits TP22 and TP23; however, were limited to the fill deposits. An imported pit run material composed of sand and gravel with some cobbles was encountered at test pits TP9, TP10, TP25 to TP28, TP33, TP34, TP38 and TP40. These locations were likely the former haul roads and some test pits had geogrid. Test pit TP9A was excavated adjacent to TP9 to follow an encountered drain. The former saw trench was encountered at test pit TP24, and it had been infilled with variable concrete debris and rebar

and the base of the trench was encountered at 3m; groundwater in the test pit was at 1.5m below ground surface. The former kiln was encountered at TP26, and concrete debris (former foundation walls) were encountered; groundwater in the test pit was at 1.4m below ground surface. The former dip tanks were observed at test pits TP27 and TP28, where significant concrete debris was encountered; a former conduit likely for the tank pump was encountered in both test pits.

The native Till unit was encountered at all test locations (except TP23) and consisted of silty sand to sandy silt with trace to some gravel, trace of clay and occasional cobbles. The Till was compact to dense, moist to wet and brown to grey. All test pits (except TP9A and TP23) were terminated in the native Till.

Bedrock was encountered at test pits TP3, TP4, TP5, TP6, TP7, TP8, TP9, and in all boreholes. Diamond core drilling was carried out at boreholes MW-1D, MW-2D, MW-3D, MW-4D and MW-6D. Examination of bedrock core samples indicates that the site is underlain mainly by metamorphosed sedimentary rocks ranging from meta-siltstone and slate (MW3, MW4) to meta-sandstone (MW1). Minor felsic intrusions were noted in the lower 4.5m (from 14.75 to 18.25m below ground surface) of monitoring well MW1, while mineral growth indicating a possible fault contact zone was noted in the last 0.3m of MW2. Local growth of metamorphic minerals was observed in the lower sections of MW2 (18m) and last 1.5m of core from MW3.

The bedrock was observed to have a moderate to high sub-vertical fracture and cleavage pattern, is weathered with significant iron staining in the upper 12m and is light to dark grey or bluish grey in colour. The entire core from monitoring well MW6 was highly fractured, suggesting influence from the local contact zone identified further to the east. The Rock Quality Designation (RQD) values of core samples ranged from 0% to 89% indicating a very poor to good quality rock.

7.3.1 Hydrogeologic Assessment

Groundwater was encountered in the monitor wells and test pits at depths below ground surface ranging from 0.20 to 2.84m. Table 7-1, below, presents the results of the groundwater survey conducted on March 20, 2016. Based on the groundwater survey, the inferred groundwater flow direction is radial from the centre of the site, and is presented on Figure 3, (Appendix 1).

Table 7-1. Hydrogeological Survey conducted on March 20, 2016.

LOCATION	DEPTH TO GROUNDWATER (metres below ground surface)	GROUND SURFACE ELEVATION (metres)	GROUNDWATER ELEVATION (metres)
MW-1D	0.93	55.54	54.61
MW-1S	0.77	55.683	54.913
MW-2D	1.14	56.336	55.196

LOCATION	DEPTH TO GROUNDWATER (metres below ground surface)	GROUND SURFACE ELEVATION (metres)	GROUNDWATER ELEVATION (metres)
MW-2S* (JWA MW1)	0.38	56.22	55.84
MW-3D	0.24	52.965	52.725
MW-3S	0.56	52.98	52.42
MW-4D	2.18	55.503	53.323
MW-4S	2.84	55.547	52.707
MW-5	1.82	54.711	52.891
MW-6D	1.13	55.444	54.314
MW-6S	0.31	55.402	55.092
MW-7	0.44	53.569	53.129
MW-8	1.28	55.115	53.835
MW-9	0.94	54.022	53.082
MW-10	0.20	55.044	54.844
MW-11* (JWA MW2)	0.49	55.773	55.283
MW-12* (JWA MW4)	1.85	56.388	54.538

Note: ground surface elevations acquired by Doucette and Acker and referenced Active Control Station #229012.

*Shallow monitor wells that were installed during an environmental site assessment of a former fungicide underground storage tank in 2005.

Hydraulic conductivity testing was conducted at four locations (MW1D, MW4D, MW4S and MW7). The calculated hydraulic conductivities (based on Hvorslev) ranged between 7.28 x 10^{-5} and 1.11 x 10^{-4} cm/sec. The results are summarized in Table 7-2, below. A copy of the plots is provided in Appendix 4.

Table 7-2. Hydraulic Conductivity Results.

LOCATION	HYDRAULIC CONDUCTIVITY (cm/sec)
MW1D	1.11 x 10^{-4}
MW4D	5.77 x 10^{-5}
MW4S	7.28 x 10^{-5}
MW7	6.70 x 10^{-5}

7.4 Field Results

Field measurements obtained for the groundwater and surface water sampling stations are presented in Table 7-3.

Table 7-3. Field Measurements at Lake George Road, Lake George, NS – March 20, 2016

LOCATION	TEMPERATURE (°C)	PH (units)	CONDUCTIVITY (µS/cm)	DISSOLVED OXYGEN (mg/L)
PW1	7.40	5.96	40	-

LOCATION	TEMPERATURE (°C)	PH (units)	CONDUCTIVITY (µS/cm)	DISSOLVED OXYGEN (mg/L)
PW2	11.40	6.60	109	-
PW2A	9.19	6.70	47	-
PW3	7.42	5.43	183	-
PW4	11.36	6.73	69	-
PW5	8.98	6.71	59	-
PW6	8.60	6.47	50	-
PW7	7.67	6.22	75	-
PW8	7.28	6.25	99	-
PW9	8.00	6.38	2	-
PW10	8.97	6.68	87	-
MW-1D	8.77	7.03	522	-
MW-2D	8.29	7.90	124	-
MW-3D	8.14	6.62	218	-
MW-4D	9.49	5.72	58	-
MW-6D	8.64	6.82	136	-
MW-1S	6.30	6.01	383	-
MW-2S* (JWA MW1)	4.13	6.96	288	-
MW-3S	6.48	6.61	309	-
MW-4S	6.23	5.89	72	-
MW-5	10.75	7.54	139	-
MW-6S	6.03	6.19	239	-
MW-7	6.50	7.06	161	-
MW-8	6.98	6.79	201	-
MW-9	5.68	6.34	119	-
MW-10	6.86	7.01	597	-
MW-11* (JWA MW 2)	4.75	5.97	94	-
MW-12* (JWS MW4)	5.85	6.19	196	-
SW1	3.24	4.54	83	12.70
SW2	3.41	5.47	38	10.19
SW3	5.03	5.77	93	13.53
SW4	4.36	5.42	143	12.17
SW5	4.4	6.8	139	9.70
SW6	7.24	7.22	990	14.50
SW7	3.59	5.19	36	10.73
SW8	9.83	6.75	69	10.13
SW9	6.27	6.99	232	8.38
SW10	3.37	3.25	37	8.40
SW11	2.98	4.26	54	9.92
SW12	4.26	4.88	25	11.32
BACKGROUND	5.19	5.73	33	14.85
P1A	6.33	6.03	78	10.45

LOCATION	TEMPERATURE (°C)	PH (units)	CONDUCTIVITY (µS/cm)	DISSOLVED OXYGEN (mg/L)
P1B	5.40	5.15	33	17.49
P2A	4.84	6.50	90	8.93
P2B	5.59	6.03	84	3.49
P3	3.82	6.64	87	7.23

*Shallow monitor wells that were installed during an environmental site assessment of a former fungicide underground storage tank in 2005.

7.5 Analytical Results

Laboratory analytical results are presented in Tables 1 through 17, Appendix 5. Laboratory Certificates of Analysis are presented in Appendix 6.

Soil analytical results are compared to the 2013 NSE EQS for coarse-grained soil at agricultural (onsite) and residential (adjacent sites) sites with potable water. The agricultural guidelines were chosen for the site since it is undeveloped, comprised of natural forested areas and is intended to be reclaimed by the Town of Yarmouth to be protective of the watershed supply area. The residential guidelines were chosen to address the neighbouring residential dwellings.

Sediment analytical results are compared to the 2013 NSE EQS for Freshwater Sediment.

Potable water and groundwater analytical results are provided in comparison with the 1999 (2014 updates) Health Canada Drinking Water Quality (HCDWQ) Guidelines and the 2013 NSE Environmental Quality Standards (EQS) for Potable Groundwater (coarse-grained soil). Note, an erratum to the phenol NSE EQS for Potable Groundwater was provided by email, confirming the published value (0.0008 mg/L) was incorrect and that the correct value is 0.57 mg/L.

Surface water analytical results are compared to the 1999 (2015 updates) CCME *Water Quality Guidelines for the Protection of Freshwater Aquatic Life* (FAL) and the 2013 NSE EQS for Surface Water (fresh water).

7.5.1 Soil

Laboratory analytical results are summarized in Tables 1 through 4, Appendix 5.

7.5.1.1 *Petroleum Hydrocarbons*

The laboratory reported a trace concentration of modified TPH (as weathered fuel oil) in soil TP22/1 (150 mg/kg). These results satisfy the Tier 1 EQS of 270 mg/kg (residential) and 150 mg/kg (agricultural) for fuel oil.

No BTEX parameters were detected in the soil sample submitted for analysis.

Other than TP23, which was immediately adjacent to TP22, there was no evidence of PHC impacts in any of the other test pits or boreholes.

7.5.1.2 *Metals*

The laboratory reported the following:

- Elevated aluminum concentrations in fill (TP6/2, TP26/1 and MW4-1B) and till (TP6/3, TP15/1 and TP24/1) over the NSE agricultural and residential Tier 1 EQS (15,400 mg/kg for both);
- Elevated arsenic concentrations in fill (TP6/2) and till (TP6/3) over the NSE agricultural (17 mg/kg) Tier 1 EQS. Arsenic was also elevated over the both the agricultural and residential (31 mg/kg) Tier 1 EQS in the sample of sediment from the drainage pipe (from the mill trench that discharges to the crock);
- Elevated iron concentrations in all samples except for two (TP17/2, TP22/2 (and its lab duplicate)) over the NSE agricultural and residential Tier 1 EQS (11,000 mg/kg for both);
- Elevated selenium concentration in fill (TP17/2) over the NSE agricultural Tier 1 EQS (1 mg/kg); this sample was from an area of infilling and debris; and
- Elevated vanadium concentration in fill (TP6/2) over the NSE agricultural and residential Tier 1 EQS (39 mg/kg for both).

No other metals exceeded the NSE Tier 1 EQS. Elevated aluminum and iron levels (in till and fill) are generally naturally occurring based on the natural geochemistry of site-native soil (slate till) and bedrock of this region as opposed to an anthropogenic source of contamination.

7.5.1.3 *Polycyclic Aromatic Hydrocarbons*

The laboratory did not detect any PAH parameters in the soil samples analyzed. In select samples, the laboratory detection limit was raised due to moisture content and sample matrix. There was no evidence of PAHs during the investigation.

These results satisfy the agricultural and residential NSE Tier 1 EQS for PAHs.

7.5.1.4 *Acid Base Neutrals*

The only ABN compound detected by the laboratory was a trace concentration of cresol (m&p) in fill (TP20/2); this sample came from a layer of buried wood chips. There is no guideline for cresol (m&p) in soil. There are few guidelines for ABN compounds; where available, these results satisfy the agricultural and residential NSE Tier 1 EQS.

7.5.2 Sediment

Laboratory analytical results are summarized in Tables 5 through 7, Appendix 5.

7.5.2.1 *Metals*

All metals parameters analysed in sediment satisfy the NSE Tier 1 EQS.

7.5.2.2 *Polycyclic Aromatic Hydrocarbons*

Trace concentrations of fluoranthene, phenanthrene and pyrene were reported at P1A and trace concentrations of perylene were reported at P1B and P3. No other PAHs were detected in the sediment. These results satisfy the NSE Tier 1 EQS.

7.5.2.3 *Chlorinated Phenols*

The laboratory did not detect any chlorinated phenol compounds in the sediment samples analyzed. These results satisfy the NSE Tier 1 EQS.

7.5.3 Groundwater

Laboratory analytical results are summarized in Tables 8 through 11, Appendix 5.

7.5.3.1 *General Chemistry*

Field and laboratory pH at MW1S, MW4S, MW4D, MW6S, MW11 and MW12 was depressed below the HCDWQ range of 6.5 to 8.5. There is no NSE Tier 1 EQS for pH. Field pH at MW9 was also depressed below the HCDWQ range of 6.5 to 8.5.

The total dissolved solids (TDS) concentration at MW10 (and its field duplicate) exceeded the HCDWQ guideline of 500 mg/L; there is no NSE EQS for TDS. The TDS HCDWQ guideline is an aesthetic objective only.

Colour at MW1S, MW2S, MW4D, MW6S, MW10 (and its field duplicate) and MW12 exceeded the HCDWQ guideline of ≤ 15 TCU; there is no NSE EQS for colour. The colour HCDWQ guideline is an aesthetic objective only.

Although the HCDWQ guideline is related to treatment systems only and not applicable at this site, turbidity in all the monitor wells was elevated.

7.5.3.2 *Metals*

Although the HCDWQ guideline is related to treatment systems only and not applicable at this site, aluminum concentrations at MW1S, MW6S, MW11 and MW12 were elevated; there is no NSE groundwater EQS for aluminum.

The arsenic concentrations at MW2D and MW6S exceeded both the HCDWQ guideline and NSE EQS (both 10 µg/L). The arsenic HCDWQ is a health based guideline. Historically elevated arsenic at MW12 was not repeated during our assessment.

Historically elevated boron at MW2S was not repeated during our assessment.

The cobalt concentrations at MW1S, MW3S, MW4S, MW4D, MW6S, MW9, MW10 and MW12 exceeded the NSE Tier 1 groundwater EQS (10 µg/L); there is no HCDWQ guideline for cobalt. The NSE guideline is based on discharge of groundwater within 10m of a surface water body. This pathway is not present at the site; so the guideline that is applicable would be 100µg/L (for groundwater >10m from a surface water body). Historically elevated cobalt at MW11 was not repeated during our assessment.

Iron concentrations at MW1S, MW3D, MW4D, MW6S and MW12 exceeded the HCDWQ guideline (300 µg/L); there is no NSE EQS for iron. The HCDWQ guideline for iron is an aesthetic objective, and iron is common in Nova Scotia groundwater supplies; therefore it is not necessarily attributable to contamination.

Manganese concentrations at all locations, except MW2D, exceeded the HCDWQ guideline (50 µg/L); there is no NSE EQS for manganese. The manganese HCDWQ guideline is an aesthetic objective only, and manganese is common in Nova Scotia groundwater supplies; therefore it is not necessarily attributable to contamination.

As an assessment tool, total lead was analyzed in groundwater at the wells, in addition to the dissolved lead that is part of the metals analytical package. At MW1S, MW4S, MW6S, MW9 and MW11, total lead was elevated over the HCDWQ guideline and NSE Tier 1 EQS (both 10 µg/L). Note, the standard groundwater sampling methodology for lead is dissolved (i.e. filtered), so comparison of total lead concentrations to guidelines is an overestimation of potential risk. The total lead analysis was used to assess the transport mechanism of metals at the site. All dissolved lead results satisfied the HCDWQ guideline and NSE Tier 1 EQS.

7.5.3.3 *Polycyclic Aromatic Hydrocarbons*

Trace concentrations of perylene and pyrene were detected in groundwater at MW5; these results satisfy the NSE EQS (710 µg/L). There is no HCDWQ guideline for perylene or pyrene.

The laboratory did not detect any other PAH parameters in the groundwater samples analyzed. These results satisfy the HCDWQ guidelines and NSE EQS for PAHs.

7.5.3.4 *Chlorinated Phenols*

The only chlorinated phenols detected in the groundwater samples were cresol (m&p) and total phenol at MW10 (and its field duplicate). These results satisfy the NSE Tier 1 EQS; there is no HCDWQ guideline for cresol or total phenol. There was no pentachlorophenol detected.

7.5.4 Surface Water

Laboratory analytical results are provided in Tables 12 through 15, Appendix 5.

7.5.4.1 *General Chemistry*

Field and laboratory surface water pH at SW1, SW2, SW7, SW10, SW11, SW12, P1A, P1B, P2B and the background sample was depressed below the CCME FAL range of 6.5 to 9.0; there is no NSE EQS for pH. Field pH at SW3 and SW4 was also depressed below the CCME FAL range of 6.5 to 9.0. Generally the surface water pH was lower than the wetland pH, except for piezometer P1B.

7.5.4.2 *Metals*

The laboratory reported the following:

- Elevated aluminum concentrations in all surface water samples exceeded the CCME FAL guideline (5 or 100 µg/L, based on pH) and the NSE EQS (5 µg/L);
- Elevated arsenic concentrations at SW9 and P1A exceeded the CCME FAL guideline and the NSE EQS (both 5 µg/L);
- Cadmium concentrations at all surface water locations exceeded the CCME FAL guideline (0.04 to 0.37 µg/L, based on hardness) and the NSE EQS. Cadmium concentrations at SW1, SW2, SW4, SW7, SW9, SW11, P1A, P1B, P2B and P3 also exceeded the CCME FAL guideline;
- Chromium concentrations at SW9 exceeded the CCME FAL guideline (8.9 µg/L). There is no NSE EQS for chromium;
- Copper concentrations at all locations except SW10, SW12 and Background exceeded the calculated CCME FAL guideline (2 to 4 µg/L, based on hardness) and the NSE EQS (2 µg/L);
- Iron concentrations at all surface water locations, except the Background location, exceeded the CCME FAL guideline and NSE EQS (300 µg/L for both);
- Lead concentrations at all surface water locations, except SW6, SW12 and the background location exceeded the CCME FAL guideline (1 to 7 µg/L, calculated based on hardness) and the NSE EQS (1 µg/L);
- Mercury concentrations at SW1, SW9, P1A, and P1B exceeded of the CCME FAL guideline and the NSE EQS (0.026 µg/L for both);
- Nickel concentration at SW9 exceeded the CCME FAL guideline (25 to 100 µg/L, calculated based on hardness) and the NSE EQS (25 µg/L).
- Selenium concentrations at SW9 and P1B exceeded the CCME FAL guideline and the NSE EQS (both 1 µg/L).
- Silver concentration at SW9 exceeded the CCME FAL guideline (0.25 µg/L) and the NSE EQS (0.1 µg/L). The silver concentration at P1B also exceeded the NSE EQS.
- Vanadium concentrations at SW9, P1A and P1B exceeded the NSE EQS of 6 µg/L. There is no CCME FAL guideline for chromium.
- Zinc concentrations at SW9 and P1A exceeded the CCME FAL guideline and the NSE EQS (both 30 µg/L).

No other metals exceeded the NSE Tier 1 EQS.

7.5.4.3 *Polycyclic Aromatic Hydrocarbons*

Trace concentrations of fluorene were detected at SW1, SW3, P1A, P1B and P2A. The laboratory did not detect any other PAH parameters in the surface water samples analyzed. These results satisfy the CCME FAL guideline and the NSE EQS (both 3 µg/L).

7.5.4.4 *Chlorinated Phenols*

The laboratory did not detect any chlorinated phenols in the surface water samples analyzed. These results satisfy the applicable CCME FAL guidelines and NSE Tier 1 EQS.

7.5.5 Potable Water

Laboratory analytical results are summarized in Tables 16 and 17, Appendix 5.

7.5.5.1 *General Chemistry*

Field and laboratory surface water pH at PW1, PW3 and the field pH at PW6, PW7, PW8 and PW9A was depressed below the HCDWQ range of 6.5 to 8.5. There is no NSE Tier 1 EQS.

The turbidity HCDWQ guideline is related to treatment systems and only PW3 and PW8 have treatment systems. At PW8, the turbidity concentration exceeded the HCDWQ guideline (1 NTU); there is no EQS for turbidity. Although the turbidity HCDWQ guideline is a health based guideline, it is intended to be protective of turbidity from surface water or groundwater under the influence of surface water. The types of suspended particles that are most frequently encountered in natural groundwater (such as at this location) are from the natural geologic processes of rock weathering; there was no evidence that the drinking water well was being impacted by surface water.

Total coliforms were detected in water from PW3 and PW7; no *E.coli* coliforms were detected. Both of these water sources were from dug wells. In general, dug wells are susceptible to total coliforms and this is generally a well construction or disinfectant issue.

7.5.5.2 *Metals*

The HCDWQ guideline is related to treatment systems only and not applicable to most potable wells, however, the aluminum concentration at PW3 was elevated over the guideline and this water source has a treatment system; there is no NSE groundwater EQS for aluminum.

The arsenic concentration at PW2A exceeded both the HCDWQ guideline and NSE EQS (both 10 µg/L). Arsenic can be naturally occurring and is not necessarily attributable to contamination; however, the arsenic HCDWQ is a health based guideline.

Iron concentrations at PW2A, PW6 and PW8 exceeded the HCDWQ guideline (300 µg/L); there is no NSE EQS for iron. The iron HCDWQ guideline is an aesthetic objective, and iron is common in Nova Scotia groundwater supplies; therefore it is not necessarily attributable to contamination.

The previous elevated lead concentration at PW3 was not repeated during this assessment.

Manganese concentrations at PW2A, PW6 and PW8 were elevated over the HCDWQ guideline (50 µg/L); there is no NSE EQS for manganese. The manganese HCDWQ guideline is an aesthetic objective only, and manganese is common in Nova Scotia groundwater supplies; therefore it is not necessarily attributable to contamination.

7.6 Potable Water Inspection

At [redacted] Lake George Road (PW8), the drilled well is treated with a reverse osmosis (RO) unit and a water softener. The dwelling was constructed between 2000 and 2005, and it is unlikely there is lead piping. Lead concentrations were non-detect in the March sampling event, suggesting seasonal fluctuation of the water quality of the deeper aquifer.

At [redacted] Lake George Road (PW3), the dug well is located between the dwelling and Lake George Road. Topography drained from Lake George Road towards the well. There was no standing water observed around the well; however, there was not much positive drainage away from the well crock. The dwelling was constructed prior to 1978. Based on the review of the potable water results from February (kitchen tap) and March (basement prior to treatment), the water is corrosive and compounded with a lower pH, and there appears to be some leaching of metal (copper, zinc, potentially lead) from the water lines. Lead might also be present from dissolution of lead adhered to sediment in the well. There were total coliforms present, although no *E.coli* coliforms. There was no direct channelized water from the sawmill site towards this dwelling; water migrating from the direction of the site would be shallow ground water or deeper groundwater. No transport mechanism was observed that would attribute coliforms to be present as the result of surface water flow.

At [redacted] Lake George Road (PW7), the potable water quality was generally good, with the exception of coliforms. The well crock was not opened, although the surrounding area was reviewed. Generally, there is a ridge of high land (upland) between this dwelling (and the one at [redacted] (PW6) Lake George Road) that separates the dwelling from wetland 1. The sawmill site drains into wetland 1, and this wetland ultimately discharges via the cross culvert beneath Lake George Road. The manicured lawn and the small wooded area to the rear of the dwelling drain towards the well crock. Also, some surface water (during rain events) would drain along the access road to the sawmill site, although there is a slight depression between the access road and well that would direct water towards the ditch (along Lake George Road) rather than impounding it adjacent to the well crock. There was no direct channelized water from the sawmill site towards this dwelling; water migrating from the direction of the site would be deeper groundwater, since shallow surface water would be controlled by wetland 1. No transport mechanism was observed that would attribute coliforms to be present as the result of surface water flow (i.e. from the compost on the sawmill site). The homeowner reported a previous elevated coliform count (90 CFU); it is unclear whether this was total coliforms or *E.coli* coliforms since the lab certificate was not provided. During the March sampling, more than 200 CFU total coliforms were detected, although no *E.coli* coliforms were detected. We understand that the well is not used on a regular basis, and this lack of flushing combined with suspected infiltration of surface water (containing natural organic matter) is likely the source of the continued elevated total coliform counts.

Information and photo documentation of the other potable water wells was collected recorded.

7.7 Quality Assurance/Quality Control (QA/QC)

As part of our QA/QC program, validation criteria were established that required the field collected data to have an acceptable level of precision, accuracy, representativeness, comparability and completeness (the “PARCC” criteria).

Precision was evaluated by calculating the relative percent difference (RPD) and comparing the RPD to the acceptable amount of variation. RPD is defined as:

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

Maxxam Environmental QA/QC Interpretation Guide has established criteria for performing QA/QC analysis on field collected samples and states that no field (blind) duplicate pair should have an RPD greater than:

- 50% for general chemistry parameters in water;
- 80% and 100% for individual metals in water and soil, respectively;
- 80% and 100% for organic compounds (PAHs and TPH/BTEX) in water and soil, respectively.

The Maxxam Guide also states that no laboratory duplicate pair should have an RPD greater than:

- 25% for general chemistry parameters in water;
- 25% and 35% for individual metals in water and soil, respectively;
- 40% and 50% for organic compounds (PAHs and TPH/BTEX) in water and soil, respectively.

These comparisons can only be made between results that are greater than five times the laboratory reportable detection limit (RDL). Results that have been calculated are not included in the comparison. The laboratory conducted independent QA/QC analysis, Englobe reviewed this analysis and all lab QA/QC met the stated objectives.

A field duplicate QA/QC summary is provided in Table 7-4, below. RPDs were assessed relative to Maxxam’s Environmental QA/QC Interpretation Guide.

Table 7-4. QA/QC Summary of Lab and Field Duplicate Samples.

SAMPLE ID	DUPLICATE ID	TYPE	PARAMETER (MEDIA)	RPD*	LAB QA/QC LIMIT
TP5/2	DUP 1	Field	Metals (soil)	0% to 22% where parameters are above 5x RDL	100%
TP5/2	DUP 1	Field	PAHs (soil)	All parameters are below RDLs or below 5x RDL	N/A

SAMPLE ID	DUPLICATE ID	TYPE	PARAMETER (MEDIA)	RPD*	LAB QA/QC LIMIT
TP5/2	DUP 1	Field	ABNs (soil)	All parameters are below RDLs or below 5x RDL	N/A
PW3	PWDUP	Field	General Chemistry (potable water)	0% to 5% where parameters are above 5x RDL	50%
PW3	PWDUP	Field	Metals (potable water)	0% to 48% where parameters are above 5x RDL	50%
MW10	MWDUP	Field	General Chemistry (groundwater)	0% to 46% where parameters are above 5x RDL	50%
MW10	MWDUP	Field	Metals (groundwater)	0% to 42% where parameters are above 5x RDL	50%
MW10	MWDUP	Field	Phenolics (groundwater)	2% where parameters are above 5x RDL	80%
SW9	SWDUP	Field	General Chemistry (surface water)	0% to 89% where parameters are above 5x RDL	50%
SW9	SWDUP	Field	Metals (surface water)	6% to 158% where parameters are above 5x RDL	50%
SW9	SWDUP	Field	Phenolics (surface water)	All parameters are below RDLs or below 5x RDL	N/A

* RPD is not calculated if one or more of the sample results are less than the laboratory RDLs, if sample results are below 5x the laboratory RDLs or for calculated parameters.

All RPD values calculated for QA/QC samples met the stated objectives with the exception of the RPDs calculated for SW9 (general chemistry and metals), which ranged between 0% and 158% (the objective is a RPD below 50%). The laboratory reviewed the samples and in their opinion sediment inclusions in the samples would account for the inhomogeneity of the water samples; the duplicate had less sediment. The results received from the DUP sample are most representative of site conditions at SW9.

Comparability was assessed qualitatively to confirm that the sample results were suitable for use. The sampling results are considered to be comparable as field methods and laboratory methods were consistent throughout the sampling program, and analytical results of similar samples of like materials across the site gave similar and/or expected results.

8 DISCUSSION

Generally, soil at the sawmill site satisfied the agricultural and residential guidelines with a few exceptions. As noted, elevated aluminum and iron concentrations are commonly found in surficial soils of Nova Scotia and are not necessarily attributed to anthropogenic contamination, although the mobilization of these naturally elevated metals can affect aquatic habitat.

Arsenic guideline exceedances were isolated to soil near the former pond (TP6) and in sediment from a drain pipe. If arsenic was a significant concern, we would expect to see more

wide spread elevated arsenic concentrations and more elevated arsenic concentrations in the surface water and sediment (peat) samples would be evident. Elevated arsenic concentrations in surface water were limited to downgradient of the pond (SW9), in sediment to the piezometer near the discharge of the onsite crock, in groundwater to adjacent to the dip tank (MW2D), the well northeast of the dip tanks (MW6S) and the well east of the dip tanks (MW12); and in the drilled well at 2014 Lake George Road, adjacent to [redacted] Lake George Road (PW2A). It appears there may be localized arsenic impacts associated with the former dip tanks and migrating radially to a limited extent in groundwater and via the drain infrastructure. The arsenic impacts near the pond may be related to a spill or release of wood preservative near this location or the quality of fill used to reinstate the pond.

The other metals guideline exceedances in soil (vanadium and selenium) appear to be isolated and somewhat anomalous; the vanadium exceedance is likely associated with the fill quality in the former pond, and the selenium exceedance is in subsurface soil likely associated with debris.

A compost sample was collected from the site to further support the source (compost facility) analytical testing that Bio-logic Environmental Systems (Paul Arnold) conducted. The analytical chemistry satisfied agricultural guidelines (which are more stringent than Category B compost guidelines), further demonstrating that once the debris is removed from the compost, it is not causing any human health or environmental harm.

In 16 soil samples, 6 sediment samples, 9 surface water samples and 12 potable water samples, only a trace amount of cresol (slightly over the laboratory detection limit) was detected in one soil sample, a trace concentration of phenol and cresol (but no PCP) was detected in groundwater at one monitor well and a trace concentration of phenol (slightly over the laboratory detection limit) was detected in the laboratory duplicate of the downgradient potable well (PW1). Based on these results it does not appear that phenol or cresol based wood preservatives were used at the sawmill. The isolated on-site detections are likely from discarded and buried lumber/wood chips treated with these chemicals. The isolated trace phenol concentrations in the two potable wells (from February and the March lab duplicate) are interpreted to be natural in nature and not causing any harm based on the magnitude of that they have been detected (100 times) below the NSE guideline.

The groundwater assessment indicates that both shallow and deeper groundwater flow is radial from the center of the site (near the former dip tanks and mill). Generally the shallow groundwater has elevated turbidity (fine-grained components of the site Till). From the analysis of the dissolved and total lead results, it appears that metals are adhered to the fine-grained particulate matter in the shallow groundwater.

Cobalt was elevated in groundwater at several of the monitor wells. The NSE Tier 1 ESQ is based on discharge of groundwater within 10m of a surface water body. This pathway is not

present at the site (and cobalt in the surface water tested is compliant); so the guideline that is applicable would be 100µg/L (for groundwater >10m from a surface water body).

Surface water is controlled by topography and leaves the site through two main areas: discharge east and west from wetland 1; discharge north and south from wetland 2. At wetland 2, there is generally a divide through the wetland, in the northern portion surface water flows from the crock to P-1A to SW3 to SW5 and to SW6. In the southern portion, surface water flows from P-1B to SW12. In the piezometers, surface water generally had higher metals concentrations than in the downgradient surface water samples; this is due to unavoidable sediment and organic matter in the water (as evidenced by the turbidity). At SW12, the aluminum and cadmium results were generally consistent with the background chemical quality; iron was still elevated over the freshwater guideline and pH was depressed. At SW3, SW5 and SW6, the pH progressively increases and is compliant in SW5 and SW6. The aluminum and cadmium results were generally consistent with the background chemical quality, copper is relatively consistent at all three locations; however, lead and iron decrease at SW6 (lead is compliant).

In the northern portion of the site, the ditching comprising SW10 and SW8 generally drains easterly towards P-3, SW2 and SW7. The aluminum and cadmium results were generally consistent with the background chemical quality. Copper, iron and lead results were relatively consistent at these areas, being slightly higher in locations with increased turbidity (P3 and SW8). At SW10, pH was very depressed; however, increased at P3 before decreasing in the downgradient areas. Areas west of the ditching (SW9, P-2A, P-2B, SW11, SW1 and SW4) generally drain westerly. Surface water entered this area of wetland 1 in two locations (near P-2A and near SW9). In this area, poor water quality at SW9 appears to dominate the water quality discharging beneath Lake George Road at SW1. Even if the field duplicate sample is considered representative of the site conditions, metals results are high even though pH is neutral and shouldn't be contributing to leaching of metals from sediment and organics. Lead concentrations decrease downgradient of SW9, although they still exceeded the applicable guidelines. pH also decreases downgradient of SW9 before starting to rise on the opposite side of Lake George Road (likely as other water sources migrate into this drainage feature). The depressed pH is likely the main contributor to the repeated fish losses at the constructed pond behind [redacted] (PW8) Lake George Road.

At the potable wells, the lead concentrations at [redacted] (PW3) Lake George Road may be from a combination of elevated lead in the shallow water supplying the dug well and from leaching of plumbing. We understand a treatment system has been installed to address lead in the drinking water. Total coliforms were detected at this location and in our opinion are related to natural recharge (of influence of surface water) of the dug well and not a result of activities at the sawmill site. At [redacted] (PW8) Lake George Road, the elevated lead results (from February) in the drilled water wells appears to be seasonally controlled. At [redacted] (PW7) Lake George

Road, the only water quality issue is total coliforms in the dug well. The topographic and surface water flow regime around this dug well was assessed, and there is no evidence to suggest surface water (laden with compost or other matter) is migrating from the sawmill site to this well and resulting in elevated total coliforms. The lack of flushing (from infrequent use) combined with infiltration of surface water from the manicured lawn or adjacent wooded areas is the likely source of the elevated coliforms.

In general, all dug wells are susceptible to total coliforms. Total coliforms can come from natural organics and growth of bacteria in non-chlorinated water. When the exterior conditions start to warm (in the spring and summer), when there is increased surface water runoff from spring melts and if water becomes stagnant (from lack of use), then bacterial growth is accelerated. If total coliforms are present, then the well should be shock chlorinated and follow-up testing conducted to see if the coliform issue resolves. NSE provides guidance on the testing and shock chlorination procedure in their *Drop on Water Factsheet*[1]. If total coliform issues don't resolve through shock chlorination, then permanent treatment (such as UV filters) or a drilled well are recommended action items.

In Nova Scotia, public drinking water supply owners (such as the Town of Yarmouth's municipal distribution system) are required by law to test the water that they supply. The Town of Yarmouth has a mandated water testing program (number of events and parameters) as a component of their operating approval and results are regularly reviewed by NSE to ensure conformance. However, although recommended, testing of private drinking water supplies is not mandatory. Most often mortgage lenders require testing for bacteria (total and *E.coli* coliforms), but general chemistry is typically not required. Homeowners are responsible for protecting and testing their water supply to ensure that it is safe to drink. NSE recommends the bacterial quality be checked every six months. The chemical quality should be checked every one to two years, or more often if changes, such as increased turbidity, staining, or hardness, or a change in taste or odor, are noticed[2].

Although residents were concerned about phenols in drinking water, the detailed testing at the sawmill does not support evidence of phenol based wood preservative use. Resolution of the NSE phenol guideline error (from 0.008 to 0.57 mg/L) and the very small detections at isolated locations during both the February and March testing do not support that there is phenol contamination at the neighbouring potable water wells. The very small detections are natural in origin, will fluctuate seasonally and pose no concern.

9 SUMMARY AND CONCLUSIONS

Based on our interpretation of the results, soil quality at the site generally satisfies the NSE Tier 1 EQS for agricultural and residential land use, with a few exceptions. At these locations further evaluation against the NSE Tier 2 Pathway Specific Standard (PSS) is recommended.

The sediment (peat) assessed did not have any NSE Tier 1 EQS exceedances.

[1] NSE The Drop on Water : Fact Sheets [http://www.novascotia.ca/nse/water/thedroponwater.asp]

[2] NSE Tips for Testing your Well Water [http://www.novascotia.ca/nse/water/welltips.asp]

The groundwater only had cobalt and arsenic concentrations that exceeded the NSE Tier 1 EQS. The cobalt Tier 1 EQS is not applicable to this site scenario, and the Tier 2 PSS should be applied. Further assessment of the arsenic is warranted.

The surface water had phenol, aluminum, arsenic, cadmium, copper, iron, lead, mercury, nickel, selenium, silver, vanadium and zinc concentrations that exceeded the NSE Tier 1 EQS. Many of these are similar to background concentrations, and there is inconclusive evidence to determine if these compounds are all from anthropogenic (i.e. manmade) contamination. Further assessment is warranted.

Total coliforms are present in the potable water from [redacted] (PW3) and [redacted] (PW7) Lake George Road. The data collected indicates the coliform source is not from the Ibbitson site. The homeowners should follow NSE's recommended procedure for addressing total coliforms in drinking water sources. Also, all homeowners should follow NSE's recommended quality testing procedures.

Arsenic was elevated in the drilled well at 2014 Lake George Road, adjacent to [redacted] (PW2) Lake George Road. The well is reportedly not used on a regular basis. If this well is used as a potable drinking water source it should be treated for arsenic, if it is no longer being used, it should be decommissioned. The most recent sampling has revealed compliant lead concentrations at [redacted] (PW8) and [redacted] (PW3) Lake George Road. Although this water is treated, further assessment to evaluate seasonal effects is warranted.

Detailed recommendations for follow-up will be provided under separate cover.

10 REPORT USE AND CONDITIONS

This review and assessment was conducted using the methodology described in this report. The opinions in this report are provided using generally accepted scientific judgement, principles and practices; however, due to the inherent uncertainty in these processes, no guarantee of conclusion is intended or can be given.

It is important to note that the investigation involves a sampling of the site gathered at specific test locations and the conclusions in this report are based on this information gathered.

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

Appendix 1 Figures

Ref: 2006 Aerial Photography purchased from GeoNOVA, Government of Nova Scotia.

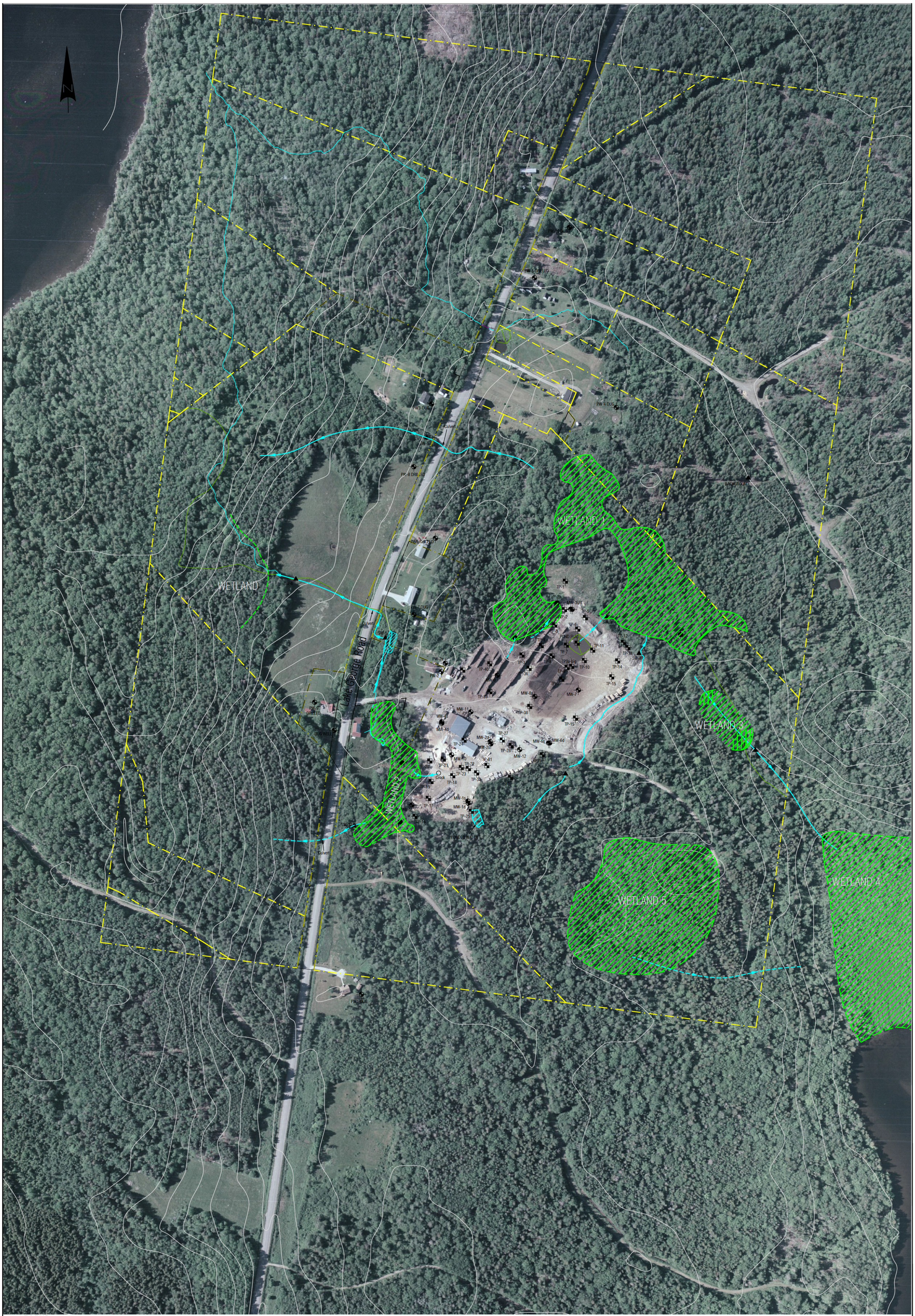
LEGEND:

- Property Line

Englobe

Site Plan
2014 Lake George Road, Lake George, NS

DATE: May 2016	SCALE: 1:4000	DRAWN BY: JJ	CKD BY: AC	JOB No. 21347	FIGURE 1



LEGEND:

- Englobe Delineated Wetland
- Property Line
- Test Pit Location
- Monitor Well / Potable Well Location
- Piezometer Point
- Surface Water Sample Location

Ref: 2006 Aerial Photography purchased from GeoNOVA, Government of Nova Scotia.

Englobe

Site Plan Showing Test Locations
2014 Lake George Road, Lake George, NS

DATE: May 2016	SCALE: 1:2000	DRAWN BY: JJ	CKD BY: AC	JOB No. 21347	FIGURE 2

N

PW-10 DUG

PW-5 DRILLED

PW3 (Dug)
(44.92)

PW-4 DUG

Culvert

SW-1

SW-4

SW-11

PW8 (Drill)
(42.04)

BACKGROUND

WETLAND 1

PW6-DRILLED

WETLAND

SW-6

PW-1 DUG

Culvert

SW-5

(52.73)
MW3-D
(52.42)
MW3-S

SW-9

POND FLAG

SW-8

PW-2a

PW-2

MW-9
(53.08)

MW-7
(53.13)

MW-8
(53.84)

PW-9
DRILLED

SW-3

MW-4S
(54.71)
MW-4D
(53.32)
(54.84)

MW-11
(55.28)

MW-2D
(55.20)

MW-6S
(55.09)
MW-6D
(54.31)

MW-12
(54.54)

MW-2S
(55.84)

MW-10

WETLAND 3

SW-2

DUG WELL

WETLAND 2

MW-1S
(54.91)

MW-1D
(54.61)

MW-5
(51.89)

PONDED WATER

SW-12

SW-10

SW-7

Culvert

WETLAND 5

WETLAND 4

PW1-DUG

LEGEND:

- Englobe Delineated Wetland
- Property Line
- Test Pit Location
- Piezometer Point
- Monitor Well with GW Elevation / Potable Well Location
- Monitor Well with GW Elevation Used in Hydrogeologic Model
- Surface Water Sample Location

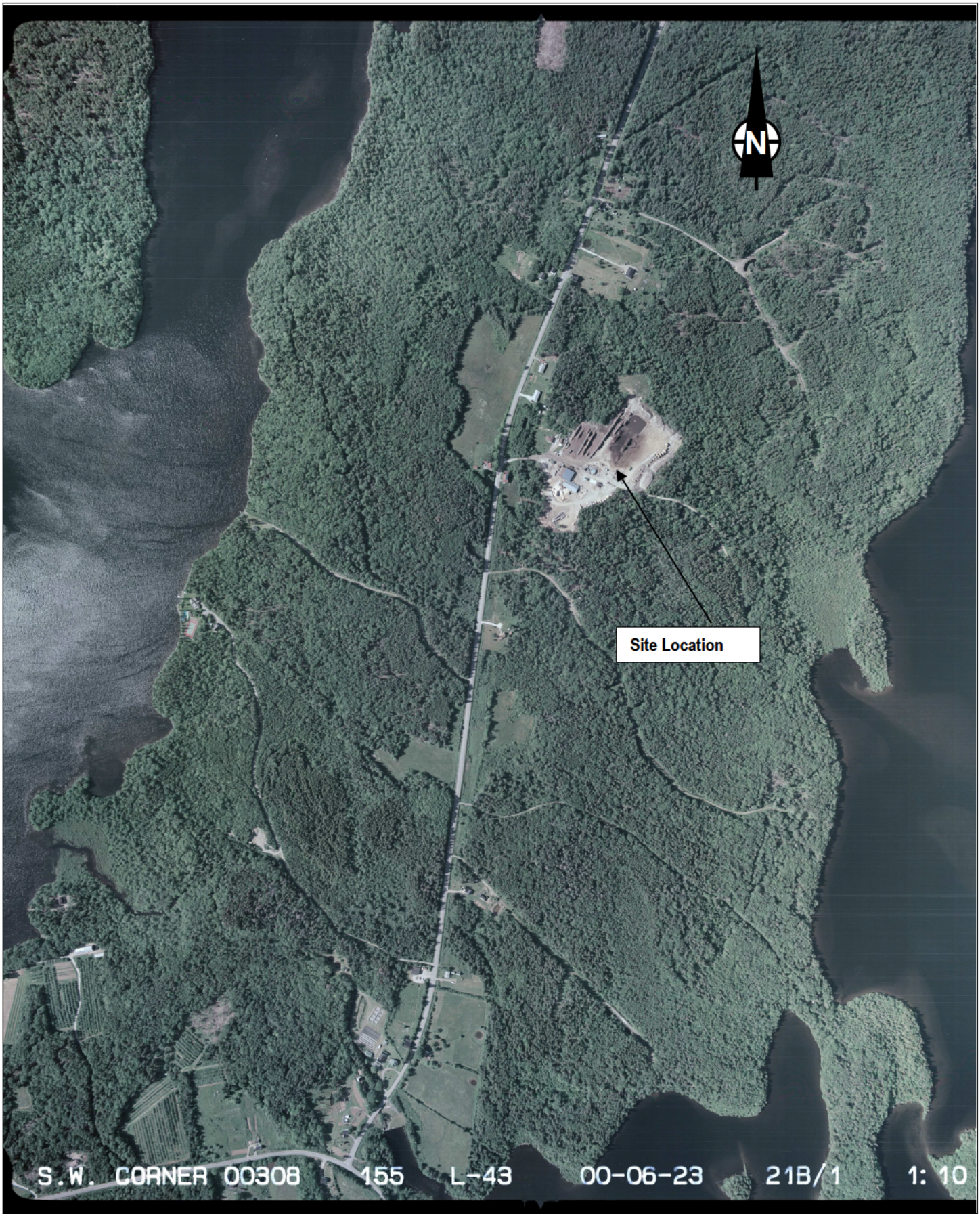
Englobe

Site Plan Showing Test Locations and Inferred GW Direction
2014 Lake George Road, Lake George, NS

DATE: May 2016	SCALE: 1:2000	DRAWN BY: JJ	CKD BY: AC	JOB No. 21347	FIGURE 3

Appendix 2 Aerial Photos

Englobe	Job No.: 21347 Date: May 2016 Scale: 1:10,000	1988 - Aerial Photograph Phase I Environmental Site Assessment Civic No. 2014 Lake George Road, Lake George, NS	Plate 2-1



Englobe	Job No.: 21347 Date: May 2016 Scale: 1:10,000	2000 - Aerial Photograph Phase I Environmental Site Assessment Civic No. 2014 Lake George Road, Lake George, NS	Plate 2-2

Englobe	Job No.: 21347 Date: May 2016 Scale: NTS	2005 – Google Earth Image Phase I Environmental Site Assessment Civic No. 2014 Lake George Road, Lake George, NS	Plate 2-3

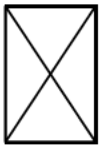
Englobe	Job No.: 21347 Date: May 2016 Scale: NTS	2013 – Google Earth Image Phase I Environmental Site Assessment Civic No. 2014 Lake George Road, Lake George, NS	Plate 2-4

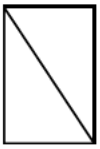
Appendix 3 Logs

SOIL SAMPLES

CONDITION – This column graphically indicates the depth and condition of the sample:

 undisturbed

 disturbed

 not recovered

TYPE – The type of sample is indicated in this column as follows:

A auger sample
B block sample
C rock core, or frozen soil core
D drive sample
G grab sample
SS split spoon
P Pitcher tube sample
U tube sample (usually thin-walled)
W wash or air return sample
O other (see report text)

PENETRATION RESISTANCE – Unless otherwise noted this column refers to the number of blows (N) of a 140 pound (63.5 kg) hammer freely dropping 30 inches (0.76 m) required to drive a 2 inch (50.8 mm) O.D. open-end sampler 0.5 feet (0.15 m) to 1.5 feet (0.45 m) into the soil, or until 100 blows have been applied, in which case, the penetration is stated. This is the standard penetration test referred to in ASTM D 1586.

OTHER TESTS

In this column are tabulated results of other laboratory tests as indicated by the following symbols:

*C	Consolidation test
Fines	Percentage by weight smaller than #200 sieve
D_R	Relative density (formerly specific gravity)
k	Permeability coefficient
*MA	Mechanical grain size analysis and hydrometer test (if appropiate)
pp	Pocket pentrometer strength
*q	Triaxial compression test
q_U	Unconfined compressive strength
*SB	Shearbox test
SO_4	Concentration of water-soluble sulphate
*ST	Swelling test
TV	Torvane shear strength
VS	Vane Shear Strength (undistrubed-remolded)
ε_f	Unit strain at failure
γ	Unit weight of soil or rock
γ_d	Dry unit weight of soil or rock
ρ	Density of soil or rock
ρ_d	Dry density of soil or rock

* The results of these tests usually are reported separately

SYMBOLS AND TERMS USED ON THE BOREHOLE AND TEST PIT RECORDS

SOIL DESCRIPTION

Behavioural properties (i.e. plasticity, permeability) take precedence over particle gradation in describing soils.

Terminology describing soil structure:

Desiccated	- having visible signs of weathering by oxidation of clay minerals, shrinkage cracks etc.
Fissured	- having cracks, and hence a blocky structure
Varved	-composed of regular alternating layers of silt and clay
Stratified	- composed of alternating layers or different soil types, e.g. silt and sand or silt and clay
Well Graded	- having wide range in grain sizes and substantial amounts of all intermediate particle sizes
Uniformly Graded	- predominantly of one grain size.

Terminology used for describing soil strata based upon the proportion of individual particle size present:

Trace, or occasional	Less than 10%
Some	10-20%
Adjective (e.g. silty or sandy)	20-35%
And (e.g. silt and sand)	35-50%

The standard terminology to describe cohesionless soils includes the relative density, as determined by laboratory test or by the Standard Penetration Test 'N' - value: the number of blows of 140 pound (64 kg) hammer falling 30 inches (760 mm), required to drive a 2 inch (50.8 mm) O.D. split spoon sampler one foot (305 mm) into the soil.

Relative Density	'N' Value	Relative Density %
Very loose	<4	<15
Loose	4-10	15-35
Compact	10-30	35-65
Dense	30-50	65-85
Very Dense	>50	>85

The standard terminology to describe cohesive soils includes the consistency, which is based on undrained shear strength as measured by insitu vane tests, penetrometer tests, unconfined compression test, or occasionally by standard penetration tests.

Consistency	Undrained Shear Strength		'N' Value
	Kips/sq ft.	kPa	
Very Soft	<0.25	<12.5	<2
Soft	0.25-0.5	12.5-25	2-4
Firm	0.5-1.0	25-50	4-8
Stiff	1.0-2.0	50-100	8-15
Very Stiff	2.0-4.0	100-200	15-30
Hard	>4.0	>200	>30

SOIL CLASSIFICATION SYSTEM (MODIFIED U.S.C.)

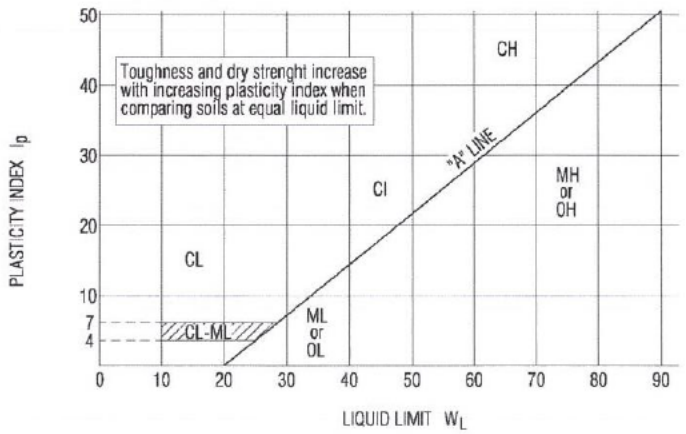
MAJOR DIVISION			GROUP SYMBOL	GRAPHIC SYMBOL	COLOR CODE	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA	
HIGHLY ORGANIC SOILS			Pt		ORANGE	PEAT AND OTHER HIGHLY ORGANIC SOILS	STRONG COLOR OR ODOR, AND OFTEN FIBROUS TEXTURE	
COARSE-GRAINED SOILS (MORE THAN HALF BY WEIGHT LARGER THAN NO. 200 SIEVE SIZE)	GRAVELS MORE THAN HALF COARSE FRACTION LARGER THAN NO.4 SIEVE SIZE	CLEAN GRAVELS	GW		RED	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, <5% FINES	$Cu = \frac{D_{60}}{D_{10}} > 4$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1$ to 3	
			GP		RED	POORLY-GRADED GRAVELS, AND GRAVEL-SAND MIXTURES, <5% FINES	NOT MEETING ALL ABOVE REQUIRMENTS	
		DIRTY GRAVELS	GM		YELLOW	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES >12% FINES	ATTERBERG LIMITS BELOW "A" LINE OR $I_p < 4$	
			GC		YELLOW	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES >12% FINES	ATTERBERG LIMITS ABOVE "A" LINE OR $I_p > 7$	
	SANDS MORE THAN HALF COARSE FRACTION SMALLER THAN NO.4 SIEVE SIZE	CLEAN SANDS	SW		RED	WELL-GRADED SANDS, GRAVELLY SANDS, <5% FINES	$Cu = \frac{D_{60}}{D_{10}} > 6$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1$ to 3	
			SP		RED	POORLY-GRADED SANDS, OR GRAVELLY SANDS, <5% FINES	NOT MEETING ALL ABOVE REQUIRMENTS	
		DIRTY SANDS	SM		YELLOW	SILTY SANDS, SAND-SILT MIXTURES >12% FINES	ATTERBERG LIMITS BELOW "A" LINE OR $I_p < 4$	
			SC		YELLOW	CLAYEY SANDS, SAND-CLAY MIXTURES >12% FINES	ATTERBERG LIMITS ABOVE "A" LINE OR $I_p > 7$	
FINE - GRAINED SOILS (MORE THAN HALF BY WEIGHT PASSES NO.200 SIEVE SIZE)	SILTS BELOW "A" LINE ON PLASTICITY CHART; NEGLIGIBLE ORGANIC CONTENT		ML		GREEN	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY SANDS OF SLIGHT PLASTICITY	$W_L < 50$	SEE CHART BELOW
			MH		BLUE	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS	$W_L > 50$	
	CLAYS ABOVE "A" LINE ON PLASTICITY CHART; NEGLIGIBLE ORGANIC CONTENT		CL		GREEN	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, LEAN CLAYS	$W_L < 30$	
			CI		GREEN-BLUE	INORGANIC CLAYS OF MEDIUM PLASTICITY SILTY CLAYS	$W_L > 30, < 50$	
			CH		BLUE	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	$W_L > 50$	
	ORGANIC SILTS & ORGANIC CLAYS BELOW "A" LINE ON PLASTICITY CHART		OL		GREEN	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	$W_L < 50$	
			OH		BLUE	ORGANIC CLAYS OF HIGH PLASTICITY	$W_L > 50$	

FILL TILL BEDROCK

1. All sieve sizes mentioned on this chart are U.S. Standard, ASTM E11.
2. Boundary classifications possessing characteristics of two groups are given combined group symbols eg GW-GC is a well-graded gravel-sand mixture wtih clay binder between 5% and 12%.
3. Soil fractions and limiting textural boundaries are in accordance with the Unified Soil Classification System, except that an inorganic clay of medium plasticity (CI) is recognized.
4. The following adjectives may be employed to define percentage ranges by weight of minor components:

and	50 - 36%
gravelly, sandy, silty, clayey, ect.	35 - 21%
some	20 - 11%
trace	10 - 1%

PLASTICITY CHART



Englobe

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 14/3/16 | JOB NO. 21347 | TEST PIT TP1

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.18 meters

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Rootmat			
1				FILL: Sandy silt, compact, moist, orange brown.			
2				TILL: Silty sand, trace gravel, occasional cobbles, compact, moist, light brown.			
3	1						
4						GRAB	
5							
6	2						
7							
8							
9							
10	3			End of test pit at 3.05m in Till. Groundwater was not encountered.			
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 1

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN.	CKD.	DATE OF INVEST.	JOB NO.	TEST PIT
AC	AC	14/3/16	21347	TP2

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.11 meters

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Rootmat/compost			
1				FILL: (Reworked Till) Sandy silt to silty sand, loose, moist to wet, grey brown.			
2				ORGANICS: Rootmat/organics			
3	1			FILL: Reworked Till, sandy silt to silty sand, loose, moist to wet, grey brown.		GRAB	
4							
5				TOPSOIL: Rootmat/organics (original).			
6				TILL: silty sand, trace gravel, occasional cobbles, compact, moist, light brown.			
7	2						
8							
9						GRAB	
10	3						
11				End of test pit at 3.35m in Till. Groundwater was not encountered.			
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

BACKHOE TYPE
Excavator

OTHER TESTS

PLATE 2

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN.	CKD.	DATE OF INVEST.	JOB NO.	TEST PIT
AC	AC	14/3/16	21347	TP3

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 52.96 meters

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Compost			
1				FILL: (Reworked Till) Sandy silt to silty sand, loose, moist to wet, grey brown.		GRAB	
4	1			TILL: Silty sand, trace gravel, occasional cobbles, compact, moist, light brown.			
6	2					GRAB	
10	3						
11				End of test pit at 3.35m on assumed bedrock. Minor groundwater inflow was observed at 3.35m			
13	4						
16	5						
19	6						
20							

BACKHOE TYPE
Excavator

OTHER TESTS

PLATE 3

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP4

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DEPTH ft / m | MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.08 meters

SOIL SAMPLE: COND. | TYPE | POCKET PENE.

BACKHOE TYPE: Excavator

OTHER TESTS

Depth (ft)	Depth (m)	Soil Description	Sample
0		Compost	
1		FILL: (Reworked Til) Sandy silt to silty sand, compact, moist, grey brown.	GRAB
2		TILL: Silty sand, trace gravel, occasional cobbles, compact, moist, brown.	
3	1		
4			
5			
6			
7	2		
8			GRAB
9			
10	3	End of test pit at 2.73m on assumed bedrock. Minor groundwater observed at 2.73m.	
11			
12			
13	4		
14			
15			
16	5		
17			
18			
19			
20	6		

PLATE 4

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP5

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 51.82 meters

BACKHOE TYPE: Excavator

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Compost, saturated			
1				FILL: Silty sand, some gravel, loose, wet, orange brown.		GRAB	
3	1			TILL: Sandy silt to silty sand, compact, wet, brown.			
6	2					GRAB	
7				End of test pit at 2.13m on assumed bedrock. Surface water inflow.			
10	3						
13	4						
16	5						
20	6						

OTHER TESTS

PLATE 5

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP6

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 52.00 meters

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost/rootmat, saturated		GRAB	
1–5	1			FILL: silty sand, some gravel, occasional cobbles, loose, moist to wet, brown.		GRAB	
6	2					GRAB	
6	2			End of test pit at 1.83m on assumed bedrock. Minor groundwater observed at 1.83m.			
7–20	3–6						

PLATE 6

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP7

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION

BACKHOE TYPE: Excavator

OTHER TESTS

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Compost		GRAB	
1–3	0–1			FILL: (Reworked Till) Silty sand, trace gravel, some clay and organics, occasional cobbles, loose, wet, brown.		GRAB	
9–10	2–3					GRAB	
10	3			End of test pit at 3.05m on assumed bedrock. Moderate groundwater observed from organics layer.			

PLATE 7

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 14/3/16 | JOB NO. 21347 | TEST PIT TP8

BACKHOE TYPE: Excavator

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.09 meters

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				FILL: (Pit Run) Sand, gravel, some cobbles, loose, moist to wet, brown, on geogrid.			
2				TILL: Silty sand, trace gravel, some clay, occasional cobbles, loose, wet, gray.			
3	1						
4						GRAB	
5							
6	2						
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16							
17	5					GRAB	
18				End of test pit at 5.18m on assumed bedrock. Groundwater was not encountered during test pit.			
19							
20	6						

OTHER TESTS

PLATE 8

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP9

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DEPTH ft / m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 52.87 meters

SOIL SAMPLE: COND. | TYPE | POCKET PENE.

BACKHOE TYPE: Excavator

OTHER TESTS

ft	m	SOIL DESCRIPTION
0	0	Compost
1		FILL: (Pit Run) Sand, gravel, some cobbles, loose, moist to wet, brown, on geogrid.
2		FILL: (Reworked Till) Silty sand, trace gravel, occasional cobbles, grubbing and organic, loose, moist to wet, dark brown to grey.
3	1	
4		
5		
6		
7	2	
8		
9		
10	3	
11		
12		TILL: Silty sand to sandy silt, trace of gravel, occasional cobble, compact, wet, light brown.
13	4	End of test pit at 3.96m on assumed bedrock. Minor groundwater observed at 3.96m.
14		
15		
16	5	
17		
18		
19		
20	6	

PLATE 9

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN.	CKD.	DATE OF INVEST.	JOB NO.	TEST PIT
AC	AC	14/3/16	21347	TP9A

WC % wp- □ w- ● wl- △ (10 20 30 40 50)

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 52.50 meters

BACKHOE TYPE: Excavator

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				FILL: (Pit Run) Sand, gravel, some cobbles, loose, moist to wet, brown, on geogrid.			
2				FILL: (Reworked Till) Silty sand, trace gravel, occasional cobbles, grubbing and organics, loose, moist to wet, dark brown to grey.		GRAB	
3	1			Drain at 0.76m with water running.			
4							
5							
6							
7	2						
8							
9							
10	3						
11							
12				TILL: Silty sand to sandy silt, trace of gravel, occasional cobble, compact, wet, light brown.			
13	4			End of test pit at 3.96m on assumed bedrock. Minor groundwater observed at 0.76m.			
14							
15							
16	5						
17							
18							
19							
20	6						

OTHER TESTS

PLATE 10

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 14/3/16 | JOB NO. 21347 | TEST PIT TP10

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 52.85 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
0				FILL: (Pit Run) Sand, gravel, some cobbles, loose, moist to wet, brown.			
1				TILL: Sandy silt, some gravel, occasional cobble, dense, moist, light brown to grey brown.			
3	1					GRAB	
4							
5							
6							
7	2						
8							
9							
10	3						
11							
12				▽			
13	4						
14							
15							
16	5						
17							
18				End of test pit at 5.49m in Till. Minor groundwater inflow observed at 3.66m.			
19							
20	6						

PLATE 11

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP11

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 52.07 meters

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Compost		GRAB	
1–7	0–2			FILL: Sandy silt to silty sand, grubbings, organics, loose, moist to wet, medium brown.		GRAB	
7–13	2–4			TILL: Sandy silt, some gravel, occasional cobble, loose to compact, moist, brown.		GRAB	
13	4			End of test pit at 3.96m in Till. Minor groundwater inflow observed at 2.13m.			

PLATE 12

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP12

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 51.69 meters

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0–3	0–1			Compost TILL: Silty sand, trace gravel, some clay, compact, moist, light brown.		GRAB	
3–6	1–2			TILL : Silty clay, trace gravel and sand, dense, moist, grey.		GRAB	
6	2			End of test pit at 1.83m in Till. Groundwater was not encountered during test pit.			
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 13

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP13

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
				DATUM Control Station #229012, Ortho_CVGD2013			
				SURFACE ELEVATION			
				Compost			
1				TILL: Silty sand, some gravel, occasional cobbles, dense, moist, orange brown to brown.		GRAB	
2	1						
3							
4							
5							
6							
7	2					GRAB	
8				End of test pit at 2.13m in Till. Groundwater was not encountered during test pit.			
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

BACKHOE TYPE
Excavator

OTHER TESTS

PLATE 14

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 14/3/16 | JOB NO. 21347 | TEST PIT TP14

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				TILL: Silty sand to sandy silt, some gravel, occasional cobbles, dense, moist, light brown.		GRAB	
2	1						
3							
4							
5							
6							
7	2					GRAB	
8				End of test pit at 2.13m in Till. Groundwater was not encountered during test pit.			
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 15

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 14/3/16 | JOB NO. 21347 | TEST PIT TP15

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.00 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				TILL: Silty sand to sandy silt, some gravel, occasional cobbles, dense, moist, light brown.		GRAB	
2							
3	1						
4							
5							
6							
7	2					GRAB	
8				End of test pit at 2.44m in Till. Groundwater was not encountered during test pit.			
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 16

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP16

WC % wp □ w ● w △ (10 20 30 40 50)

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.62 meters

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Rootmat			
1				Topsoil and organics, very loose, moist, dark brown.		GRAB	
2							
3	1			FILL: Organics, debris (Sawn wood, logs, grubbing, cobbles), loose, saturated, dark brown.			
4							
5							
6	2					GRAB	
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6			TILL: Sand and gravel, some cobbles, compact, saturated, grey.		GRAB	
				End of test pit at 6.10m in Till. Minor			

BACKHOE TYPE: Excavator

OTHER TESTS

PLATE 17

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	TEST PIT TP16

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.	BACKHOE TYPE / OTHER TESTS
				DATUM Control Station #229012, Ortho_CVGD2013 SURFACE ELEVATION 54.62 meters				Excavator
22				groundwater inflow observed at 2.13m.				
23	7							
24								
25								
26	8							
27								
28								
29								
30	9							
31								
32								
33	10							
34								
35								
36	11							
37								
38								
39	12							
40								
41								

PLATE 18

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 14/3/16 | JOB NO. 21347 | TEST PIT TP17

BACKHOE TYPE: Excavator

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.85 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				FILL: Organics, debris (Sawdust, sawn wood, logs, roots, grubbing, cobbles), loose, saturated, dark brown.		GRAB	
2							
3	1						
4							
5							
6							
7	2						
8							
9						GRAB	
10	3						
11							
12							
13	4						
14				TILL: Silt, some sand and gravel, dense, moist, grey.		GRAB	
15				End of test pit at 4.27m in Till. Groundwater inflow observed at 3.05m.			
16							
17	5						
18							
19							
20	6						

OTHER TESTS

PLATE 19

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP18

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION DATUM Control Station #229012, Ortho_CVGD2013 SURFACE ELEVATION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				FILL: Silty sand, organics, rootmat, loose, moist, medium dark brown.		GRAB	
3	1			TILL: Silt some sand and gravel, occasional cobbles, compact to dense, moist, grey.			
5						GRAB	
6	2						
10	3						
12				▽			
13	4						
15						GRAB	
16	5			End of test pit at 4.88m in Till. Minor groundwater inflow observed at 3.66m.			
20	6						

BACKHOE TYPE
Excavator

OTHER TESTS

PLATE 20

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP19

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft / m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.35 meters

SOIL SAMPLE: COND. | TYPE | POCKET PENE.

BACKHOE TYPE: Excavator

OTHER TESTS

Depth (ft)	Depth (m)	Description	Sample
0		Compost	
0–9		FILL: Debris (saw dust, saw wood, grubbings, seamless vinyl) loose, moist, medium dark brown.	GRAB
7		▽	
8			GRAB
9		TILL: Silt some sand and gravel, compact to dense, moist, grey.	GRAB
10	3	End of test pit at 2.74m in Till. Minor groundwater inflow observed at 2.13m.	

PLATE 21

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP20

BACKHOE TYPE: Excavator

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.95 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				FILL: (Reworked Till) sandy silt to silty sand, loose, moist to wet, grey brown.		GRAB	
3	1			FILL: Debris (wood chips and organics, moist to wet, light brown to dark brown.		GRAB	
5				TILL: Silty sand, trace gravel, occasional cobbles, compact, moist, grey to orange brown.			
7	2					GRAB	
8				End of test pit at 2.44m in Till. Minor groundwater inflow observed at 2.44m.			
10	3						
13	4						
16	5						
20	6						

OTHER TESTS

PLATE 22

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP21

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.53 meters

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost		GRAB	
1				FILL: (Reworked Till) silty sand, trace gravel, compact, moist, grey brown.			
2				TILL: Silty sand, trace gravel, occasional cobbles, dense, moist, grey.			
3	1						
4							
5							
6							
7	2						
8						GRAB	
9				End of test pit at 2.74m in Till. Minor groundwater inflow observed at 2.44m.			
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 23

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP22

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.26 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
				Compost			
1				FILL: Topsoil and saw dust, loose, moist, orange brown.		GRAB	
2				FILL: (Reworked till) debris (lumber) brown with lenses of purple brown, loose, moist.		GRAB	
3	1			At 0.25 to 0.6m diesel odour.			
4							
5							
6						GRAB	
7	2			TILL: Silty sand, trace gravel, occasional cobbles, dense, moist, grey.		GRAB	
8				End of test pit at 2.44m in Till. Minor groundwater inflow observed at 2.44m.			
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 24

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP23

WC % wp □ w ● w △ (10 20 30 40 50)

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.07 meters

BACKHOE TYPE: Excavator

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.	OTHER TESTS
0	0			Compost				
1–7	0–2			FILL: (Reworked till) debris (lumber and grubbings), brown with lenses of purple brown, loose, moist. At 0.25 to 0.6m diesel odour.				
8	2			End of test pit at 2.44m in Fill. Minor groundwater inflow observed at 2.44m.				
9–20	3–6							

PLATE 25

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP24

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft / m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.59 meters

SOIL SAMPLE: COND. | TYPE | POCKET PENE.

BACKHOE TYPE: Excavator

OTHER TESTS

ft	m	SOIL DESCRIPTION	COND.	TYPE	POCKET PENE.
0	0	Compost			
1		FILL: concrete and rebar (likely old conveyor trench).			
2					
3	1				
4					
5		▽			
6					
7	2				
8					
9					
10	3	Concrete			
		TILL: Silt, trace of sand and gravel, compact, moist, brown.	GRAB		
11		End of test pit at 3.05m in Till. Heavy groundwater inflow observed at 1.52m.			
12					
13	4				
14					
15					
16	5				
17					
18					
19					
20	6				

PLATE 26

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP25

BACKHOE TYPE: Excavator

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.64 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Rootmat			
1				FILL: (Pit Run) Sand, gravel, some cobbles, loose, moist to wet, medium brown.		GRAB	
2				FILL: Silty sand to sandy silt, trace clay, loose to compact, moist to wet, dark brown to black.		GRAB	
3	1			Rootmat			
4				TILL: Sand, gravel and silt, moist to wet, compact, grey.			
5							
6							
7	2						
8							
9						GRAB	
10	3			End of test pit at 3.05m in Till. Groundwater inflow observed at 0.90m.			
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

OTHER TESTS

PLATE 27

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP26

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.00 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1–2				FILL: Mix of sand and gravel and reworked till (Pit Run), loose, moist, brown.		GRAB	
3–5	1			FILL: Mix of reworked till and debris (old foundation wall and insulation).		GRAB	
6–7	2			TILL: Silt, trace sand and gravel, moist, dense, grey.		GRAB	
8				End of test pit at 2.44m in Till. Groundwater inflow observed at 1.37m.			
9–10	3						
11–13	4						
14–16	5						
17–20	6						

PLATE 28

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP27

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 56.56 meters

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost		GRAB	
1				FILL: Mix of sand and gravel, debris (concrete, rebar, conduit), loose, saturated, brown.			
2							
3	1					GRAB	
4							
5							
6							
7	2						
8				TILL: Silt, moist, compact to dense, grey.		GRAB	
9				End of test pit at 2.44m in Till. Groundwater inflow observed at 0.9m (through conduit).			
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 29

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP28

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 56.51 meters

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				FILL: (Pit run) Sand and gravel, moist, loose, brown.		GRAB	
2				FILL: (Reworked till) silty sand, trace gravel, moist to wet, loose, brown.			
3	1						
4				Conduit			
5						GRAB	
6				TILL: Silt, sand, trace gravel, compact to dense, moist, brown.			
7	2						
8						GRAB	
9				End of test pit at 2.74m in Till. Medium groundwater inflow observed at 1.52m.			
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 30

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN.	CKD.	DATE OF INVEST.	JOB NO.	TEST PIT
AC	AC	15/3/16	21347	TP29

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 56.12 meters

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Rootmat			
1				FILL: (Reworked Till) Sand and silt, trace gravel, loose, moist, brown.		GRAB	
2				Rootmat (Original)			
3	1			TILL: Silty sand to sandy silt, trace gravel, moist, compact to dense, grey to brown.		GRAB	
4							
5							
6	2						
7							
8						GRAB	
9				End of test pit at 2.74m in Till. Minor groundwater inflow observed at 0.45m.			
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 31

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP30

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 56.51 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Rootmat		GRAB	
1				TOPSOIL: Silt and sand, trace gravel, loose to compact, moist, orange.			
2				TILL: Silt and sand, trace to some gravel, moist, compact, grey to brown.		GRAB	
3	1						
4				End of test pit at 1.22m in Till. Groundwater was not encountered during test pit.			
5							
6	2						
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 32

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP31

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.82 meters

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
3	1			Compost FILL: (Pit Run) Sand and gravel, moist, loose, brown.		GRAB	
				FILL: Sily sand, debris (wood, grubbing), moist, loose, black.			
4				TILL: Silt, some sand, trace gravel, compact, moist, grey.		GRAB	
10	3					GRAB	
				End of test pit at 3.05m in Till. Minor groundwater inflow observed at 0.9m.			

PLATE 33

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP32

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
				DATUM Control Station #229012, Ortho_CVGD2013			
				SURFACE ELEVATION			
				Compost			
1				FILL: (reworked till) Silt and sand, trace gravel, compact, moist, grey to brown.		GRAB	
2				TILL: Silt, some sand, trace gravel, occasional cobbles, compact, moist, grey to brown.			
3	1						
4							
5						GRAB	
6							
7	2						
8				End of test pit at 2.44m in Till. Groundwater was not encountered during test pit.			
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

BACKHOE TYPE
Excavator

OTHER TESTS

PLATE 34

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP33

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
				Compost			
1				FILL: (Pit Run) Sand and gravel, moist, loose, brown.		GRAB	
2				TILL: Silt and sand, trace gravel, compact to dense, moist, brown.			
3	1						
4						GRAB	
5							
6	2						
7							
8				End of test pit at 2.44m in Till. Groundwater was not encountered during test pit.			
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 35

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP34

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION

WC % 10 20 30 40 50 (wp □ w ● w △)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1				FILL: (Pit Run) Sand and gravel, loose, moist, brown over fabric and geogrid.		GRAB	
2				TILL: Silt and sand, some gravel, occasional cobbles, compact, moist, brown.			
3	1					GRAB	
4				End of test pit at 2.44m in Till. Groundwater was not encountered during test pit.			
5							
6	2						
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 36

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP35

WC % wp □ w ● w △ (10 20 30 40 50)

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.66 meters

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0	0			Compost			
1				FILL: (Pit Run) Sand and gravel, loose, moist, brown.			
2						GRAB	
3	1			Drain Tile TILL: Silty sand and gravel, occasional cobbles, compact to dense, moist, light brown.		GRAB	
4				End of test pit at 1.22m in Till. Groundwater was not encountered during test pit.			
5							
6	2						
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

BACKHOE TYPE
Excavator

OTHER TESTS

PLATE 37

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP36

BACKHOE TYPE: Excavator

OTHER TESTS

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
				DATUM Control Station #229012, Ortho_CVGD2013			
				SURFACE ELEVATION 53.23 meters			
				Compost			
1				TILL: Silty sand and gravel, compact, moist, brown.		GRAB	
2							
3	1						
4						GRAB	
5				End of test pit at 1.22m in Till. Groundwater was not encountered during test pit.			
6	2						
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

PLATE 38

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP37

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.06 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
0				Topsoil and Organics, loose, moist, dark brown.		GRAB	
1				FILL: Sand and gravel, occasional cobbles and boulders, loose to compact, wet, dark brown.		GRAB	
3	1			TILL: Silty sand and gravel, moist, compact, grey to brown.			
7	2					GRAB	
				End of test pit at 2.13m in Till. Minor groundwater inflow observed at 0.76m.			
10	3						
13	4						
16	5						
20	6						

PLATE 39

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP38

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
				DATUM Control Station #229012, Ortho_CVGD2013			
				SURFACE ELEVATION			
				Compost		GRAB	
1				FILL: (Pit Run) Sand and gravel, loose, moist, brown.			
2				TILL: Silty sand and gravel, moist, compact, brown.		GRAB	
3	1						
4				End of test pit at 0.90m in Till. Groundwater was not encountered during test pit.			
5							
6	2						
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

BACKHOE TYPE
Excavator

OTHER TESTS

PLATE 40

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | TEST PIT TP39

BACKHOE TYPE: Excavator

OTHER TESTS

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.67 meters

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
0				Compost			
1–3				TILL: Silty sand and gravel, moist, compact, brown.		GRAB	
3	1					GRAB	
4–20	1–6			End of test pit at 0.90m in Till. Groundwater was not encountered during test pit.			

PLATE 41

TEST PIT LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. AC	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	TEST PIT TP40

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE POCKET PENE.
				DATUM Control Station #229012, Ortho_CVGD2013			
				SURFACE ELEVATION 54.18 meters			
				Compost			
1				FILL: (Pit run) Sand and gravel, loose, moist, brown.		GRAB	
2				TILL: Silty sand and gravel, moist, compact, brown.			
3	1			End of test pit at 0.61m in Till. Groundwater was not encountered during test pit.			
4							
5							
6	2						
7							
8							
9							
10	3						
11							
12							
13	4						
14							
15							
16	5						
17							
18							
19							
20	6						

BACKHOE TYPE
Excavator

OTHER TESTS

PLATE 42

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL	CKD. AC	DATE OF INVEST. 14/3/16	JOB NO. 21347	HOLE NO. MW-1D

DRILL TYPE: Truck drill rig

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.54 meters

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details
0	0			FILL: Silty sand, trace clay, loose, moist , black.				
3	1			TILL: Silt, some sand, trace gravel, compact, moist, grey.				
6	2							
9	3							
12	4							
16	5							
19	6							

Other Tests

TCR Tota Core Recovery
RQD Rock Qua ty Des gnat on
UCS Unconf ned Compress ve Strength

PLATE 43

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 14/3/16 | JOB NO. 21347 | HOLE NO. MW-1D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.54 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	Description	TYPE	Other Tests
22		BEDROCK: Metasandstone, very poor to fair quality, weathered, subvertical bedding and cleavage fractures, iron staining along fractures to 10.6m, grey to dark grey, light pink felsic intrusions below 14.75m.		
23	7		C	TCR = 89% RQD = 0%
24				
25				
26	8	Soil in fracture.		
27			C	TCR = 100% RQD = 32%
28				
29				
30	9			
31				
32			C	TCR = 86% RQD = 37%
33	10			
34				
35				
36	11			
37			C	TCR = 100% RQD = 28%
38				
39	12			
40		Soil in fracture.		
41				

PLATE 44

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 14/3/16 | JOB NO. 21347 | HOLE NO. MW-1D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.54 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	TYPE	Other Tests
43	13	C	TCR = 100% RQD = 42%
46	14	C	TCR = 65% RQD = 46%
49	15	C	TCR = 79% RQD =34%
56	17	C	TCR = 100% RQD =60%
59	18		
62	19		

End of borehole in Bedrock at 18.29 m.

Groundwater measured on March 20, 2016, at 0.93 m.

PLATE 45

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | HOLE NO. MW-1S

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details	Other Tests
				DATUM Control Station #229012, Ortho_CVGD2013 SURFACE ELEVATION 55.68 meters					
1–3				FILL: Silty sand, trace clay, loose, moist , black.					
3–20	1–6			TILL: Silt, some sand, trace gravel, compact, moist, grey.					
20	6			End of borehole on assumed Bedrock at 6.10 m.					

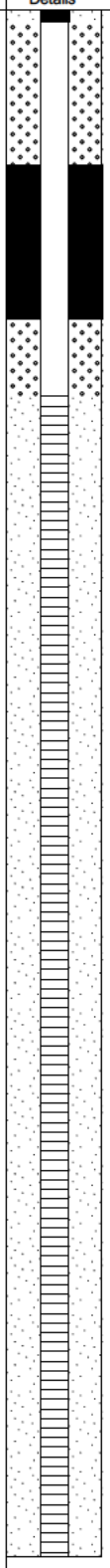


PLATE 46

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	HOLE NO. MW-1S

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.68 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE: Truck drill rig

Well Details | Other Tests

ft	m
22	
23	7
24	
25	
26	8
27	
28	
29	9
30	
31	
32	
33	10
34	
35	
36	11
37	
38	
39	12
40	
41	

Groundwater measured on March 20, 2016, at 0.77 m.

PLATE 47

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 17/3/16 | JOB NO. 21347 | HOLE NO. MW-2D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details
				DATUM Control Station #229012, Ortho_CVGD2013 SURFACE ELEVATION 56.34 meters				
0	0			Compost				
1				FILL: concrete and rebar.				
2								
3	1							
4								
5								
6								
7	2							
8								
9								
10	3			TILL: Silt, trace of sand and gravel, compact, moist, brown.				
11								
12								
13	4							
14								
15								
16								
17	5							
18								
19								
20	6							

Other Tests

TCR Tota Core Recovery
RQD Rock Qua ty Des gnat on
UCS Unconf ned Compress ve Strength

PLATE 48

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 17/3/16 | JOB NO. 21347 | HOLE NO. MW-2D

DRILL TYPE: Truck drill rig

CASING RESISTANCE b ows/300mm

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft / m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 56.34 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	SOIL DESCRIPTION	TYPE	Other Tests
22				
23	7	BEDROCK: Metasandstone, very poor to fair quality, subvertical bedding/foliation and cleavage/fractures, iron staining along fractures to 12.2m, grey to dark grey.	C	TCR = 53% RQD = 22%
24				
25				
26	8			
27			C	TCR = 100% RQD = 55%
28				
29				
30	9			
31				
32			C	TCR = 100% RQD = 10%
33	10			
34				
35				
36	11		C	TCR = 100% RQD = 84%
37				
38				
39	12			
40				
41				

PLATE 49

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 17/3/16 | JOB NO. 21347 | HOLE NO. MW-2D

DRILL TYPE: Truck drill rig

CASING RESISTANCE b ows/300mm

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 56.34 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	TYPE	Other Tests
43	13	C	TCR = 80% RQD = 0%
46	14	C	TCR = 100% RQD = 30%
49	15	C	TCR = 100% RQD = 72%
52	16	C	TCR = 100% RQD = 38%
55	17		
58	18		
61	19		

Possible fault or contact zone.

End of borehole in Bedrock at 18.29 m.

Groundwater measured on March 20, 2016, at 1.14 m.

PLATE 50

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | HOLE NO. MW-3D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft / m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 52.95 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

FILL: Reworked Till, sandy silt to silty sand, loose, moist to wet, grey brown.

TILL: silty sand, trace gravel, occasional cobbles, compact, moist, light brown.

BEDROCK: Metasandstone/Slate, very poor to fair quality, subvertical bedding and cleavage, iron staining along fractures to 16.75m, mineralization below 17m, blue grey to dark grey with several white veins from 15.8 to 16.5m.

C

TCR Tota Core Recovery
RQD Rock Qua ty Des gnat on
UCS Unconf ned Compress ve Strength

TCR = 100%
RQD = 13%

PLATE 51

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | HOLE NO. MW-3D

DRILL TYPE: Truck drill rig

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 52.95 meters

CASING RESISTANCE b ows/300mm

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details	Other Tests
22									
23	7					C			TCR = 100% RQD = 14%
24				Possible mafic intrusion from 7.3m to 8m.					
25									
26	8								
27						C			TCR = 100% RQD = 45%
28									
29	9								
30									
31									
32						C			TCR = 100% RQD = 36%
33	10								
34									
35									
36	11					C			TCR = 100% RQD = 58%
37									
38									
39	12								
40									
41									

PLATE 52

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | HOLE NO. MW-3D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details	Other Tests
				DATUM Control Station #229012, Ortho_CVGD2013 SURFACE ELEVATION 52.95 meters					
43	13					C			TCR = 100% RQD = 72%
44									
45									
46	14								
47						C			
48									TCR = 100% RQD = 16%
49	15								
50									
51									
52									
53	16					C			TCR = 100% RQD = 49%
54				Soil in fracture.					
55									
56	17								
57						C			
58									TCR = 100% RQD = 61%
59	18								
60				End of borehole in Bedrock at 18.29 m.					
61				Groundwater measured on March 20 at 0.24 m.					
62	19								

PLATE 53

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | HOLE NO. MW-3S

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details	Other Tests
				DATUM Control Station #229012, Ortho_CVGD2013 SURFACE ELEVATION 52.98 meters					
1–4	1			FILL: Reworked Till, sandy silt to silty sand, loose, moist to wet, grey brown.					
5–17	1–5			TILL: Rootmat, silty sand, trace gravel, occasional cobbles, compact, moist, light brown.					
15–17	4–5			BEDROCK					
17–20	5–6			End of borehole in assumed Bedrock at 5.18 m. Groundwater measured on March 20, 2016, at 0.56 m.					

PLATE 54

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 16/3/16 | JOB NO. 21347 | HOLE NO. MW-4D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.50 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details

Other Tests

TCR Tota Core Recovery
RQD Rock Qua ty Des gnat on
UCS Unconf ned Compress ve Strength

FILL: (Reworked till) silty sand, trace to some gravel, compact to dense, moist, grey.

TILL: Silt, trace sand and gravel, moist, dense, grey.

AUGER

BEDROCK: Metasandstone/Slate, very poor to fair quality, subvertical bedding and cleavage, iron staining

PLATE 55

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 16/3/16 | JOB NO. 21347 | HOLE NO. MW-4D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.50 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	Description	TYPE	Other Tests
22		along fractures to 15m, blue grey to dark grey with several white veins at 13.75m.	C	TCR = 59% RQD = 11%
23	7			
24				
25				
26	8		C	TCR = 100% RQD = 28%
27				
28				
29	9			
30				
31				
32			C	TCR = 100% RQD = 20%
33	10			
34				
35				
36	11		C	TCR = 100% RQD = 0%
37				
38				
39	12			
40				
41				

PLATE 56

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 16/3/16 | JOB NO. 21347 | HOLE NO. MW-4D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details	Other Tests
43	13			DATUM Control Station #229012, Ortho_CVGD2013					
44									
45									
46	14			SURFACE ELEVATION 55.50 meters					
47									
48						C			TCR = 100% RQD = 20%
49	15								
50									
51									
52									
53	16					C			TCR = 100% RQD = 7%
54									
55									
56	17								
57									
58									
59	18					C			TCR = 100% RQD = 63%
60				End of borehole in Bedrock at 18.29 m.					
61				Groundwater measured on March 20, 2016, at 2.18 m.					
62	19					C			TCR = 100% RQD = 89%

PLATE 57

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 16/3/16 | JOB NO. 21347 | HOLE NO. MW-4S

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	TYPE	PENE. RESIST.	Well Details	Other Tests
				DATUM Control Station #229012, Ortho_CVGD2013 SURFACE ELEVATION 55.55 meters					
				Compost					
1				FILL: (Reworked till) Silty sand, trace to some gravel, compact to dense, moist, grey.		SS	N=45		
2									
3	1					SS	N=46		
4						SS	N=50/4"		
5									
6	2								
7						SS	N=13		
8									
9						SS	N=18		
10	3								
11				TILL: Silty sand, trace to some gravel, compact to dense, moist, grey.		SS	N=34		
12									
13	4								
14									
15									
16	5								
17									
18									
19									
20	6			Bedrock End of borehole on assumed Bedrock at 6.10 m.					

PLATE 58

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL	CKD. AC	DATE OF INVEST. 16/3/16	JOB NO. 21347	HOLE NO. MW-4S

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.55 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE: Truck drill rig

Well Details | Other Tests

ft	m	SOIL DESCRIPTION
22		Groundwater measured on March 20, 2016, at 2.84 m.
23	7	
24		
25		
26	8	
27		
28		
29		
30	9	
31		
32		
33	10	
34		
35		
36	11	
37		
38		
39		
40	12	
41		

PLATE 59

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 15/3/16 | JOB NO. 21347 | HOLE NO. MW-5

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.71 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	Description
0	0	Rootmat
0	0	TOPSOIL: Organics, very loose, moist, dark brown.
3	1	FILL: Organics, debris (Sawn wood, logs, grubbing, cobbles), loose, saturated, dark brown.
20	6	TILL: Sand and gravel, some cobbles, compact, saturated, grey.
20	6	End of borehole on Inferred Bedrock

PLATE 60

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL	CKD. AC	DATE OF INVEST. 15/3/16	JOB NO. 21347	HOLE NO. MW-5

CASING RESISTANCE b ows/300mm

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.71 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE: Truck drill rig

Well Details | Other Tests

ft	m
22	
23	7
24	
25	
26	8
27	
28	
29	9
30	
31	
32	
33	10
34	
35	
36	11
37	
38	
39	12
40	
41	

at 6.10 m.

Groundwater measured on March 20, 2016, at 1.82 m.

PLATE 61

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 18/3/16 | JOB NO. 21347 | HOLE NO. MW-6D

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.44 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE
Truck drill rig

Well Details

Other Tests

TCR Tota Core Recovery
RQD Rock Qua ty Des gnat on
UCS Unconf ned Compress ve Strength

ft	m	SOIL DESCRIPTION
0	0	Compost
1		FILL: Sand and gravel, loose, moist, brown.
2		TILL: Silt and sand, trace gravel, compact to dense, moist, brown.
3	1	
4		
5		
6	2	
7		
8		
9		
10	3	
11		
12		
13	4	
14		
15		
16	5	
17		
18		
19		
20	6	

PLATE 62

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 18/3/16 | JOB NO. 21347 | HOLE NO. MW-6D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.44 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	Description	TYPE	Other Tests
22				
23	7			TCR = 100% RQD = 0%
24				
25		BEDROCK: Metasandstone/Slate, very poor to fair quality, highly fractured to 15m then subvertical bedding and cleavage to 18.25m, iron staining along fractures to 10.7m, blue grey to dark grey.		
26	8			
27			C	
28				TCR = 76% RQD = 0%
29				
30	9			
31				
32			C	
33	10			TCR = 100% RQD = 0%
34				
35				
36	11			
37			C	
38				TCR = 53% RQD = 0%
39				
40	12	Possible fault zone 12m to 15m.		
41				

PLATE 63

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 18/3/16 | JOB NO. 21347 | HOLE NO. MW-6D

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details	Other Tests
43	13			DATUM Control Station #229012, Ortho_CVGD2013					
44									
45									
46	14			SURFACE ELEVATION 55.44 meters					
47									
48						C			TCR = 66% RQD = 0%
49	15								
50									
51									
52									
53	16					C			TCR = 100% RQD = 0%
54									
55									
56	17								
57									
58						C			TCR = 100% RQD = 0%
59	18								
60				End of borehole in Bedrock at 18.29 m.					
61									
62	19			Groundwater measured on March 20, 2016, at 1.13 m.		C			TCR = 76% RQD = 0%

PLATE 64

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 18/3/16 | JOB NO. 21347 | HOLE NO. MW-6S

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.40 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details

Other Tests

ft	m	Description
0	0	Compost
1		FILL: Sand and gravel, loose, moist, brown.
2		TILL: Silt and sand, trace gravel, compact to dense, moist, brown.
3	1	
4		
5		
6		
7	2	
8		
9		
10	3	
11		
12		
13	4	
14		
15		
16	5	
17		
18		
19		
20	6	

PLATE 65

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 18/3/16 | JOB NO. 21347 | HOLE NO. MW-6S

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.40 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE: Truck drill rig

Well Details | Other Tests

ft	m
22	
23	7
24	
25	
26	8
27	
28	
29	9
30	
31	
32	
33	10
34	
35	
36	11
37	
38	
39	12
40	
41	

End of borehole on assumed Bedrock at 7.62 m.

Groundwater measured on March 20, 2016, at 0.31 m.

PLATE 66

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 19/3/16 | JOB NO. 21347 | HOLE NO. MW-7

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.57 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	Description
0	0	Compost
1		FILL: Sand and gravel, loose, moist, brown.
2		TILL: Silt and sand, some gravel, occasional cobbles, compact, moist, brown.
3	1	
4		
5		
6	2	
7		
8		
9		
10	3	
11		
12		
13	4	
14		
15		
16	5	
17		
18		
19		
20	6	End of borehole on assumed Bedrock at 6.10 m.

PLATE 67

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL	CKD. AC	DATE OF INVEST. 19/3/16	JOB NO. 21347	HOLE NO. MW-7

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 53.57 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE: Truck drill rig

Well Details | Other Tests

ft	m	SOIL DESCRIPTION
22		Groundwater measured on March 20, 2016, at 0.44 m.
23	7	
24		
25		
26	8	
27		
28		
29		
30	9	
31		
32		
33	10	
34		
35		
36	11	
37		
38		
39		
40	12	
41		

PLATE 68

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 19/3/16 | JOB NO. 21347 | HOLE NO. MW-8

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.12 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	Description
0	0	Compost
0	0	TILL: Silt, sand and gravel, compact, moist, brown.
20	6	End of borehole on assumed Bedrock at 6.10 m.

PLATE 69

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL	CKD. AC	DATE OF INVEST. 19/3/16	JOB NO. 21347	HOLE NO. MW-8

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft / m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.12 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE: Truck drill rig

Well Details | Other Tests

ft	m	SOIL DESCRIPTION
22		Groundwater measured on March 20, 2016, at 1.28 m.
23	7	
24		
25		
26	8	
27		
28		
29		
30	9	
31		
32		
33	10	
34		
35		
36	11	
37		
38		
39		
40	12	
41		

PLATE 70

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 19/3/16 | JOB NO. 21347 | HOLE NO. MW-9

DRILL TYPE: Truck drill rig

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.02 meters

CASING RESISTANCE b ows/300mm

WC % wp □ w ● w △ (10 20 30 40 50)

DEPTH ft	DEPTH m	MODIFIED USCS	SOIL SYMBOL	SOIL DESCRIPTION	SOIL SAMPLE COND.	SOIL SAMPLE TYPE	SOIL SAMPLE PENE. RESIST.	Well Details	Other Tests
1				Compost					
2				TILL: Silt, sand and gravel, moist, compact, brown.					
3	1								
4									
5									
6									
7	2								
8									
9									
10	3				AUGER				
11									
12									
13	4								
14									
15									
16	5								
17									
18									
19									
20	6			End of borehole on assumed Bedrock at 6.10 m.					

PLATE 71

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL	CKD. AC	DATE OF INVEST. 19/3/16	JOB NO. 21347	HOLE NO. MW-9

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 54.02 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE: Truck drill rig

Well Details | Other Tests

ft	m	SOIL DESCRIPTION
22		Groundwater measured on March 20, 2016, at 0.94 m.
23	7	
24		
25		
26	8	
27		
28		
29		
30	9	
31		
32		
33	10	
34		
35		
36	11	
37		
38		
39		
40	12	
41		

PLATE 72

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL | CKD. AC | DATE OF INVEST. 19/3/16 | JOB NO. 21347 | HOLE NO. MW-10

DRILL TYPE: Truck drill rig

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft m

MODIFIED USCS | SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.04 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

Well Details | Other Tests

ft	m	Description
0	0	Compost
		FILL: sandy silt to silty sand, loose, moist to wet, grey brown.
4	1	TILL: Silty sand, trace gravel, occasional cobbles, compact, moist, grey to orange brown.
20	6	End of borehole on assumed Bedrock at 6.10 m.

PLATE 73

BOREHOLE LOG

PROJECT
Environmental Investigation
Civic No. 2014 Lake George Road, Lake George, NS

LOGGED/DWN. LL	CKD. AC	DATE OF INVEST. 19/3/16	JOB NO. 21347	HOLE NO. MW-10

CASING RESISTANCE
b ows/300mm

WC % wp □ w ● w △
10 20 30 40 50

DEPTH ft / m

MODIFIED USCS

SOIL SYMBOL

SOIL DESCRIPTION

DATUM Control Station #229012, Ortho_CVGD2013

SURFACE ELEVATION 55.04 meters

SOIL SAMPLE: COND. | TYPE | PENE. RESIST.

DRILL TYPE: Truck drill rig

Well Details | Other Tests

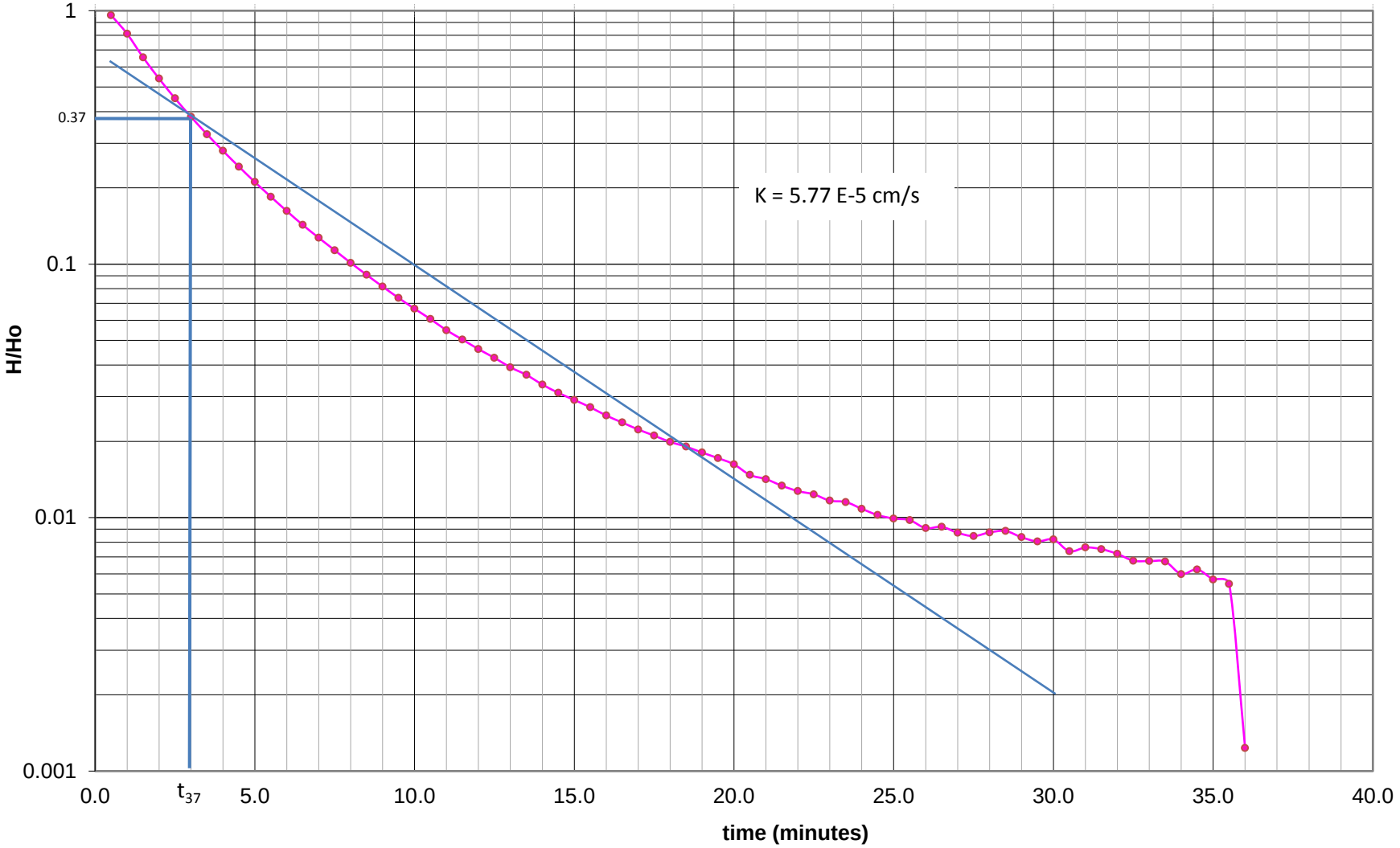
ft	m	SOIL DESCRIPTION
22		Groundwater measured on March 20, 2016, at 0.20 m.
23	7	
24		
25		
26	8	
27		
28		
29		
30	9	
31		
32		
33	10	
34		
35		
36	11	
37		
38		
39		
40	12	
41		

PLATE 74

Appendix 4 Hydraulic Conductivities

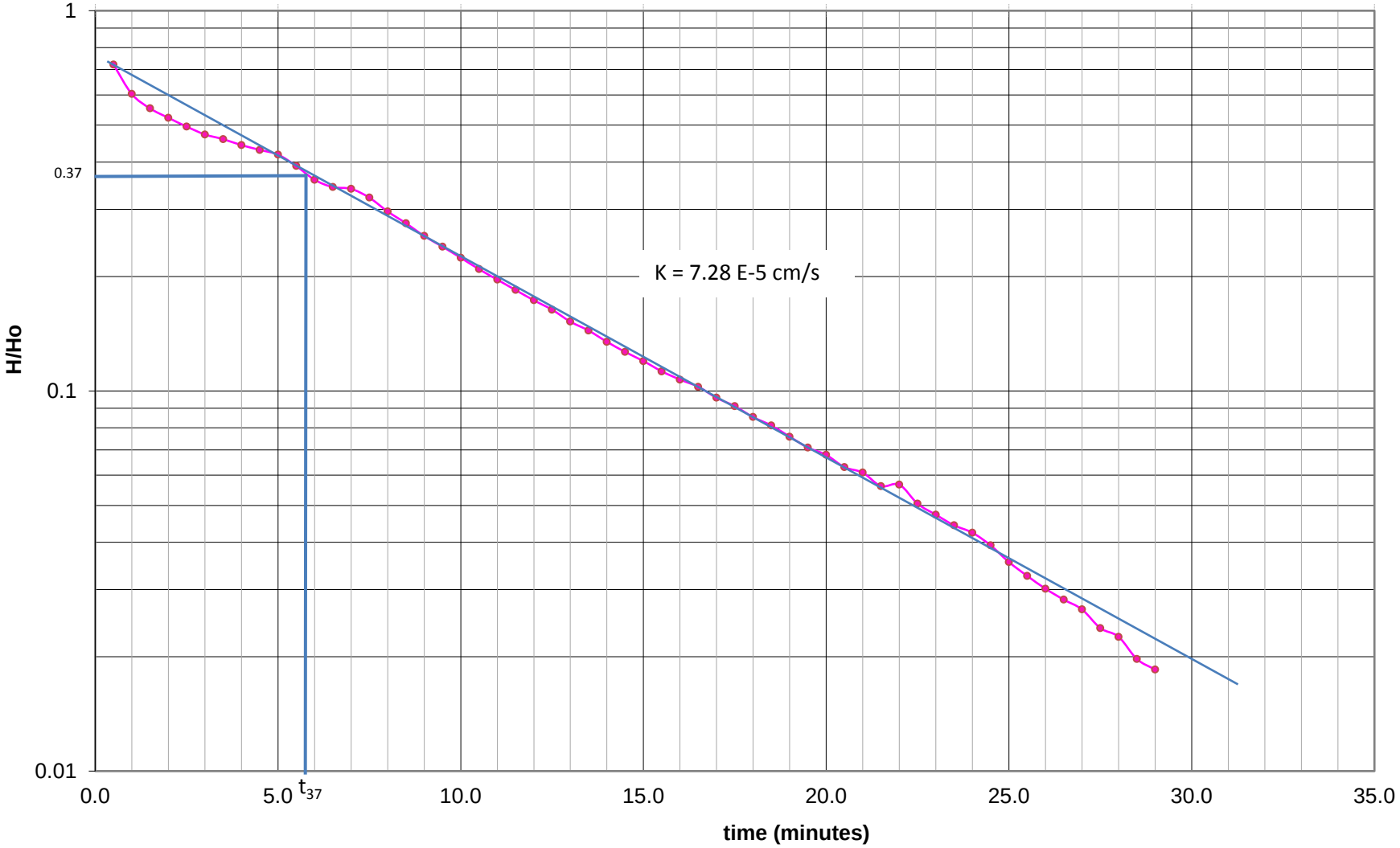
LVM Maritime Testing

Hydraulic Conductivity
MW4D (20-Mar-16)



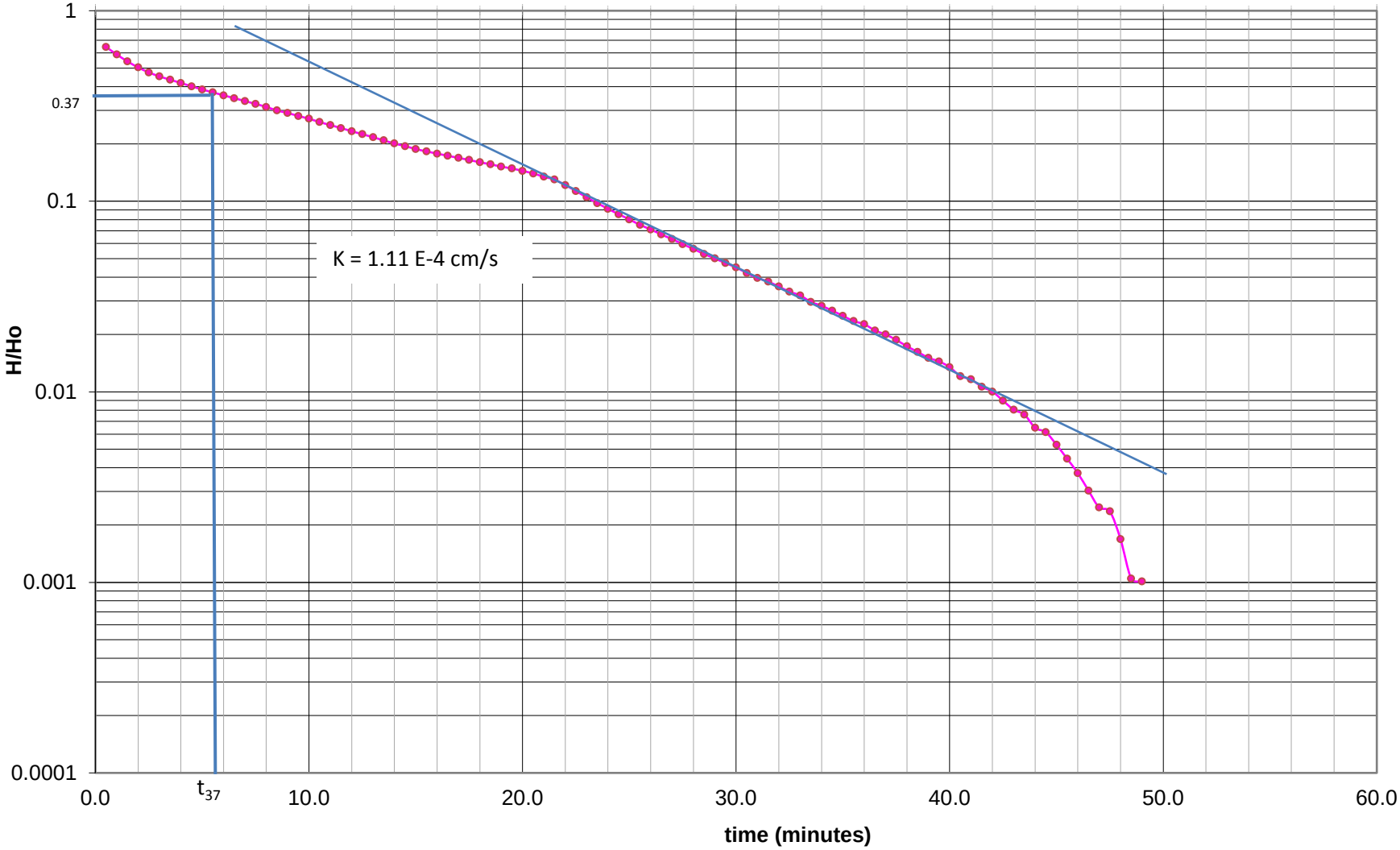
LVM Maritime Testing

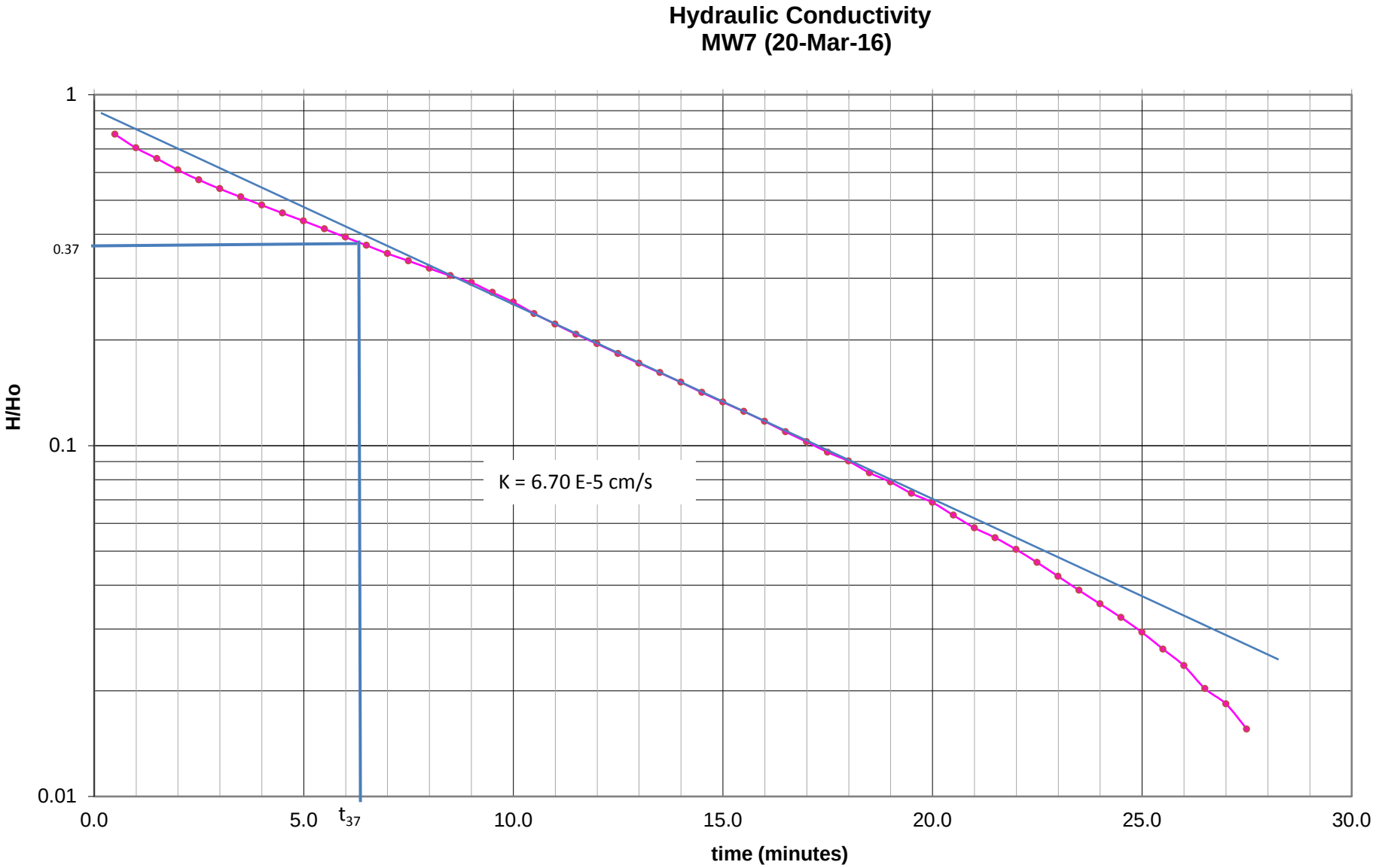
Hydraulic Conductivity
MW4S (20-Mar-16)



LVM Maritime Testing

Hydraulic Conductivity
MW1S (20-Mar-16)




Hydraulic Conductivity
MW7 (20-Mar-16)
H/Ho
1
0.37
0.1
0.01
K = 6.70 E-5 cm/s
0.0
5.0
t_{37}
10.0
15.0
20.0
25.0
30.0
time (minutes)

Appendix 5 Analytical Results

TABLE 1: TOTAL PETROLEUM HYDROCARBON (TPH) COMPOUNDS in Soil

Client: Town of Yarmouth

Site Location: 2014 Lake George Road, Lake George, NS

Englobe Project No.: 21347

PARAMETER		UNITS	2013 NSE TIER 1 EQS (RES)[1]	2013 NSE TIER 1 EQS (AGR)[2]	SAMPLE ID (DEPTH) DATE SAMPLED	
					TP22/1 Fill (0.2 - 0.6m)	
					15-Mar-16	Lab Dup
BTEX (mg/kg)	Benzene	mg/kg	0.042	0.042	<0.025	<0.025
	Toluene	mg/kg	0.35	0.35	<0.025	<0.025
	Ethylbenzene	mg/kg	0.065	0.065	<0.025	<0.025
	Xylenes (Total)	mg/kg	8.8	8.8	<0.050	<0.050
Modified TPH (mg/kg)	Gas Range (C6-C10) (less BTEX)	mg/kg	-	-	8.1	9.3
	Fuel Range (>C10-C16)	mg/kg	-	-	32	-
	Fuel Range (>C16-C21)	mg/kg	-	-	60	-
	Lube Range (>C21-<C32)	mg/kg	-	-	50	-
Total Modified TPH - Tier I		mg/kg	74 as gas 270 as fuel oil 1,100 as lube oil	74 as gas 150 as fuel oil 300 as lube oil	150	-
Product Resemblance		-	-	-	Weathered fuel oil fraction. Unidentified compound(s) in fuel / lube range.	-

Notes:

value - value exceeds agricultural NSE standards

value - value exceeds both NSE standards

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Residential/Parkland).

[2] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Agricultural).

Englobe

TABLE 2: METALS in Soil

Client: Town of Yarmouth

Site Location: 2014 Lake George Road, Lake George, NS

Englobe Project No.: 21347

PARAMETER	UNITS	2013 NSE TIER 1 EQS (RES)[1]	2013 NSE TIER 1 EQS (AGR)[2]	SAMPLE ID (DEPTH) DATE SAMPLED														
				TP1/1 Till (1.2 - 1.5m) 14-Mar-16	TP3/1 Fill (0.1 - 1.2m) 14-Mar-16	TP5/1 Fill (0.15 - 0.9m) 14-Mar-16	TP5/1 Fill (0.15 - 0.9m) Lab Dup	TP5/1 Fill (0.15 - 0.9m) DUP 1 (Field Dup)	TP5/2 Till (1.8 - 2.1m) 14-Mar-16	TP6/1 Compost (0 - 0.2m) 14-Mar-16	TP6/1 Compost (0 - 0.2m) Lab Dup	TP6/2 Fill (0.2 - 0.9m) 14-Mar-16	TP6/3 Till (1.5 - 1.8m) 14-Mar-16	TP7/2 Fill (0.9 - 1.2m) 14-Mar-16	TP9/2 Fill (0.3 - 4m) 14-Mar-16	TP9A/1 Fill (0.8m) 14-Mar-16	TP12/1 Till (0.1 - 0.6m) 14-Mar-16	TP15/1 Till (0 - 0.1m) 14-Mar-16	TP15/2 Till (2.1 - 2.4m) 14-Mar-16
Aluminum (Al)	mg/kg	15,400	15,400	11000	14000	11000	13000	12000	11000	11000	-	**18000**	**18000**	13000	11000	12000	15000	**16000**	13000
Antimony (Sb)	mg/kg	7.5	7.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic (As)	mg/kg	31	17	3.8	5.9	10	11	10	6.6	5.3	-	***30***	***19***	4.1	4.5	5.7	9.1	5.8	7.9
Barium (Ba)	mg/kg	10,000	400	19	22	18	22	20	16	23	-	43	27	21	17	21	40	17	21
Beryllium (Be)	mg/kg	38	5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bismuth (Bi)	mg/kg	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Boron (B)	mg/kg	4,300	4,300	<50	<50	<50	<50	<50	<50	<50	-	<50	<50	<50	<50	<50	<50	<50	<50
Cadmium (Cd)	mg/kg	14	1.4	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Chromium (Cr)	mg/kg	220	52	21	29	27	30	29	24	19	-	47	36	25	23	26	33	30	24
Chromium VI	mg/kg	160	0.4	<0.2	<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cobalt (Co)	mg/kg	22	20	9.6	12	11	13	13	10	4.1	-	12	12	11	11	10	11	9.5	9.7
Copper (Cu)	mg/kg	1,100	63	26	25	28	30	30	23	14	-	44	37	21	24	22	20	17	21
Iron (Fe)	mg/kg	11,000	11,000	**22000**	**26000**	**28000**	**29000**	**27000**	**24000**	**19000**	-	**45000**	**38000**	**24000**	**23000**	**24000**	**27000**	**25000**	**25000**
Lead (Pb)	mg/kg	140	70	3.3	4.0	4.1	4.8	5.1	3.5	18	-	9.6	5.6	3.9	3.3	4.6	5.0	5.3	4.1
Lithium (Li)	mg/kg	NG	NG	21	30	24	27	28	24	15	-	39	39	25	22	29	29	28	25
Manganese (Mn)	mg/kg	NG	NG	380	470	440	510	510	390	210	-	500	510	370	430	410	460	350	480
Mercury	mg/kg	6.6	6.6	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Molybdenum (Mo)	mg/kg	110	40	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	4.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nickel (Ni)	mg/kg	330	50	22	30	25	28	27	22	12	-	31	31	25	24	23	26	25	22
Rubidium (Rb)	mg/kg	NG	NG	8.7	11	8.0	10	10	8.7	5.8	-	11	8.4	8.3	8.7	9.9	12	9.2	7.3
Selenium (Se)	mg/kg	80	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver (Ag)	mg/kg	77	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)	mg/kg	9,400	9,400	5.9	11	9.0	10	9.4	8.9	33	-	16	12	7.5	9.4	8.1	9.5	7.0	6.7
Thallium (Tl)	mg/kg	1	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	0.12	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tin (Sn)	mg/kg	9,400	5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium (U)	mg/kg	23	23	0.59	0.68	0.96	1.1	0.97	0.78	0.45	-	1.8	1.5	0.66	0.53	0.89	0.64	0.81	0.73
Vanadium (V)	mg/kg	39	39	23	26	26	30	27	22	26	-	**44**	29	25	24	26	31	27	25
Zinc (Zn)	mg/kg	5,600	200	40	53	46	50	48	44	50	-	55	66	45	43	45	46	50	43

Notes:
NG- no guideline

value - value exceeds agricultural NSE standards

value - value exceeds both NSE standards

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Residential/Parkland).

[2] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Agricultural).

Englobe

TABLE 2: METALS in Soil

Client: Town of Yarmouth

Site Location: 2014 Lake George Road, Lake George, NS

Englobe Project No.: 21347

PARAMETER	UNITS	2013 NSE TIER 1 EQS (RES)[1]	2013 NSE TIER 1 EQS (AGR)[2]	SAMPLE ID (DEPTH) DATE SAMPLED															
				TP16/1 Fill (0.1 - 0.9m) 14-Mar-16	TP17/2 Fill (2.4 - 3.0m) 14-Mar-16	TP19/1 Fill (0.15 - 0.3m) 15-Mar-16	TP20/2 Fill (0.6 - 1.2m) 15-Mar-16	TP22/2 Fill (0.6 - 0.9m) 15-Mar-16	TP22/2 Fill (0.6 - 0.9m) Lab Dup	TP24/1 Till (3.0m) 15-Mar-16	TP25/1 Fill (0.1 - 0.6m) 15-Mar-16	TP25/2 Fill (0.6 - 0.9m) 15-Mar-16	TP26/1 Fill (0.3 - 0.9m) 15-Mar-16	TP27/1 Fill (0 - 0.15m) 15-Mar-16	TP28/2 Fill (1.35m) 15-Mar-16	TP31/1 Fill (0.2 - 0.3m) 15-Mar-16	TP31/2 Till (0.9 - 1.05m) 15-Mar-16	TP35/2 Till (1.2m) 15-Mar-16	TP35/2 Till (1.2m) Lab Dup
Aluminum (Al)	mg/kg	15,400	15,400	9500	12000	10000	12000	5500	5700	**17000**	14000	15000	**18000**	14000	12000	14000	13000	11000	11000
Antimony (Sb)	mg/kg	7.5	7.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic (As)	mg/kg	31	17	11	<2.0	5.8	4.4	<2.0	<2.0	4.6	13	5.4	4.8	10	5.8	10	7.3	6.3	6.3
Barium (Ba)	mg/kg	10,000	400	33	51	28	21	9.4	9.7	24	24	16	30	28	20	53	21	14	14
Beryllium (Be)	mg/kg	38	5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bismuth (Bi)	mg/kg	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Boron (B)	mg/kg	4,300	4,300	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cadmium (Cd)	mg/kg	14	1.4	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Chromium (Cr)	mg/kg	220	52	19	8.3	17	25	6.6	6.9	34	30	28	34	25	22	29	26	23	23
Chromium VI	mg/kg	160	0.4	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-
Cobalt (Co)	mg/kg	22	20	7.6	2.7	5.2	6.0	1.1	<1.0	15	8.6	10	17	12	9.6	10	12	9.1	9.6
Copper (Cu)	mg/kg	1,100	63	15	7.5	15	12	<2.0	<2.0	21	27	19	30	27	18	23	24	22	22
Iron (Fe)	mg/kg	11,000	11,000	**18000**	4100	**18000**	**22000**	2500	2500	**32000**	**26000**	**23000**	**33000**	**26000**	**23000**	**24000**	**27000**	**22000**	**23000**
Lead (Pb)	mg/kg	140	70	7.0	19	12	8.5	4.1	4.2	3.8	6.1	4.8	5.7	5.4	3.1	8.5	3.9	3.6	3.8
Lithium (Li)	mg/kg	NG	NG	19	3.5	16	18	5.4	5.5	40	27	27	39	28	23	22	29	22	22
Manganese (Mn)	mg/kg	NG	NG	580	82	270	280	120	120	630	310	380	660	660	420	510	530	360	360
Mercury	mg/kg	6.6	6.6	<0.10	0.28	<0.10	<0.10	0.10	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Molybdenum (Mo)	mg/kg	110	40	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nickel (Ni)	mg/kg	330	50	16	8.7	13	14	2.7	2.8	37	19	26	37	23	22	23	28	21	22
Rubidium (Rb)	mg/kg	NG	NG	10	2.4	6.2	6.3	7.1	7.1	8.2	9.3	7.4	11	11	6.0	16	8.3	8.3	8.6
Selenium (Se)	mg/kg	80	1	<1.0	***1.8***	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver (Ag)	mg/kg	77	20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)	mg/kg	9,400	9,400	15	26	22	7.8	<5.0	<5.0	11	<5.0	7.2	10	5.9	7.4	19	8.1	5.1	5.4
Thallium (Tl)	mg/kg	1	1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	<0.10	0.11	<0.10	<0.10	<0.10
Tin (Sn)	mg/kg	9,400	5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium (U)	mg/kg	23	23	0.78	1.3	0.43	0.47	0.33	0.37	0.80	0.87	0.63	0.77	1.2	0.58	2.3	0.65	0.74	0.74
Vanadium (V)	mg/kg	39	39	19	9.0	23	32	5.7	5.6	27	30	25	28	25	22	28	26	23	23
Zinc (Zn)	mg/kg	5,600	200	55	9.7	53	35	5.1	<5.0	67	42	46	69	56	41	79	49	38	39

Notes:

NG- no guideline

value - value exceeds agricultural NSE standards

value - value exceeds both NSE standards

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Residential/Parkland).

[2] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Agricultural).

Englobe

TABLE 2: METALS in Soil

Client: Town of Yarmouth

Site Location: 2014 Lake George Road, Lake George, NS

Englobe Project No.: 21347

PARAMETER	UNITS	2013 NSE TIER 1 EQS (RES)[1]	2013 NSE TIER 1 EQS (AGR)[2]	SAMPLE ID (DEPTH) DATE SAMPLED				
				TP37/2	PIPE		POND	MW4/1B
				Fill (0.3 - 0.75m)	Fill (0.9m)		Fill (0 - 0.1m)	Fill (0 - 0.6m)
				15-Mar-16	15-Mar-16	Lab Dup	15-Mar-16	16-Mar-16
Aluminum (Al)	mg/kg	15,400	15,400	13000	10000	-	13000	**17000**
Antimony (Sb)	mg/kg	7.5	7.5	<2.0	<2.0	-	<2.0	<2.0
Arsenic (As)	mg/kg	31	17	5.9	**39**	-	4.6	4.1
Barium (Ba)	mg/kg	10,000	400	18	23	-	15	27
Beryllium (Be)	mg/kg	38	5	<2.0	<2.0	-	<2.0	<2.0
Bismuth (Bi)	mg/kg	NG	NG	<2.0	<2.0	-	<2.0	<2.0
Boron (B)	mg/kg	4,300	4,300	<50	<50	-	<50	<50
Cadmium (Cd)	mg/kg	14	1.4	<0.30	<0.30	-	<0.30	<0.30
Chromium (Cr)	mg/kg	220	52	24	19	-	20	32
Chromium VI	mg/kg	160	0.4	<0.2	<0.2	<0.2	<0.2	<0.2
Cobalt (Co)	mg/kg	22	20	7.3	8.6	-	4.2	14
Copper (Cu)	mg/kg	1,100	63	15	16	-	7.6	26
Iron (Fe)	mg/kg	11,000	11,000	**25000**	**36000**	-	**20000**	**29000**
Lead (Pb)	mg/kg	140	70	9.5	5.3	-	8.0	6.4
Lithium (Li)	mg/kg	NG	NG	21	33	-	16	35
Manganese (Mn)	mg/kg	NG	NG	340	400	-	190	520
Mercury	mg/kg	6.6	6.6	<0.10	<0.10	-	<0.10	<0.10
Molybdenum (Mo)	mg/kg	110	40	<2.0	<2.0	-	<2.0	<2.0
Nickel (Ni)	mg/kg	330	50	18	19	-	12	33
Rubidium (Rb)	mg/kg	NG	NG	8.0	13	-	5.2	11
Selenium (Se)	mg/kg	80	1	<1.0	<1.0	-	<1.0	<1.0
Silver (Ag)	mg/kg	77	20	<0.50	<0.50	-	<0.50	<0.50
Strontium (Sr)	mg/kg	9,400	9,400	18	12	-	5.8	7.6
Thallium (Tl)	mg/kg	1	1	<0.10	<0.10	-	<0.10	<0.10
Tin (Sn)	mg/kg	9,400	5	<2.0	<2.0	-	<2.0	<2.0
Uranium (U)	mg/kg	23	23	0.48	1.8	-	0.45	0.69
Vanadium (V)	mg/kg	39	39	29	25	-	27	27
Zinc (Zn)	mg/kg	5,600	200	51	100	-	27	62

Notes:

NG- no guideline

value - value exceeds agricultural NSE standards

value - value exceeds both NSE standards

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Residential/Parkland).

[2] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Agricultural).

Englobe

TABLE 3: POLYCYCLIC AROMATIC HYDROCARBONS in Soil

Client: Town of Yarmouth

Site Location: 2014 Lake George Road, Lake George, NS

Englobe Project No.: 21347

PARAMETER	UNITS	2013 NSE TIER 1 EQS (RES)[1]	2013 NSE TIER 1 EQS (AGR)[2]	SAMPLE ID																
				(DEPTH)																
				DATE SAMPLED																
				TP2/1 Fill (0.6 - 1.2m)		TP5/1 Fill (0.15 - 0.9m)		TP6/2 Fill (0.2 - 0.9m)	TP9A/1 Fill (0.8m)	TP12/1 Till (0.1 - 0.6m)	TP16/2 (1) Fill (1.8 - 2.1m)	TP17/2 (2) (Fill (2.4 - 3.0m)	TP19/2 (1) Fill (2.1m)	TP20/2 Fill (0.6 - 0.9m)	TP22/2 (2) Fill (0.6 - 0.9m)	TP24/1 Till (3.0m)	TP25/2 Fill (0.6 - 0.9m)	TP28/2 Fill (1.35m)	TP31/1 (1) Fill (0.2 - 0.3m)	TP35/2 Till (1.2m)	PIPE Fill (0.9m)
				14-Mar-16	Lab Dup	14-Mar-16	DUP 1 (Field Dup)	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	15-Mar-16	15-Mar-16	15-Mar-16	15-Mar-16	15-Mar-16	15-Mar-16	15-Mar-16	15-Mar-16
1-Methylnaphthalene	ug/g	30	30	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2-Methylnaphthalene	ug/g	30	30	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Acenaphthene	ug/g	3,900	21.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Acenaphthylene	ug/g	4.5	4.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Anthracene	ug/g	24,000	2.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Benzo(a)anthracene	ug/g	NG	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Benzo(a)pyrene	ug/g	NG	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Benzo(b/j)fluoranthene	ug/g	NG	6.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Benzo(g,h,i)perylene	ug/g	NG	6.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Benzo(k)fluoranthene	ug/g	NG	6.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Chrysene	ug/g	NG	6.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Dibenz(a,h)anthracene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Fluoranthene	ug/g	3,500	15.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Fluorene	ug/g	2,700	15.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	ug/g	NG	0.38	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Naphthalene	ug/g	2.2	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Perylene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
Phenanthrene	ug/g	17	6.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Pyrene	ug/g	2,100	7.7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Quinoline	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
BaP Total Potency Equivalent[2]	ug/g	5.3	5.3	0.116	0.116	0.116	0.116	0.116	0.116	0.116	2.32	0.58	2.32	0.116	0.58	0.232	0.116	0.232	2.32	0.116	0.116

Notes:
NG- no guideline

value - value exceeds agricultural NSE standards

value - value exceeds both NSE standards

(1) Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly for dilution and high moisture content.

(2) Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Residential/Parkland).

[2] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Agricultural).

[3] The Benzo(a)Pyrene Total Potency Equivalent [B(a)P TPE] for a soil sample is calculated by multiplying the concentration of each carcenogenic PAH in the sample (or 1/2 its detection limit when concentration is non-detect) by its corresponding B(a)P Potency Equivalence Factor, and summing these products.

Englobe

TABLE 4: ACID BASE NEUTRALS in Soil

Client: Town of Yarmouth

Site Location: 2014 Lake George Road, Lake George, NS

Englobe Project No.: 21347

PARAMETER	UNITS	2013 NSE TIER 1 EQS (RES)[1]	2013 NSE TIER 1 EQS (AGR)[2]	SAMPLE ID (DEPTH) DATE SAMPLED																	
				TP2/1 Fill (0.6 - 1.2m) 14-Mar-16	TP2/1 Fill (0.6 - 1.2m) Lab Dup	TP5/1 Fill (0.15 - 0.9m) 14-Mar-16	TP5/1 Fill (0.15 - 0.9m) DUP 1 (Field Dup)	TP6/2 Fill (0.2 - 0.9m) 14-Mar-16	TP9A/1 Fill (0.8m) 14-Mar-16	TP12/1 Till (0.1 - 0.6m) 14-Mar-16	TP16/2 (2) Fill (1.8 - 2.1m) 14-Mar-16	TP17/2 (3) (Fill (2.4 - 3.0m) 14-Mar-16	TP19/2 (2) Fill (2.1m) 14-Mar-16	TP20/2 Fill (0.6 - 0.9m) 15-Mar-16	TP22/2 (3) Fill (0.6 - 0.9m) 15-Mar-16	TP24/1 Till (3.0m) 15-Mar-16	TP25/2 Fill (0.6 - 0.9m) 15-Mar-16	TP28/2 Fill (1.35m) 15-Mar-16	TP31/1 (2) Fill (0.2 - 0.3m) 15-Mar-16	TP35/2 Till (1.2m) 15-Mar-16	PIPE Fill (0.6m) 15-May-16
1-Chloronaphthalene	ug/g	NG	NG	<1	<1	<1	<1	<1	<1	<1	<20	<5	<20	<1	<5	<2	<1	<1	<20	<1	<1
2-Chloronaphthalene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
1,2-Dichlorobenzene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
1,3-Dichlorobenzene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
1,4-Dichlorobenzene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Hexachlorobenzene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
Pentachlorobenzene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
1,2,3,4-Tetrachlorobenzene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
1,2,3,5-Tetrachlorobenzene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
1,2,4,5-Tetrachlorobenzene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
1,2,3-Trichlorobenzene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
1,2,4-Trichlorobenzene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
1,3,5-Trichlorobenzene	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
2-Chlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
4-Chloro-3-Methylphenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
m/p-Cresol	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	0.3	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
o-Cresol	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
2,3-Dichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,4-Dichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,5-Dichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,6-Dichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
3,4-Dichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
3,5-Dichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,4-Dimethylphenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,4-Dinitrophenol	ug/g	NG	NG	<1	<1	<1	<1	<1	<1	<1	<20	<5	<20	<1	<5	<2	<1	<1	<20	<1	<1
4,6-Dinitro-2-methylphenol	ug/g	NG	NG	<1 (1)	<1 (1)	<1 (1)	<0.5	<1 (1)	<1 (1)	<1 (1)	<10	<5 (1)	<10	<0.5	<3	<2 (1)	<1 (1)	<0.5	<10	<0.5	<0.5
2-Nitrophenol	ug/g	NG	NG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<3	<10	<0.5	<3	<1	<0.5	<0.5	<10	<0.5	<0.5
4-Nitrophenol	ug/g	NG	NG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<3	<10	<0.5	<3	<1	<0.5	<0.5	<10	<0.5	<0.5
Pentachlorophenol	ug/g	7.6	7.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
Phenol	ug/g	3.8	3.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
2,3,4,5-Tetrachlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,3,4,6-Tetrachlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,3,5,6-Tetrachlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,3,4-Trichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,3,5-Trichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,3,6-Trichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,4,5-Trichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,4,6-Trichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
3,4,5-Trichlorophenol	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Benzyl butyl phthalate	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
Bis(2-chloroethoxy)methane	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Bis(2-chloroisopropyl)ether	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Bis(2-ethylhexyl)phthalate	ug/g	NG	NG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<3	<10	<0.5	<3	<1	<0.5	<0.5	<10	<0.5	<0.5
4-Bromophenyl phenyl ether	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
p-Chloroaniline	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
4-Chlorophenyl phenyl ether	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
3,3'-Dichlorobenzidine	ug/g	NG	NG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<3	<10	<0.5	<3	<1	<0.5	<0.5	<10	<0.5	<0.5
Diethyl phthalate	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
Di-N-butyl phthalate	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
Di-N-octyl phthalate	ug/g	NG	NG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<3	<10	<0.5	<3	<1	<0.5	<0.5	<10	<0.5	<0.5
2,4-Dinitrotoluene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
2,6-Dinitrotoluene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Dimethyl phthalate	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
Biphenyl	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Bis(2-chloroethyl)ether	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
Hexachlorobutadiene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Hexachlorocyclopentadiene	ug/g	NG	NG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<3	<10	<0.5	<3	<1	<0.5	<0.5	<10	<0.5	<0.5
Hexachloroethane	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Isophorone	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Nitrobenzene	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1
Nitrosodiphenylamine/Diphenylamine	ug/g	NG	NG	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<4	<1	<4	<0.2	<1	<0.4	<0.2	<0.2	<4	<0.2	<0.2
N-Nitroso-di-n-propylamine	ug/g	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.5	<2	<0.1	<0.5	<0.2	<0.1	<0.1	<2	<0.1	<0.1

Notes:

NG- no guideline

value - value exceeds agricultural NSE standards

value - value exceeds both NSE standards

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Residential/Parkland).

[2] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for Coarse Grained Soil at a Potable Site (Agricultural).

(1) Detection limit was raised due to matrix interference.

(2) Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly for dilution and high moisture content.

(3) Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

TABLE 5: METALS in Sediment

Client: Town of Yarmouth

Site Location: 2014 Lake George Road, Lake George, NS

Englobe Project No.: 21347

PARAMETER	UNITS	2013 NSE TIER 1 EQS[1]	SAMPLE ID (DEPTH) DATE SAMPLED				
			P1A (0 - 0.2m) 15-Mar-16	P1B (0 - 0.2m) 15-Mar-16	P2A (0 - 0.2m) 15-Mar-16	P2B (0 - 0.2m) 20-Mar-16	P3 (0 - 0.2m) 15-Mar-16
Aluminum (Al)	mg/kg	NG	5700	6500	11000	7800	8600
Antimony (Sb)	mg/kg	25	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic (As)	mg/kg	17	5.9	<2.0	2.1	3.8	2.1
Barium (Ba)	mg/kg	NG	60	49	30	12	36
Beryllium (Be)	mg/kg	NG	<2.0	<2.0	<2.0	<2.0	<2.0
Bismuth (Bi)	mg/kg	NG	<2.0	<2.0	<2.0	<2.0	<2.0
Boron (B)	mg/kg	NG	<50	<50	<50	<50	<50
Cadmium (Cd)	mg/kg	3.5	0.39	<0.30	<0.30	<0.30	<0.30
Chromium (Cr)	mg/kg	90	6.9	3.0	15	7.7	7.5
Cobalt (Co)	mg/kg	NG	3.7	2.8	3.8	1.2	1.7
Copper (Cu)	mg/kg	197	15	10	7.2	4.4	11
Iron (Fe)	mg/kg	43,766	13000	2600	12000	11000	4600
Lead (Pb)	mg/kg	91.3	27	29	18	15	22
Lithium (Li)	mg/kg	NG	3.4	<2.0	13	4.1	<2.0
Manganese (Mn)	mg/kg	1,100	430	31	170	53	79
Mercury	mg/kg	0.486	0.27	0.24	0.19	0.13	0.38
Molybdenum (Mo)	mg/kg	NG	<2.0	<2.0	3.5	<2.0	2.1
Nickel (Ni)	mg/kg	75	8.8	8.2	11	3.7	5.9
Rubidium (Rb)	mg/kg	NG	3.4	<2.0	6.1	3.8	2.1
Selenium (Se)	mg/kg	2	1.2	1.0	1.3	<1.0	1.9
Silver (Ag)	mg/kg	1	<0.50	<0.50	<0.50	<0.50	<0.50
Strontium (Sr)	mg/kg	NG	49	41	16	5.9	45
Thallium (Tl)	mg/kg	NG	<0.10	<0.10	<0.10	<0.10	<0.10
Tin (Sn)	mg/kg	NG	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium (U)	mg/kg	NG	0.69	0.45	0 57	0.29	1.1
Vanadium (V)	mg/kg	NG	11	7.7	20	27	5.6
Zinc (Zn)	mg/kg	315	94	7.2	30	12	23

Notes: **value** - value exceeds NSE standard

NG- no guideline

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for freshwater sediment.

TABLE 6: POLYCYCLIC AROMATIC HYDROCARBONS in Sediment

Client: Town of Yarmouth
Site Location: 2014 Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	2013 NSE TIER 1 EQS[1]	SAMPLE ID (DEPTH) DATE SAMPLED				
			P1A (0 - 0.2m) 15-Mar-16	P1A (0 - 0.2m) Lab Dup	P1B (0 - 0.2m) 15-Mar-16	P2A (0 - 0.2m) 15-Mar-16	P3 (0 - 0.2m) 15-Mar-16
1-Methylnaphthalene	mg/kg	0.201	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
2-Methylnaphthalene	mg/kg	0.201	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthene	mg/kg	0.0889	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	0.128	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	0.245	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)anthracene	mg/kg	0.385	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)pyrene	mg/kg	0.782	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b)fluoranthene	mg/kg	13.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(g,h,i)perylene	mg/kg	3.2	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(j)fluoranthene	mg/kg	13.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(k)fluoranthene	mg/kg	13.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chrysene	mg/kg	0.862	<0.070 (1)	<0.050 (1)	<0.060 (1)	<0.0050	<0.0050
Dibenz(a,h)anthracene	mg/kg	0.135	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	2.355	0.083	<0.0050	<0.0050	<0.0050	<0.0050
Fluorene	mg/kg	0.144	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Indeno(1,2,3-cd)pyrene	mg/kg	3.2	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Naphthalene	mg/kg	0.391	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Perylene	mg/kg	NG	<0.0050	<0.0050	0.055	<0.0050	4.8
Phenanthrene	mg/kg	0.515	0.074	<0.0050	<0.0050	<0.0050	<0.0050
Pyrene	mg/kg	0.875	0.065	<0.0050	<0.0050	<0.0050	<0.0050

Notes: **value** - value exceeds NSE standard
NG- no guideline

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for freshwater sediment.
(1) Elevated PAH RDL(s) due to matrix/co-extractive interference.

TABLE 7: CHLORINATED PHENOLS in Sediment

Client: Town of Yarmouth
Site Location: 2014 Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	2013 NSE TIER 1 EQS[1]	SAMPLE ID (DEPTH) DATE SAMPLED					
			P1A (1) (0 - 0.2m) 15-Mar-16	P1B (1) (0 - 0.2m) 15-Mar-16	P2A (2) (0 - 0.2m) 15-Mar-16	P2A (2) (0 - 0.2m) Lab Dup	P2B (2) (0 - 0.2m) 20-Mar-16	P3 (1) (0 - 0.2m) 15-Mar-16
2-Chlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,3,4,6-Tetrachlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,3,5-Trichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,4-Dichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,4-Dimethylphenol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1
2,4,6-Trichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,6-Dichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
4-Chloro-3-Methylphenol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1
4-Nitrophenol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1
m/p-Cresol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1
o-Cresol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1
Pentachlorophenol	ug/g	0.1	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
Phenol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1
2,3,4,5-Tetrachlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,3,5,6-Tetrachlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,3,4-Trichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,4,5-Trichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,3,6-Trichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
3,4,5-Trichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,3-Dichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,5-Dichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
3,4-Dichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
3,5-Dichlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2,4-Dinitrophenol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1
4,6-Dinitro-2-methylphenol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1
3 & 4-Chlorophenol	ug/g	NG	<0.8	<0.8	<0.2	<0.2	<0.1	<0.7
2-Nitrophenol	ug/g	NG	<2	<2	<0.3	<0.3	<0.2	<1

Notes: **value** - value exceeds NSE standard
NG- no guideline

[1] 2013 Nova Scotia Environment Tier 1 Environmental Quality Standards for freshwater sediment.
(1) Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly. Further,Detection limits were adjusted for high moisture content.
(2) Detection limits were adjusted for high moisture content.

Englobe

TABLE 8: GENERAL CHEMISTRY in Groundwater (Monitor Wells)
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	Sample ID												
				MW1S	MW1D	MW2S			MW2D	MW3S	MW3D		MW4S	MW4D	MW5	MW6S	MW6D
				20-Mar-16	20-Mar-16	4-Nov-05	11-Jan-06	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	Lab-Dup	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16
Field pH	pH	6.5-8.5	NG	**6.01**	7.03	-	-	6.96	7.9	6.61	6.62	-	**5.89**	**5.72**	7.54	**6.19**	6.82
Field Conductivity	uS/cm	NG	NG	383	522	-	-	288	124	309	218	-	72	58	139	239	136
Field Temperature	°C	NG	NG	6.3	8.77	-	-	4.13	8.29	6.48	8.14	-	6.23	9.49	10.75	6.03	8.64
Anion Sum	me/L	NG	NG	3.36	9.15	2.81	1.93	5.37	2.61	7.17	3.36	-	1.40	0.820	2.11	5.06	2.05
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	130	420	114	75	140	100	330	130	-	25	16	85	170	51
Calculated TDS	mg/L	≤ 500 (AO)	NG	270	470	169	120	310	150	370	200	-	87	59	130	320	130
Carb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	<1.0	1.1	<1	<1	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0
Cation Sum	me/L	NG	NG	6.39	8.88	2.85	2.03	5.02	2.56	6.64	3.27	-	1.14	0.750	2.02	6.30	1.94
Colour	TCU	≤ 15 (AO)	NG	**2100**	<5.0	8	**16**	**24**	<5.0	<5.0	7.5	10	<5.0	**37**	9.1	**730**	<5.0
Conductivity	uS/cm	NG	NG	350	760	270	180	520	230	600	310	-	130	77	180	510	190
Chloride (Cl)	mg/L	≤ 250 (AO)	250	24	19	5	6	45	13	16	21	21	22	5.8	11	58	26
Sulphate (SO4)	mg/L	≤ 500 (AO)	NG	<2.0	8.3	18	12	48	11	4.2	8.9	9.3	13	15	3.8	<2.0	13
Hardness (CaCO3)	mg/L	NG	NG	150	370	76	58	140	95	290	110	-	40	23	62	170	49
Ion Balance (% Difference)	%	NG	NG	31.1	1.50	0.725	2.51	3.37	0.970	3.84	1.36	-	10.2	4.46	2.18	10.9	2.76
Langelier Index (@ 20C)	N/A	NG	NG	-1.50	0.574	-1.06	-1.37	-0.591	-0.0910	-0.221	-1.01	-	-2.95	-3.03	-1.11	-1.33	-1.24
Langelier Index (@ 4C)	N/A	NG	NG	-1.75	0.325	-1.31	-1.62	-0.840	-0.341	-0.470	-1.26	-	-3.20	-3.28	-1.36	-1.58	-1.49
Nitrate (N)	mg/L	10 (MAC)	NG	<0.050	0.14	<0.05	0.09	3.2	0.17	<0.050	0.11	-	0.18	0.31	<0.050	0.37	0.43
Nitrate + Nitrite	mg/L	NG	NG	<0.050	0.14	<0.05	0.06	3.2	0.19	<0.050	0.11	0.12	0.21	0.31	<0.050	0.39	0.43
Nitrite (N)	mg/L	3.2 (MAC)	NG	<0.010	<0.010	0.01	<0.01	0.034	0.021	<0.010	<0.010	<0.010	0.025	<0.010	<0.010	0.015	<0.010
Nitrogen (Ammonia Nitrogen)	mg/L	NG	NG	2.4	0.13	0.07	0.32	0.18	0.13	0.29	0.10	-	0.27	<0.050	0.61	4.3	0.13
Orthophosphate (P)	mg/L	NG	NG	0.011	0.021	<0.01	<0.01	<0.010	0.046	0.017	0.017	0.019	<0.010	0.010	0.015	0.020	0.013
pH	pH	6.5-8.5	NG	**6.26**	7.43	6.85	6.8	6.95	7.92	6.90	6.84	-	**6.01**	**6.34**	7.11	**6.28**	7.27
Reactive Silica (SiO2)	mg/L	NG	NG	18	24	8.9	8.8	5.8	18	21	26	26	7.2	11	22	25	21
Saturation pH (@ 20C)	N/A	NG	NG	7.76	6.85	7.91	8.17	7.54	8.01	7.12	7.85	-	8.96	9.37	8.23	7.61	8.51
Saturation pH (@ 4C)	N/A	NG	NG	8.01	7.10	8.16	8.42	7.79	8.26	7.37	8.10	-	9.21	9.62	8.48	7.86	8.76
Total Alkalinity (Total as CaCO3)	mg/L	NG	NG	130	420	110	75	140	100	330	130	130	25	16	85	170	51
Total Organic Carbon (C)	mg/L	NG	NG	<50 (1)	<5.0 (1)	6.9	<500	<25 (1)	0.74	<25 (1)	<5.0 (1)	-	<25 (1)	<5.0 (1)	<25 (1)	58 (1)	<25 (1)
Turbidity	NTU	1 (MAC)[3]	NG	>1000	440	24	>1000	>1000	230	>1000	150	-	>1000	120	>1000	>1000	250

Notes:

AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds CCME guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)

[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil

[3] For treatment systems only

(1) Reporting limit was increased due to turbidity.

Englobe

TABLE 8: GENERAL CHEMISTRY in Groundwater (Monitor Wells)
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	Sample ID													
				MW7		MW8	MW9	MW10	MW-DUP (MW10 Field Dup)		MW11			MW12			
				20-Mar-16	Lab-Dup	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	Lab-Dup	4-Nov-05	20-Mar-16	Lab-Dup	4-Nov-05	20-Mar-16	Lab-Dup
Field pH	pH	6.5-8.5	NG	7.06	-	6.79	**6.34**	7.01	-	-	-	**5.97**	-	-	**6.19**	-
Field Conductivity	uS/cm	NG	NG	161	-	201	119	697	-	-	-	94	-	-	196	-
Field Temperature	°C	NG	NG	6.5	-	6.98	5.68	6.86	-	-	-	4.75	-	-	5.85	-
Anion Sum	me/L	NG	NG	2.61	-	4.06	2.03	11.0	11.1	-	4.5	1.67	-	2.77	2.02	-
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	99	-	120	50	380	380	-	98	50	-	104	22	-
Calculated TDS	mg/L	≤ 500 (AO)	NG	150	-	250	130	**610**	**610**	-	269	100	-	248	150	-
Carb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	<1.0	-	<1.0	<1.0	<1.0	<1.0	-	<1	<1.0	-	<1	<1.0	-
Cation Sum	me/L	NG	NG	2.49	-	4.17	1.91	10.5	10.5	-	4.76	1.58	-	5.63	2.82	-
Colour	TCU	≤ 15 (AO)	NG	<5.0	-	<5.0	<5.0	**78**	**90**	-	6	5.2	-	**87**	**130**	-
Conductivity	uS/cm	NG	NG	230	-	390	190	990	990	-	460	170	170	340	210	-
Chloride (Cl)	mg/L	≤ 250 (AO)	250	17	-	49	22	110	110	-	75	11	-	21	53	-
Sulphate (SO4)	mg/L	≤ 500 (AO)	NG	6.3	-	13	18	22	22	-	20	9.3	-	5	4.0	-
Hardness (CaCO3)	mg/L	NG	NG	91	-	120	59	280	280	-	150	59	-	53	19	-
Ion Balance (% Difference)	%	NG	NG	2.35	-	1.34	3.05	2.51	2.77	-	2.83	2.77	-	34	16.5	-
Langelier Index (@ 20C)	N/A	NG	NG	-0.966	-	-0.943	-1.83	0.0970	0.139	-	-1.65	-2.38	-	-1.91	-3.48	-
Langelier Index (@ 4C)	N/A	NG	NG	-1.22	-	-1.19	-2.08	-0.150	-0.108	-	-1.9	-2.63	-	-2.16	-3.73	-
Nitrate (N)	mg/L	10 (MAC)	NG	0.13	-	<0.050	0.25	<0.050	<0.050	-	<0.05	2.1	-	<0.05	<0.050	-
Nitrate + Nitrite	mg/L	NG	NG	0.13	-	<0.050	0.25	<0.050	<0.050	-	<0.05	2.1	-	<0.05	<0.050	-
Nitrite (N)	mg/L	3.2 (MAC)	NG	<0.010	-	<0.010	<0.010	<0.010	<0.010	-	<0.01	<0.010	-	<0.01	<0.010	-
Nitrogen (Ammonia Nitrogen)	mg/L	NG	NG	0.076	0.097	0.052	<0.050	3.3	3.1	3.2	0.1	0.074	-	6.2	1.8	-
Orthophosphate (P)	mg/L	NG	NG	0.026	-	0.022	<0.010	0.015	0.015	-	<0.01	0.064	-	<0.01	<0.010	-
pH	pH	6.5-8.5	NG	7.07	-	6.86	6.76	7.15	7.18	-	**6.2**	**6.05**	-	**6.33**	**5.83**	**5.89**
Reactive Silica (SiO2)	mg/L	NG	NG	23	-	26	14	18	18	-	20	8.2	-	18	7.3	-
Saturation pH (@ 20C)	N/A	NG	NG	8.04	-	7.81	8.59	7.05	7.04	-	7.85	8.43	-	8.24	9.31	-
Saturation pH (@ 4C)	N/A	NG	NG	8.29	-	8.06	8.84	7.30	7.29	-	8.1	8.68	-	8.49	9.56	-
Total Alkalinity (Total as CaCO3)	mg/L	NG	NG	99	-	120	50	380	380	-	98	50	-	100	22	-
Total Organic Carbon (C)	mg/L	NG	NG	<5.0 (1)	-	4.2 (1)	<50 (1)	52 (1)	49 (1)	-	1.9	<50 (1)	-	<0.5	25 (1)	-
Turbidity	NTU	1 (MAC)[3]	NG	130	-	210	>1000	580	930	-	590	>1000	-	>1000	490	-

Notes:

AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds CCME guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)

[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil

[3] For treatment systems only

(1) Reporting limit was increased due to turbidity.

Englobe

TABLE 9: TOTAL METALS in Groundwater
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	Sample ID											
				MW1S	MW1D	MW2S			MW2D	MW3S	MW3D		MW4S	MW4D	MW5
				20-Mar-16	20-Mar-16	4-Nov-05	11-Jan-06	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	Lab-Dup	20-Mar-16	20-Mar-16	20-Mar-16
Aluminum	µg/L	100[3]	NG	110	6.4	<10	77	68	19	7.0	9.5	10	82	39	14
Antimony	µg/L	6 (MAC)	6	<1.0	<1.0	<2	<2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	10 (MAC)	10	1.5	2.7	<2	<2	<1.0	***14***	1.4	4.1	4.1	<1.0	<1.0	2.0
Barium	µg/L	1000 (MAC)	1000	67	260	<5	13	67	24	21	18	18	20	11	33
Beryllium	µg/L	NG	4	<1.0	<1.0	<2	<2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bismuth	µg/L	NG	NG	<2.0	<2.0	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Boron	µg/L	5000 (MAC)	5000	<50	<50	***6800***	3300	180	850	<50	<50	<50	<50	<50	<50
Cadmium	µg/L	5 (MAC)	5	0.13	0.029	<0.3	<0.3	0.037	<0.010	0.084	0.014	0.014	0.11	0.025	<0.010
Calcium	µg/L	NG	NG	33000	97000	24000	20000	53000	23000	63000	26000	26000	9500	5400	16000
Chromium	µg/L	50 (MAC)	50	3.9	<1.0	<2	<2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt	µg/L	NG	10	***50***	2.0	<1	6	1.3	<0.40	***12***	4.6	4.6	***38***	***12***	1.0
Copper	µg/L	≤1000 (AO)	NG	4.0	<2.0	<2	<2	13	<2.0	2.4	<2.0	<2.0	3.8	<2.0	<2.0
Iron	µg/L	≤300 (AO)	NG	**76000**	<50	<50	**2700**	74	<50	<50	**310**	**310**	55	**930**	100
Lead	µg/L	-	10	<0.50	<0.50	<0.5	3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Lead (Total)	µg/L	10 (MAC)	NG	**27**	3.4	-	-	7.2	1.2	2.1	1	-	**22**	5.9	9.6
Magnesium	µg/L	NG	NG	15000	32000	3900	1800	2400	9200	32000	11000	11000	3900	2200	5400
Manganese	µg/L	≤50 (AO)	NG	**8200**	**420**	**5600**	**2000**	**1100**	12	**8000**	**250**	**250**	**7000**	**600**	**390**
Mercury	µg/L	1 (MAC)	1	<0.013	<0.013	-	-	<0.013	<0.013	<0.013	<0.013	-	<0.013	<0.013	<0.013
Molybdenum	µg/L	NG	70	<2.0	<2.0	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nickel	µg/L	NG	100	20	7.2	<2	3	<2.0	2.4	11	7.4	7.8	9.6	6.5	<2.0
Phosphorus	µg/L	NG	NG	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Potassium	µg/L	NG	NG	7100	11000	8700	7000	17000	3700	7900	3800	3700	1900	1000	5600
Selenium	µg/L	10 (MAC)	10	<1.0	<1.0	<2	<2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	µg/L	NG	100	<0.10	<0.10	<0.5	<0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	µg/L	≤ 200,000 (AO)	200,000	8400	26000	25000	13000	40000	13000	16000	21000	21000	6300	5600	14000
Strontium	µg/L	NG	4400	270	370	84	49	160	130	410	150	150	61	40	82
Thallium	µg/L	NG	2	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tin	µg/L	NG	4400	<2.0	<2.0	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	µg/L	NG	NG	<2.0	<2.0	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	µg/L	20 (MAC)	20	0.41	3.1	<0.1	<0.1	0.44	0.37	0.61	0.14	0.12	<0.10	<0.10	<0.10
Vanadium	µg/L	NG	6.2	<2.0	<2.0	<2	<2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Zinc	µg/L	≤5000 (AO)	5000	9.9	250	<5	14	<5.0	<5.0	6.1	91	90	<5.0	11	<5.0

Notes:

AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds HC guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)

[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil

[3] For treatment systems only

Englobe

TABLE 9: TOTAL METALS in Groundwater
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	Sample ID												
				MW6S	MW6D	MW7	MW8	MW9	MW10	MW-DUP (MW10 Field Dup)	MW11		MW12			
				20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	4-Nov-05	20-Mar-16	4-Nov-05	20-Mar-16	Lab-Dup
Aluminum	µg/L	100[3]	NG	210	5.4	7.1	7.1	8.3	75	55	24	140	47	140	150
Antimony	µg/L	6 (MAC)	6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2	<1.0	<2.0	<1.0	<1.0
Arsenic	µg/L	10 (MAC)	10	***14***	1.6	1.2	<1.0	<1.0	5.0	4.8	<2	<1.0	***49***	6.5	6.4
Barium	µg/L	1000 (MAC)	1000	57	8.6	13	32	16	91	88	46	32	81	32	32
Beryllium	µg/L	NG	4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2	<1.0	<2.0	<1.0	<1.0
Bismuth	µg/L	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2.0	<2.0	<2.0	<2.0
Boron	µg/L	5000 (MAC)	5000	<50	<50	<50	<50	<50	95	95	27	<50	120	<50	<50
Cadmium	µg/L	5 (MAC)	5	0.088	<0.010	0.020	0.076	0.058	<0.010	0.017	<0.3	0.087	<0.3	0.056	0.061
Calcium	µg/L	NG	NG	39000	14000	21000	33000	12000	73000	73000	34000	16000	14000	5200	5200
Chromium	µg/L	50 (MAC)	50	1.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2	<1.0	<2.0	2.0	1.9
Cobalt	µg/L	NG	10	***11***	0.74	0.61	6.4	***53***	***19***	***19***	***15***	1.3	***56***	***13***	***13***
Copper	µg/L	≤1000 (AO)	NG	4.1	<2.0	<2.0	<2.0	<2.0	4.4	4.3	3.0	3.2	4.0	5.6	5.7
Iron	µg/L	≤300 (AO)	NG	**40000**	300	<50	<50	<50	290	190	260	<50	**63000**	**46000**	**45000**
Lead	µg/L	-	10	0.55	<0.50	<0.50	<0.50	0.94	<0.50	<0.50	<0.5	<0.50	<0.5	0.58	<0.50
Lead (Total)	µg/L	10 (MAC)	NG	**20**	5.9	1.4	0.93	**79**	2.8	3.9	-	**70**	-	2.2	-
Magnesium	µg/L	NG	NG	17000	3600	9000	10000	7100	25000	25000	16000	4400	4.5	1600	1600
Manganese	µg/L	≤50 (AO)	NG	**4600**	**110**	**100**	**890**	**2000**	**5200**	**5200**	**1300**	**3900**	**2900**	**880**	**870**
Mercury	µg/L	1 (MAC)	1	<0.013	<0.013	<0.013	<0.013	0.55	<0.013	<0.013	-	0.75	-	<0.013	-
Molybdenum	µg/L	NG	70	<2.0	2.1	<2.0	<2.0	<2.0	2.4	2.4	<2	<2.0	<2.0	<2.0	<2.0
Nickel	µg/L	NG	100	11	<2.0	<2.0	6.4	21	12	12	12	<2.0	19	3.4	3.1
Phosphorus	µg/L	NG	NG	<100	<100	<100	<100	<100	<100	<100	<100	270	<100	<100	<100
Potassium	µg/L	NG	NG	6300	1200	2700	6800	3500	48000	48000	6400	1100	17000	2500	2600
Selenium	µg/L	10 (MAC)	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2	<1.0	<2.0	<1.0	<1.0
Silver	µg/L	NG	100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5	<0.10	<0.5	<0.10	<0.10
Sodium	µg/L	≤ 200,000 (AO)	200,000	24000	21000	14000	35000	15000	77000	78000	36000	8500	32000	14000	13000
Strontium	µg/L	NG	4400	250	62	84	180	89	350	350	280	57	220	46	45
Thallium	µg/L	NG	2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.10	<0.1	<0.10	<0.10
Tin	µg/L	NG	4400	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3	<2.0	<2.0
Titanium	µg/L	NG	NG	4.2	<2.0	<2.0	<2.0	<2.0	2.5	2.5	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	µg/L	20 (MAC)	20	0.71	0.20	0.23	0.14	<0.10	1.8	2.1	<0.1	<0.10	0.3	0.21	0.21
Vanadium	µg/L	NG	6.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Zinc	µg/L	≤5000 (AO)	5000	8.7	11	6.5	13	5.9	8.3	7.5	25.0	20	27	38	36

Notes:

AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds HC guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)

[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil

[3] For treatment systems only

TABLE 10: Polycyclic Aromatic Hydrocarbons (PAHs) in Groundwater
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

Parameter	Units	Health Canada Drinking Water Guidelines[1]	NSE Tier I EQS[2]	SAMPLE ID					
				MW4S		MW4D	MW5	MW9	MW11
				20-Mar-16	Lab-Dup	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16
1-Methylnaphthalene	µg/L	NG	12	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2-Methylnaphthalene	µg/L	NG	12	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthene	µg/L	NG	1400	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	µg/L	NG	4.5	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)anthracene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	µg/L	0.01	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(j)fluoranthene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	µg/L	NG	940	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-cd)pyrene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	µg/L	NG	470	<0.20	<0 20	<0.20	<0 20	<0.20	<0 20
Perylene	µg/L	NG	NG	<0.010	<0.010	<0.010	0.019	<0.010	<0.010
Phenanthrene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Pyrene	µg/L	NG	710	<0.010	<0.010	<0.010	0.22	<0.010	<0.010

Notes:

AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds HC guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)

[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil

TABLE 11: Chlorinated Phenols in Groundwater
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	SAMPLE ID												
				MW1S	MW1D	MW2S	MW2D	MW5		MW6S	MW6D	MW8	MW9	MW10	MWDUP (MW10 Field Dup)	MW11
				20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	Lab-Dup	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16	20-Mar-16
2-Chlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,3,4,6-Tetrachlorophenol	ug/L	100 (MAC)/≤1 (AO)	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,3,5-Trichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,4-Dichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,4-Dimethylphenol	ug/L	NG	NG	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1
2,4,6-Trichlorophenol	ug/L	5 (MAC)/≤2 (AO)	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,6-Dichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
4-Chloro-3-Methylphenol	ug/L	NG	NG	<0.1	<0.2 (1)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3 (1)	<0.1	<0.5	<0.5	<0.1
4-Nitrophenol	ug/L	NG	NG	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1
m/p-Cresol	ug/L	NG	NG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	18	17	<0.5
o-Cresol	ug/L	NG	NG	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	<2.5	<0.5
Pentachlorophenol	ug/L	60 (MAC)/≤30 (AO)	30	<0.1	<0.1	<0.1	1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
Phenol	ug/L	NG	570	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.1	6.2	<0.5
2,3,4,5-Tetrachlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,3,5,6-Tetrachlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,3,4-Trichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,3,6-Trichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,4,5-Trichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
3,4,5-Trichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,4-Dinitrophenol	ug/L	NG	NG	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1
2,3-Dichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
2,5-Dichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
3,4-Dichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
3,5-Dichlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.1
4,6-Dinitro-2-methylphenol	ug/L	NG	NG	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1
3 & 4-Chlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.1	<0.2 (1)	<0.1	<0.1	<0.1	<0.2 (1)	<0.1	<0.1	<0.5	<0.5	<0.1
2-Nitrophenol	ug/L	NG	NG	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1

Notes:
AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds HC guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)
[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil

(1) Detection Limit was raised due to matrix interferences.

TABLE 12: GENERAL CHEMISTRY in Surface Water
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	CCME FAL[1]	NSE Tier 1 EQS[2]	SAMPLE ID																										
				SW1			SW2		SW3				SW4	SW5	SW6	SW7	SW8	SW9		SW10		SW11	SW12	BACKGROUND	P1A	P1B		P2A	P2B	P3
				2-Feb-16	Lab Dup	14-Mar-16	2-Feb-16	14-Mar-16	2-Feb-16	Lab Dup	14-Mar-16	Lab Dup	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	SW-DUP	16-Mar-16	Lab Dup	16-Mar-16	16-Mar-16	16-Mar-16	19-Mar-16	19-Mar-16	Lab-Dup	19-Mar-16	19-Mar-16	19-Mar-16
Field pH	pH	6.5-9.0	NG	**3.64**	-	**4.54**	6.55	**5.47**	**6.29**	-	**5.77**	-	**5.42**	6.8	7.22	**5.19**	6.75	6.99	-	**3.25**	-	**4.26**	**4.88**	**5.73**	**6.03**	**5.15**	-	6.5	**6.03**	6.64
Field Conductivity	uS/cm	NG	NG	63	-	83	46	38	93	-	93	-	143	139	990	36	69	232	-	37	-	54	25	33	78	33	-	90	84	87
Field Temperature	°C	NG	NG	2.85	-	3 24	2.91	3.41	2.56	-	5.03	-	4.36	4.4	7.24	3.59	9.83	6.27	-	3.37	-	2.98	4.26	5.19	6.33	5.4	-	4.84	5.59	3.82
Field Dissolved Oxygen	mg/L	varies [3]	NG	12.44	-	12.7	10.48	10.19	10 27	-	13.53	-	12.17	9.7	14.5	10.19	10.13	8.38	-	8.4	-	9.92	11.32	12.85	10.45	17.49	-	8.93	7.23	7.23
Anion Sum	me/L	NG	NG	0.790	-	0.630	0.530	0.440	1.50	-	1.46	-	1.21	1.30	1.43	0.410	1.05	3.77	3.75	0.280	-	0.660	0.280	0.320	1.07	0.380	-	1.36	0.790	1.34
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	<1.0	-	<1.0	<1.0	<1.0	39	-	39	-	<1.0	34	25	<1.0	34	130	130	<1.0	-	<1.0	<1.0	<1.0	25	<1.0	-	46	15	37
Calculated TDS	mg/L	NG	NG	57	-	49	42	37	99	-	95	-	80	85	89	34	63	590	280	20	-	50	21	22	110	45	-	84	63	88
Carb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	<1.0	-	<1.0	<1.0	<1.0	<1.0	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0
Carbanaceous BOD	mg/L	NG	NG	<5.0	-	-	<5.0	-	<5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cation Sum	me/L	NG	NG	0.870	-	0.780	0.720	0.640	1.68	-	1.66	-	1.32	1.46	1.51	0.590	1.28	18.3	6.14	0.320	-	0.780	0.350	0.330	2.82	1.31	-	1.52	1.29	1.56
Colour	TCU	Narrative	NG	510	590	610	310	260	460	-	410	-	420	360	230	250	290	880	780	190	-	740	220	46	470	120	-	250	330	560
Conductivity	uS/cm	NG	NG	98	-	79	72	60	150	-	140	140	130	130	140	58	100	380	380	54	-	84	36	49	110	60	60	130	80	140
Chloride (Cl)	mg/L	120	NG	24	24	18	16	13	22	-	21	-	40	19	29	13	11	27	28	9.8	-	19	9.7	11	17	14	-	13	16	18
Sulphate (SO4)	mg/L	NG	NG	5.5	5.3	5.4	3.3	2.5	3.6	-	3.3	-	3.4	2.9	3.1	2.5	2.2	13	12	<2.0	-	5.5	<2.0	<2.0	3.7	<2.0	-	2.9	2.0	4.7
Hardness (CaCO3)	mg/L	NG	NG	5.3	-	4.0	5.2	6.3	25	-	26	-	12	23	22	5.3	37	280	110	4.1	-	3.2	4.5	3.4	40	36	-	30	19	18
Ion Balance (% Difference)	%	NG	NG	4.82	-	10.6	15.2	18.5	5.66	-	6.41	-	4.35	5.80	2.72	18.0	9.87	65.8	24.2	6.67	-	8.33	11.1	1.54	45.0	55.0	-	5.56	24.0	7.59
Langelier Index (@ 20C)	N/A	NG	NG	NC	-	NC	NC	NC	-2.19	-	-1.88	-	NC	-2.03	-1.97	NC	-1.51	0.134	-0.397	NC	-	NC	NC	NC	-2.48	NC	-	-1.54	-3.03	-2.19
Langelier Index (@ 4C)	N/A	NG	NG	NC	-	NC	NC	NC	-2.45	-	-2.13	-	NC	-2.29	-2.22	NC	-1.77	-0.113	-0.646	NC	-	NC	NC	NC	-2.73	NC	-	-1.79	-3.29	-2.44
Nitrate (N)	mg/L	13	NG	0.056	-	0.051	0.065	0.13	0.18	-	0.17	-	0.31	0.35	0.31	<0.050	<0.050	0.12	0.23	0.051	-	0.069	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050
Nitrate + Nitrite	mg/L	NG	NG	0.056	0.057	0.051	0.065	0.13	0.18	-	0.17	-	0.31	0.35	0.31	<0.050	<0.050	0.12	0.23	0.051	-	0.069	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050
Nitrite (N)	mg/L	0.06	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010
Nitrogen (Ammonia Nitrogen)	mg/L	Varies [4]	NG	<0.050	-	0.17	<0.050	<0.050	0.14	-	0.11	-	<0.050	0.078	0.058	0.14	<0.050	0.20	0.16	<0.050	<0.050	0.061	<0.050	0.078	0.22	0.40	-	0.052	0.072	0.081
Orthophosphate (P)	mg/L	NG	NG	0.031	0.032	0.028	0.030	0.023	0.044	-	0.033	-	0.018	0.032	0.022	0.016	0.31	0.33	0.17	0.012	-	0.029	0.011	0.011	0.025	<0.010	-	0.091	0.045	0.13
Phenol	mg/L	0.004	0.004	**0.0085 (2)**	-	<0.0005	0.0026 (3)	-	**0.0052 (3)**	-	<0.0025	-	-	-	-	-	-	<0.0025	<0.0005	-	-	-	-	<0.0005	-	-	-	-	-	-
pH	pH	6.5-9.0	NG	***5.38***	-	***5.61***	***5.89***	***5.86***	6.74	-	7.04	7.05	6.00	7.00	7.21	***6.16***	7.24	7.64	7.44	***5.31***	-	***4.94***	***5.20***	***5.70***	**6.43**	**5.26**	-	7.21	**6.42**	6.93
Phosphorous	mg/L	Framework[5]	NG	0.072	-	-	0.069	-	0.13	0.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reactive Silica (SiO2)	mg/L	NG	NG	5.1	5.1	5.2	4.6	4.5	7.0	-	5.4	-	5.1	5.4	4.7	4.6	0.56	3.5	2.1	3.5	-	5.4	3.5	4.1	5.6	4.1	-	2.4	3.4	2.2
Saturation pH (@ 20C)	N/A	NG	NG	NC	-	NC	NC	NC	8.94	-	8.92	-	NC	9.03	9.18	NC	8.76	7.51	7.84	NC	-	NC	NC	NC	8.91	NC	-	8.75	9.46	9.12
Saturation pH (@ 4C)	N/A	NG	NG	NC	-	NC	NC	NC	9.19	-	9.17	-	NC	9.28	9.43	NC	9.01	7.75	8.09	NC	-	NC	NC	NC	9.16	NC	-	9.00	9.71	9.37
Total Alkalinity (Total as CaCO3)	mg/L	NG	NG	<5.0	<5.0	<5.0	<5.0	<5.0	39	-	39	-	<5.0	34	26	<5.0	34	140	130	<5.0	-	<5.0	<5.0	<5.0	25	<5.0	-	46	15	37
Tannins/Lignins	mg/L	NG	NG	7.4	-	-	4.7	-	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Chemical Oxygen Demand	mg/L	NG	NG	110	-	-	72	-	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	NG	NG	3.4 (4)	-	-	2.0 (4)	-	2.9 (4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (C)	mg/L	NG	NG	21 (2)	-	21 (1)	12 (2)	15 (1)	22 (2)	-	22 (1)	-	14 (1)	19 (1)	13 (1)	14 (1)	15 (1)	72 (1)	41 (1)	16 (1)	-	27 (1)	16 (1)	9.7	<50 (1)	<50 (1)	-	15 (1)	19 (1)	24 (1)
Total Suspended Solids	mg/L	NG	NG	<1.0	-	-	3.2	-	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
Turbidity	NTU	Narrative	NG	6.0	-	4.2	3.9	2.8	11	-	21	-	2.7	13	4.7	2.0	16	170	>1000	110	-	14	3.2	0.25	330	>1000	-	20	54	40

Notes:

NG - no guideline

value - exceeds CCME guidelines
value -exceeds NSE EQS
value -exceeds both CCME and NSE EQS

(1) Elevated reporting limit due to sample matrix.
(2) Reporting limit was increased due to turbidity.
(3) The sample was decanted due to sediment.
(4) Elevated reporting limit due to blank performance.

[1]Criteria taken from the Canadian Council of Ministers of the Environment (CCME) Fresh Water Aquatic Life Guidelines (Update 2015)

[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for fresh water surface water

[3]Lowest acceptable dissolved oxygen concentration:
for warm water biota: early life stages = 6 mg/L
for warm water biota: other life stages = 5.5 mg/L
for cold water biota: early life stages = 9.5 mg/L
for cold water biota: other life stages = 6.5 mg/L

[4] Ammonia - calculations as per http://st-ts.ccme.ca/en/index.html?lang=en&factsheet=5#aql_fresh_concentration.

[5] Canadian Guidance Framework for Phosphorus is for developing phosphorus guidelines (does not provide guidance on other freshwater nutrients).
It provides Trigger Ranges for Total Phosphorus (µg/L) (see Guidance Framework for Phosphorus factsheet):
ultra-oligotrophic <4
oligotrophic 4-10
mesotrophic 10-20
meso-eutrophic 20-35
eutrophic 35-100
hyper-eutrophic >100

TABLE 13: TOTAL METALS in Surface Water
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	CCME FAL[1]	NSE Tier 1 EQS[2]	SAMPLE ID																			
				SW1		SW2		SW3		SW4	SW5	SW6	SW7	SW8	SW9		SW10	SW11	SW12	BACKGROUND	P1A	P1B	P2A	P2B	P3
				2-Feb-16	14-Mar-16	2-Feb-16	14-Mar-16	2-Feb-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	SW-DUP	16-Mar-16	16-Mar-16	16-Mar-16	16-Mar-16	19-Mar-16	19-Mar-16	19-Mar-16	19-Mar-16	19-Mar-16
Aluminum	µg/L	5 or 100[3]	5	***550***	***580***	***450***	***380***	***530***	***610***	***490***	***580***	***350***	***340***	***600***	***67000***	***14000***	***520***	***700***	***420***	***510***	***4400***	***10000***	***620***	***1100***	***850***
Antimony	µg/L	NG	20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	5	5	<1.0	1.1	<1.0	<1.0	1.3	1.7	<1.0	1.3	<1.0	<1.0	1.5	***120***	***25***	<1.0	1.3	<1.0	<1.0	***10***	2.4	1.5	2.4	1.8
Barium	µg/L	NG	1000	3.0	2.2	3.0	2.6	9.5	8.9	4.3	7.7	6.3	2.0	5.3	410	75	2.6	2.1	2.6	2.9	78	110	6.4	19	11
Beryllium	µg/L	NG	5.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bismuth	µg/L	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Boron	µg/L	1500	1200	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	120	92	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cadmium	µg/L	0.04 - 0.37[4]	0.01	***0.21***	***0.15***	***0.11***	***0.069***	***0.063***	***0.037***	***0.091***	***0.048***	***0.033***	***0.064***	***0.043***	***2.1***	***0.60***	***0.036***	***0.18***	***0.023***	***0.024***	***0.28***	***0.46***	***0.050***	***0.13***	***0.16***
Calcium	µg/L	NG	NG	1100	860	1000	1200	6500	6900	2800	5900	5600	930	11000	71000	28000	480	700	740	240	11000	8200	8200	4800	4500
Chromium	µg/L	8.9	NG	1.1	1.1	<1.0	46	1.5	1.8	<1.0	1.5	1.1	<1.0	1.6	**94**	**25**	<1.0	1.4	<1.0	1.6	7.2	4.6	1.5	2.2	1.6
Chromium VI	µg/L	1	1	-	<0.50	-	-	-	<0.50	-	-	-	-	-	<0.50	<0.50	<5.0	-	-	<0.50	<5.0	<5.0	<5.0	-	-
Cobalt	µg/L	NG	10	1.2	0.93	0.73	0.63	1.4	1.4	0.84	1.1	<0.40	0.41	0.59	**93**	**17**	0.46	1.1	0.46	<0.40	4.9	5.2	0.71	2.6	1.2
Copper	µg/L	2 - 4[5]	2	***7.3***	***5.8***	***4.5***	***3.7***	***6.6***	***4.1***	***4.7***	***4.8***	***3.9***	***2.4***	***5.5***	***200***	***66***	<2.0	***6.8***	<2.0	<2.0	***17***	***18***	***6.5***	***13***	***11***
Iron	µg/L	300	300	***820***	***780***	***560***	***650***	***2200***	***2700***	***970***	***2400***	***1200***	***340***	***1100***	***270000***	***32000***	***470***	***840***	***970***	280	***32000***	***5800***	***1600***	***3500***	***1300***
Lead	µg/L	1 to 7[6]	1	***13***	***10***	***5.9***	***3.2***	***1.5***	***1.3***	***5.1***	***1.3***	0.57	***3.0***	***2.3***	***160***	***37***	***1.2***	***12***	0.72	<0.50	***16***	***43***	***2.1***	***7.0***	***6.5***
Magnesium	µg/L	NG	NG	620	440	660	820	2000	2200	1300	2000	1900	730	2400	25000	10000	700	340	650	680	2900	3800	2300	1700	1700
Manganese	µg/L	NG	820	13	12	16	17	160	180	23	120	16	12	33	***4300***	***710***	14	8.6	20	9.6	630	110	40	290	33
Mercury	µg/L	0.026	0.026	***0.028***	***0.035***	0.022	0.017	0.020	<0.013	0.015	<0.013	<0.013	<0.013	<0.013	***0.13***	***0.065***	<0.013	0.013	<0.013	<0.013	***0.19***	***0.24***	<0.013	0.017	0.025
Molybdenum	µg/L	73	73	<2.0	<2.0	<2.0	5.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	24	8.7	<2.0	<2.0	<2.0	<2.0	<2.0	2.1	2.4	<2.0	<2.0
Nickel	µg/L	25 - 150[7]	25	7.4	5.7	3.5	19	4.4	4.1	3.9	3.7	2.9	2.4	<2.0	***210***	***41***	<2.0	6.9	<2.0	<2.0	11	13	2.4	5.1	5.0
Phosphorus	µg/L	NG	NG	<100	130	100	130	160	170	110	200	130	110	580	11000	3800	<100	150	160	<100	1500	2500	350	800	660
Potassium	µg/L	NG	NG	5800	5100	5500	4200	14000	11000	3600	11000	7400	3800	6000	55000	48000	100	6400	360	<100	11000	1600	13000	11000	18000
Selenium	µg/L	1	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	***3.5***	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	***1.5***	<1.0	<1.0	<1.0
Silver	µg/L	0.25	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	***0.58***	***0.20***	<0.10	<0.10	<0.10	<0.10	0.10	***0.15***	<0.10	<0.10	<0.10
Sodium	µg/L	NG	NG	13000	12000	10000	8700	17000	17000	22000	15000	19000	8500	8100	37000	35000	4900	12000	4900	5600	14000	7000	12000	12000	16000
Strontium	µg/L	NG	21000	7.4	6.1	6.7	7.4	31	34	18	29	29	6.1	47	430	140	6.1	4.9	4.9	3.4	62	86	35	31	23
Thallium	µg/L	0.8	0.8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.53	0.14	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tin	µg/L	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	4.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	µg/L	NG	NG	12	11	8.4	5.0	10	11	7.9	14	7.5	5.7	17	1400	380	4.6	12	4.9	2.4	100	100	18	38	16
Uranium	µg/L	15	300	<0.10	<0.10	<0.10	<0.10	0.15	0.10	<0.10	0.10	<0.10	<0.10	<0.10	7.2	1.6	<0.10	<0.10	<0.10	<0.10	0.55	0.77	<0.10	0.13	0.11
Vanadium	µg/L	NG	6	2.4	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.1	***150***	***26***	<2.0	3.0	<2.0	<2.0	***9.9***	***10***	<2.0	3.4	<2.0
Zinc	µg/L	30	30	11	8.5	11	7.5	21	17	6.6	16	14	6.4	13	***460***	***120***	5.7	10	<5.0	<5.0	***87***	29	12	23	21

Notes:

NG - no guideline

value - exceeds CCME guidelines
value -exceeds NSE EQS
value -exceeds both CCME and NSE EQS

[1]Criteria taken from the Canadian Council of Ministers of the Environment (CCME) Fresh Water Aquatic Life Guidelines (Update 2015)
[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for fresh water surface water

[3] Aluminium Guideline for pH < 6.5 = 5 ug/L
Aluminium Guideline for pH ≥ 6.5 = 100 ug/L

[4] At [CaCO3] = > 0 to < 17 mg/L, cadmium guideline = 0.04 µg/L
At [CaCO3] = ≥ 17 to ≤ 280 mg/L, cadmium guideline (µg/L) = $10^{\{0.83[\log(\text{hardness})] - 2.46\}}$
At [CaCO3] = > 280 mg/L, cadmium guideline = 0.37 µg/L

[5] At [$CaCO_3$] = 0 to 120 mg/L, copper guideline = 2 ug/L.
At [CaCO3] = 120 to 180 mg/L, copper guideline = 3 ug/L.
At [CaCO3] = > 180 mg/L, copper guideline = 4 ug/L.
If hardness unknown, the CWQG is 2 ug/L

[6] At [$CaCO_3$] = 0 to ≤60 mg/L, lead guideline = 1 ug/L
At [$CaCO_3$] = >60 to ≤180 mg/L, lead guideline = $e^{\{1.273[\ln(\text{hardness})]-4.705\}}$
At [$CaCO_3$] = >180 mg/L, lead guideline = 7 ug/L

TABLE 14: Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Water
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

Parameter	Units	CCME Freshwater Aquatic Life Guidelines [2]	Tier 1 EQS for Surface Water [1]	SAMPLE ID						
				SW1		SW3	P1A	P1B	P2A	P3
				19-Mar-16	Lab Dup	19-Mar-16	19-Mar-16	19-Mar-16	19-Mar-16	19-Mar-16
1-Methylnaphthalene	µg/L	NG	2	<0.050	<0.050	<0.050	<0.050	<0.060	<0.050	<0.050
2-Methylnaphthalene	µg/L	NG	2	<0.050	<0.050	<0.050	<0.050	<0.060	<0.050	<0.050
Acenaphthene	µg/L	5.8	5.8	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Acenaphthylene	µg/L	NG	4.6	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Acridine	µg/L	4.4	NG	<0.050	<0.050	<0.050	<0.050	<0.060	<0.050	<0.050
Anthracene	µg/L	0.012	0.012	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Benzo(a)anthracene	µg/L	0.018	0.018	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Benzo(a)pyrene	µg/L	0.015	0.015	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Benzo(b)fluoranthene	µg/L	NG	0.48	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Benzo(g,h,i)perylene	µg/L	NG	0.17	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Benzo(j)fluoranthene	µg/L	NG	0.48	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Benzo(k)fluoranthene	µg/L	NG	0.48	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Chrysene	µg/L	NG	1.4	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Dibenz(a,h)anthracene	µg/L	NG	0.26	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Fluoranthene	µg/L	0.04	0.04	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Fluorene	µg/L	3	3	0.012	<0.010	0.018	0.025	0.023	0.019	<0.030 (1)
Indeno(1,2,3-cd)pyrene	µg/L	NG	0.21	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Naphthalene	µg/L	1.1	1.1	<0 20	<0.20	<0 20	<0 20	<0 30	<0 20	<0 20
Perylene	µg/L	NG	NG	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Phenanthrene	µg/L	0.4	0.4	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Pyrene	µg/L	0.025	0.025	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Quinoline	µg/L	3.4	NG	<0.050	<0.050	<0.050	<0.050	<0.060	<0.050	<0.050

Notes:
NG - no guideline

value - exceeds CCME guidelines
value -exceeds NSE EQS
value -exceeds both CCME and NSE EQS

[1]Criteria taken from the Canadian Council of Ministers of the Environment (CCME) Fresh Water Aquatic Life Guidelines (Update 2015)

[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for fresh water surface water

TABLE 15: Chlorinated Phenols in Surface Water
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	CCME FAL[1]	NSE Tier 1 EQS[2]	SAMPLE ID										
				SW1	SW3	SW9	SW-DUP (SW9 Field Dup)	BACKGROUND		P1A	P1B	P2A	P2B	P3
				14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	14-Mar-16	Lab Dup	19-Mar-16	19-Mar-16	19-Mar-16	14-Mar-16	19-Mar-16
2-Chlorophenol	ug/L	NG	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,3,4,6-Tetrachlorophenol	ug/L	1	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,3,5-Trichlorophenol	ug/L	18	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dichlorophenol	ug/L	0 2	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dimethylphenol	ug/L	NG	NG	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1
2,4,6-Trichlorophenol	ug/L	18	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,6-Dichlorophenol	ug/L	0 2	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chloro-3-Methylphenol	ug/L	NG	NG	<0.1	<0.1	<5 (1)	<0 5 (1)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.7 (1)	<0.1
4-Nitrophenol	ug/L	NG	NG	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1
m/p-Cresol	ug/L	NG	NG	<0 5	<0.5	<2.5	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5	<0 5	<0 5
o-Cresol	ug/L	NG	NG	<0 5	<0.5	<2.5	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5	<0 5	<0 5
Pentachlorophenol	ug/L	0 5	0 5	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenol	ug/L	4	4	<0 5	<0.5	<2.5	<0.5	<0 5	<0.5	<0 5	<0.5	<0.5	<0 5	<0 5
2,3,4,5-Tetrachlorophenol	ug/L	1	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,3,5,6-Tetrachlorophenol	ug/L	1	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,3,4-Trichlorophenol	ug/L	18	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,3,6-Trichlorophenol	ug/L	18	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,4,5-Trichlorophenol	ug/L	18	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3,4,5-Trichlorophenol	ug/L	18	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dinitrophenol	ug/L	NG	NG	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1
2,3-Dichlorophenol	ug/L	0 2	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,5-Dichlorophenol	ug/L	0 2	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3,4-Dichlorophenol	ug/L	0 2	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3,5-Dichlorophenol	ug/L	0 2	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,6-Dinitro-2-methylphenol	ug/L	NG	NG	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1
3 & 4-Chlorophenol	ug/L	7	NG	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Nitrophenol	ug/L	NG	NG	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1

Notes:
NG - no guideline

value - exceeds CCME guidelines
value -exceeds NSE EQS
value -exceeds both CCME and NSE EQS

[1]Criteria taken from the Canadian Council of Ministers of the Environment (CCME) Fresh Water Aquatic Life Guidelines (Update 2015)

[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for fresh water surface water

(1) Detection Limit was raised due to matrix interferences.

TABLE 16: GENERAL CHEMISTRY in Potable Water
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	Sample ID (Civic No. Lake George Road)																		
				PW1				PW2		PW2A			PW3		PW-DUP	PW4			PW5		PW6		
				2-Feb-16	Lab Dup	16-Mar-16	Lab Dup	2-Feb-16	16-Mar-16	11-Jan-06	21-Mar-16	Lab Dup	2-Feb-16	16-Mar-16	16-Mar-16	2-Feb-16	Lab Dup	16-Mar-16	2-Feb-16	16-Mar-16	2-Feb-16	16-Mar-16	Lab Dup
Field pH	pH	6.5-8.5	NG	6.13	-	5.96	-	6 58	6.6	-	6.7	-	6.64	5.43	5.43	6.98	-	6.73	6.85	6.71	7.06	6.47	-
Field Conductivity	uS/cm	NG	NG	59	-	40	-	114	109	-	47	-	185	183	183	105	-	69	117	59	85	50	-
Field Temperature	°C	NG	NG	10	-	7.4	-	12.07	11.36	-	9.19	-	7.37	7.42	7.42	7.51	-	11.36	9.02	8.98	8.35	8.6	-
Escherichia Coli	CFU/100ml	0 per 100 ml	NG	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Total Coliforms	CFU/100ml	0 per 100 ml	NG	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	-
Anion Sum	me/L	NG	NG	0.850	-	0.840	-	1 51	1.48	1.19	1.35	-	2.64	2.86	2.88	1.72	-	1.68	1.81	1.80	1.29	1.22	-
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	29	-	26	-	41	37	24	27	-	12	9 5	10	61	-	59	59	61	26	24	-
Calculated TDS	mg/L	≤ 500 (AO)	NG	54	-	53	-	97	95	95	110	-	150	170	170	110	-	110	120	120	86	84	-
Carb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	<1.0	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	-
Cation Sum	me/L	NG	NG	0.820	-	0.820	-	1 36	1.41	1.36	1.50	-	2.30	2.55	2.63	1.57	-	1.60	1.66	1.78	1.13	1.16	-
Colour	TCU	≤ 15 (AO)	NG	6.1	-	6 9	-	<5.0	<5.0	<5.0	<5.0	-	<5.0	13	5.7	<5.0	-	<5.0	<5.0	<5.0	<5.0	<5.0	-
Conductivity	uS/cm	NG	NG	75	-	79	-	130	140	130	120	-	260	290	290	140	-	140	150	160	110	120	-
Chloride (Cl)	mg/L	≤ 250 (AO)	250	5 2	-	6.7	-	15	16	12	14	-	78	87	87	9 5	-	9.5	15	13	18	17	-
Sulphate (SO4)	mg/L	≤ 500 (AO)	NG	4 5	-	4.1	-	12	12	17	20	-	8.7	9 5	10	10	-	11	9 5	9.6	12	12	-
Hardness (CaCO3)	mg/L	NG	NG	27	-	27	-	45	45	37	37	-	23	22	23	59	-	61	59	62	31	32	-
Ion Balance (% Difference)	%	NG	NG	1.80	-	1.20	-	5 23	2.42	6.51	5.26	-	6.88	5.73	4 54	4.56	-	2.44	4.32	0 560	6.61	2.52	-
Langelier Index (@ 20C)	N/A	NG	NG	-2.42	-	-2.63	-	-1 58	-1.70	(2.14)	-2.05	-	-3.27	-3.33	-3.32	-0.896	-	-0.985	-1.26	-1.05	-2.16	-2.01	-
Langelier Index (@ 4C)	N/A	NG	NG	-2.67	-	-2.88	-	-1.84	-1.95	(2.39)	-2.30	-	-3.52	-3.58	-3.57	-1.15	-	-1 24	-1.51	-1.30	-2.41	-2.26	-
Nitrate (N)	mg/L	10 (MAC)	NG	0.54	-	0.56	-	0.45	0.42	<0.05	<0.050	-	0.15	0.093	0.10	0.18	-	0.15	0.26	0.26	0.15	0.11	-
Nitrate + Nitrite	mg/L	NG	NG	0.54	-	0.56	-	0.45	0.42	<0.05	<0.050	-	0.15	0.093	0.10	0.18	-	0.15	0.26	0.26	0.15	0.12	-
Nitrite (N)	mg/L	3.2 (MAC)	NG	<0.010	-	<0.010	-	<0.010	<0.010	<0.01	<0.010	-	<0.010	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	0.011	-
Nitrogen (Ammonia Nitrogen)	mg/L	NG	NG	0.077	-	<0.050	-	<0.050	<0.050	<0.05	0.11	-	0.051	<0.050	<0.050	0.17	0.11	<0.050	<0.050	0.42	<0.050	0.058	-
Orthophosphate (P)	mg/L	NG	NG	0.011	-	<0.010	-	0.015	0.012	<0.01	0.013	-	<0.010	<0.010	0.012	0.020	-	0.016	0.018	0.014	0.015	0.011	-
Phenol	mg/L	NG	0.57	0.0019	-	<0.0010	0.0012	0.0011	<0.0010	-	<0.0010	-	<0.0010	<0.0010	-	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
pH	pH	6 5-8.5	NG	6.59	-	6.41	-	7.00	6.93	6.84	6.89	-	6.19	6.28	6.23	7.38	-	7 29	7.10	7.28	6.82	6.99	-
Phosphorous	mg/L	NG	NG	<0.020	-	-	-	<0.020	-	-	-	-	<0.020	-	-	<0.020	-	-	<0.020	-	<0.020	-	-
Reactive Silica (SiO2)	mg/L	NG	NG	8.0	-	7.2	-	16	14	23	22	-	5 9	5.4	5.7	18	-	17	22	22	17	16	-
Saturation pH (@ 20C)	N/A	NG	NG	9.00	-	9.04	-	8 59	8.63	8.98	8.94	-	9.47	9.61	9 54	8.27	-	8.28	8.36	8.33	8.97	8.99	-
Saturation pH (@ 4C)	N/A	NG	NG	9.25	-	9.29	-	8.84	8.88	9.23	9.19	-	9.72	9.86	9.79	8.53	-	8.53	8.62	8.58	9.22	9.25	-
Total Alkalinity (Total as CaCO3)	mg/L	NG	NG	29	-	26	-	41	37	24	27	-	12	9.5	10	62	-	59	59	61	26	24	-
Dissolved Organic Carbon	mg/L	NG	NG	3.4	3 3	-	-	0.5	-	-	-	-	0.80	-	-	<0 5	-	-	<0 5	-	<0.5	-	-
Total Chemical Oxygen Demand	mg/L	NG	NG	7.7	-	-	-	<5.0	-	-	-	-	<5.0	-	-	<5.0	-	-	<5.0	-	<5.0	-	-
Total Kjeldahl Nitrogen	mg/L	NG	NG	0 29 (1)	-	-	-	<0.20 (1)	-	-	-	-	<0.20 (1)	-	-	<0.20 (1)	-	-	<0.20 (1)	-	<0.20 (1)	-	-
Total Organic Carbon (C)	mg/L	NG	NG	3.1	-	2.6	-	<0.50	<0.50	<0 5	0.58	0.6	0.56	0.74	0.61	<0.50	<0.50	<0.50	<0.50	<0.50	<0 50	<0.50	<0.50
Total Suspended Solids	mg/L	NG	NG	<1.0	-	-	-	<1.0	-	-	-	-	<1.0	-	-	<1.0	-	-	<1.0	-	<1.0	-	-
Turbidity	NTU	1 (MAC)[3]	NG	0.39	-	0.39	-	0.49	0.71	39	52	-	0.66	0.37	0.40	<0.10	-	0.10	<0.10	<0.10	7 3	5.2	-

Notes:
AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds HC drinking water guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

(1) Elevated reporting limit due to sample matrix.
(2) Reporting limit was increased due to turbidity.
(3) The sample was decanted due to sediment.
(4) Elevated reporting limit due to blank performance.

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)
[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil
[3] For treatment systems only

TABLE 16: GENERAL CHEMISTRY in Potable Water
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	Sample ID (Civic No. Lake George Road)									
				PW7		PW8		PW9	PW9A				PW10
				2-Feb-16	16-Mar-16	2-Feb-16	16-Mar-16	24-Feb-16	24-Feb-16	Lab Dup	16-Mar-16	Lab Dup	16-Mar-16
Field pH	pH	6 5-8.5	NG	6 95	6.22	6 95	6.25	-	-	-	6.38	-	6.68
Field Conductivity	uS/cm	NG	NG	68	75	234	99	-	-	-	2	-	87
Field Temperature	°C	NG	NG	7 34	7.67	10.24	7 28	-	-	-	8	-	8.97
Escherichia Coli	CFU/100ml	0 per 100 ml	NG	-	0	-	0	-	-	-	-	-	-
Total Coliforms	CFU/100ml	0 per 100 ml	NG	-	>200	-	0	-	-	-	-	-	-
Anion Sum	me/L	NG	NG	1.01	1.05	3 29	2.77	0.680	0.830	-	0.800	-	1.35
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	14	14	58	61	23	31	-	25	-	45
Calculated TDS	mg/L	≤ 500 (AO)	NG	67	69	190	170	45	44	-	55	-	89
Carb. Alkalinity (calc. as CaCO3)	mg/L	NG	NG	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	-	<1.0
Cation Sum	me/L	NG	NG	0.890	0.980	2.80	2.62	0.600	0.780	-	0.770	-	1.25
Colour	TCU	≤ 15 (AO)	NG	<5.0	<5.0	<5.0	<5.0	7.6	8.2	8 2	5.8	<5.0	<5.0
Conductivity	uS/cm	NG	NG	95	100	290	250	58	76	-	70	-	120
Chloride (Cl)	mg/L	≤ 250 (AO)	250	19	20	68	47	5.2	7.0	6 9	6.3	6.1	10
Sulphate (SO4)	mg/L	≤ 500 (AO)	NG	8.5	8.8	10	10	2.9	<2.0	<2.0	4.5	4 5	7.4
Hardness (CaCO3)	mg/L	NG	NG	18	18	83	83	18	30	-	23	-	43
Ion Balance (% Difference)	%	NG	NG	6 32	3.45	8.05	2.78	6 25	3.11	-	1.91	-	3.85
Langelier Index (@ 20C)	N/A	NG	NG	-2 94	-2 97	-0.950	-0.737	-2.66	-1.94	-	-2.28	-	-1.45
Langelier Index (@ 4C)	N/A	NG	NG	-3.19	-3 22	-1 20	-0.987	-2 91	-2.19	-	-2.53	-	-1.71
Nitrate (N)	mg/L	10 (MAC)	NG	0.16	0.13	<0.050	<0.050	0.19	<0.050	-	0.25	-	0.21
Nitrate + Nitrite	mg/L	NG	NG	0.16	0.13	<0.050	<0.050	0.19	<0.050	<0.050	0.26	0.27	0.21
Nitrite (N)	mg/L	3.2 (MAC)	NG	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	<0.010
Nitrogen (Ammonia Nitrogen)	mg/L	NG	NG	<0.050	0.076	0.068	0.068	0.089	<0.050	-	<0.050	-	0.050
Orthophosphate (P)	mg/L	NG	NG	0.014	0.013	0.017	0.020	<0.010	<0.010	<0.010	0.011	0.011	0.020
Phenol	mg/L	NG	0 57	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010
pH	pH	6 5-8.5	NG	6.63	6.61	7 29	7.47	6.61	6.90	-	6.88	-	7.11
Phosphorous	mg/L	NG	NG	<0.020	-	0.047	-	<0.020	<0.020	-	-	-	-
Reactive Silica (SiO2)	mg/L	NG	NG	12	11	21	21	10	2.8	2.8	13	13	19
Saturation pH (@ 20C)	N/A	NG	NG	9 57	9 58	8 24	8 20	9 27	8.84	-	9.16	-	8.57
Saturation pH (@ 4C)	N/A	NG	NG	9.83	9.83	8.49	8.45	9 52	9.09	-	9.41	-	8.82
Total Alkalinity (Total as CaCO3)	mg/L	NG	NG	14	14	58	61	23	31	31	25	25	45
Dissolved Organic Carbon	mg/L	NG	NG	<0.5	-	<0.5	-	3.3	3.9	-	-	-	-
Total Chemical Oxygen Demand	mg/L	NG	NG	<5.0	-	<5.0	-	5.8	7.7	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	NG	NG	<0.20 (1)	-	<0 20 (1)	-	<0 20 (4)	0 26 (4)	-	-	-	-
Total Organic Carbon (C)	mg/L	NG	NG	<0.50	<0.50	<0.50	<0.50	2.1	3.5	-	1.7	-	<0.50
Total Suspended Solids	mg/L	NG	NG	1.6	-	<1.0	-	<1.0	<1.0	-	-	-	-
Turbidity	NTU	1 (MAC)[3]	NG	0.49	0 28	12	7.4	0 27	0.16	-	0.34	-	0.16

Notes:
AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds HC drinking water guidelines
value - exceeds NSE EQS
value - exceeds both HC and NSE EQS

(1) Elevated reporting limit due to sample matrix.
(2) Reporting limit was increased due to turbidity.
(3) The sample was decanted due to sediment.
(4) Elevated reporting limit due to blank performance.

[1] Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)
[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil
[3] For treatment systems only

TABLE 17: TOTAL METALS in Potable Water
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	Sample ID (Civic No. Lake George Road)											
				PW1			PW2		PW2A		PW3		PW-DUP	PW4	
				2-Feb-16	16-Mar-16	Lab Dup	2-Feb-16	16-Mar-16	11-Jan-06	21-Mar-16	2-Feb-16	16-Mar-16	16-Mar-16	2-Feb-16	16-Mar-16
Aluminum	µg/L	100 [3]	NG	85	83	79	12	24	<10	24	110	110	110	<5.0	6.3
Antimony	µg/L	6 (MAC)	6	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	10 (MAC)	10	1.2	1.2	1.2	<1.0	<1.0	9	*23*	<1.0	<1.0	<1.0	3.1	3.1
Barium	µg/L	1000 (MAC)	1000	12	13	13	8.1	8.1	<5.0	3.5	18	19	20	6.2	6.4
Beryllium	µg/L	NG	4	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bismuth	µg/L	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Boron	µg/L	5000 (MAC)	5000	<50	<50	<50	<50	<50	<5.0	<50	<50	<50	<50	<50	<50
Cadmium	µg/L	5 (MAC)	5	0.086	0.092	0.083	0.025	0.038	<0.3	0.067	0.072	0.063	0.055	0.016	0.014
Calcium	µg/L	NG	NG	7100	7100	7200	14000	14000	9500	9400	6500	6200	6500	19000	20000
Chromium	µg/L	50 (MAC)	50	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	3.5	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt	µg/L	NG	10	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	0.70	<0.40	<0.40	<0.40	<0.40	<0.40
Copper	µg/L	≤1000 (AO)	NG	79	82	81	86	59	6	67	260	7.5	6.3	120	110
Iron	µg/L	≤300 (AO)	NG	100	76	76	<50	<50	3600	8300	120	210	180	<50	<50
Lead	µg/L	10 (MAC)	10	1.2	1.2	1.1	1.3	1.1	2.0	7.2	*15*	1.1	1.1	<0.50	<0.50
Magnesium	µg/L	NG	NG	2100	2100	2100	2600	2600	3300	3200	1600	1700	1700	2800	2800
Manganese	µg/L	≤50 (AO)	NG	9.8	6.2	6.0	9.8	10	160	480	30	42	44	<2.0	<2.0
Mercury	µg/L	1 (MAC)	1	0.015	0.028	0.028	<0.013	0.020	-	-	<0.013	0.013	<0.013	<0.013	0.043
Molybdenum	µg/L	NG	70	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nickel	µg/L	NG	100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	9.3	7.5	<2.0	<2.0	2.2	2.0
Phosphorus	µg/L	NG	NG	<100	<100	<100	<100	<100	<100	140	<100	<100	<100	<100	<100
Potassium	µg/L	NG	NG	2700	2700	2700	1700	1600	900	870	690	680	730	1100	1000
Selenium	µg/L	10 (MAC)	10	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	µg/L	NG	100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.5	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	µg/L	≤ 200,000 (AO)	200,000	4700	5000	4900	9400	11000	11000	10000	42000	48000	49000	7900	8300
Strontium	µg/L	NG	4400	51	55	53	77	83	40	38	33	37	38	73	77
Thallium	µg/L	NG	2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tin	µg/L	NG	4400	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	µg/L	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	µg/L	20 (MAC)	20	0.19	0.16	0.16	<0.10	<0.10	<0.1	0.12	<0.10	<0.10	<0.10	<0.10	<0.10
Vanadium	µg/L	NG	6.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Zinc	µg/L	≤5000 (AO)	5000	8.3	6.2	6.6	33	29	20	380	210	39	24	11	17

Notes:
AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds HC drinking water guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)
[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil
[3] For treatment systems only

TABLE 17: TOTAL METALS in Potable Water
Client: Town of Yarmouth
Site Location: Lake George Road, Lake George, NS
Englobe Project No.: 21347

PARAMETER	UNITS	Health Canada Drinking Water Guidelines[1]	NSE Tier 1 EQS[2]	Sample ID (Civic No. Lake George Road)											
				PW5		PW6		PW7		PW8		PW9	PW9A		PW10
				2-Feb-16	16-Mar-16	2-Feb-16	16-Mar-16	2-Feb-16	16-Mar-16	2-Feb-16	16-Mar-16	24-Feb-16	24-Feb-16	16-Mar-16	24-Feb-16
Aluminum	µg/L	100[3]	NG	<5.0	<5.0	11	9.3	34	44	5.7	<5.0	41	48	35	9.0
Antimony	µg/L	6 (MAC)	6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	10 (MAC)	10	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	1.1	1.1	<1.0	<1.0	<1.0	1.3
Barium	µg/L	1000 (MAC)	1000	4.0	4.2	6.8	6.8	4.2	4.8	18	18	1.6	3.4	2.2	7.5
Beryllium	µg/L	NG	4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bismuth	µg/L	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Boron	µg/L	5000 (MAC)	5000	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cadmium	µg/L	5 (MAC)	5	<0.010	<0.010	<0.010	<0.010	0.034	0.030	<0.010	<0.010	<0.010	0.033	<0.010	0.022
Calcium	µg/L	NG	NG	16000	17000	8900	9000	4000	4000	24000	24000	4700	9300	5600	13000
Chromium	µg/L	50 (MAC)	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cobalt	µg/L	NG	10	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Copper	µg/L	≤1000 (AO)	NG	17	13	31	27	120	160	21	<2.0	250	12	80	210
Iron	µg/L	≤300 (AO)	NG	<50	<50	**620**	**360**	66	<50	**1000**	**800**	58	<50	72	<50
Lead	µg/L	10 (MAC)	10	<0.50	<0.50	0.69	0.52	0.83	1.1	7.5	<0.50	1.0	<0.50	0.74	<0.50
Magnesium	µg/L	NG	NG	4400	4500	2100	2200	2000	1800	5500	5400	1600	1700	2100	2500
Manganese	µg/L	≤50 (AO)	NG	<2.0	<2.0	**65**	**53**	9.1	8.3	**420**	**350**	2.0	<2.0	2.2	<2.0
Mercury	µg/L	1 (MAC)	1	<0.013	0.015	<0.013	0.027	<0.013	0.072	<0.013	<0.013	0.16	0.11	0.023	0.035
Molybdenum	µg/L	NG	70	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nickel	µg/L	NG	100	<2.0	<2.0	<2.0	<2.0	<2.0	2.1	<2.0	<2.0	4.6	<2.0	2.4	<2.0
Phosphorus	µg/L	NG	NG	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Potassium	µg/L	NG	NG	1500	1500	980	1000	590	550	1600	1600	340	620	540	1000
Selenium	µg/L	10 (MAC)	10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	µg/L	NG	100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium	µg/L	≤ 200,000 (AO)	200,000	10000	11000	11000	11000	12000	14000	25000	20000	4900	3600	6900	8100
Strontium	µg/L	NG	4400	84	92	46	47	29	32	140	150	35	47	41	47
Thallium	µg/L	NG	2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tin	µg/L	NG	4400	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium	µg/L	NG	NG	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Uranium	µg/L	20 (MAC)	20	0.16	0.16	0.14	0.12	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	<0.10	<0.10
Vanadium	µg/L	NG	6.2	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Zinc	µg/L	≤5000 (AO)	5000	<5.0	9.3	12	11	40	36	<5.0	<5.0	11	<5.0	10	15

Notes:
AO - Aesthetic Objective
MAC - Maximum Acceptable Concentration
NG - no guideline

value - exceeds HC drinking water guidelines
value -exceeds NSE EQS
value -exceeds both HC and NSE EQS

[1]Criteria taken from Health Canada's Canadian Water Quality Guidelines for Community (Drinking) Water (Update 2014)
[2] Criteria taken from the 2013 Nova Scotia Environment (NSE) Tier 1 Environmental Quality Standards (EQS) for potable water at a residential site with coarse-grained soil
[3] For treatment systems only

Appendix 6 Laboratory Certificates

Your Project #: 21347
Your C.O.C. #: 552099-01-01

Attention:Lisa Ladouceur

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

Report Date: 2016/03/23
Report #: R3939408
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B652954
Received: 2016/03/16, 12:30

Sample Matrix: Drinking Water
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Carbonate, Bicarbonate and Hydroxide	11	N/A	2016/03/21	N/A	SM 22 4500-CO2 D
Alkalinity	8	N/A	2016/03/17	ATL SOP 00013	EPA 310.2 R1974 m
Alkalinity	3	N/A	2016/03/21	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	8	N/A	2016/03/18	ATL SOP 00014	SM 22 4500-Cl- E m
Chloride	3	N/A	2016/03/21	ATL SOP 00014	SM 22 4500-Cl- E m
TC/EC Drinking Water CFU/100mL	2	N/A	2016/03/16	ATL SOP 00096	OMOE E3407 V5.2
Colour	8	N/A	2016/03/18	ATL SOP 00020	SM 22 2120C m
Colour	3	N/A	2016/03/22	ATL SOP 00020	SM 22 2120C m
Conductance - water	11	N/A	2016/03/18	ATL SOP 00004	SM 22 2510B m
Hardness (calculated as CaCO3)	1	N/A	2016/03/18	ATL SOP 00048	SM 22 2340 B
Hardness (calculated as CaCO3)	10	N/A	2016/03/21	ATL SOP 00048	SM 22 2340 B
Mercury - Total (CVAA,LL)	11	2016/03/18	2016/03/22	ATL SOP 00026	EPA 245.1 R3 m
Metals Water Total MS	11	2016/03/18	2016/03/18	ATL SOP 00058	EPA 6020A R1 m
Ion Balance (% Difference)	11	N/A	2016/03/22		Auto Calc.
Anion and Cation Sum	11	N/A	2016/03/22		Auto Calc.
Nitrogen Ammonia - water	10	N/A	2016/03/21	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	1	N/A	2016/03/22	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	11	N/A	2016/03/21	ATL SOP 00016	USGS SOPINCF0452.2 m
Nitrogen - Nitrite	8	N/A	2016/03/18	ATL SOP 00017	SM 22 4500-NO2- B m
Nitrogen - Nitrite	3	N/A	2016/03/22	ATL SOP 00017	SM 22 4500-NO2- B m
Nitrogen - Nitrate (as N)	11	N/A	2016/03/22	ATL SOP 00018	ASTM D3867
pH (1)	11	N/A	2016/03/18	ATL SOP 00003	SM 22 4500-H+ B m
Phosphorus - ortho	8	N/A	2016/03/18	ATL SOP 00021	EPA 365.2 m
Phosphorus - ortho	3	N/A	2016/03/22	ATL SOP 00021	EPA 365.2 m
Sat. pH and Langelier Index (@ 20C)	11	N/A	2016/03/22	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	11	N/A	2016/03/22	ATL SOP 00049	Auto Calc.
Reactive Silica	8	N/A	2016/03/18	ATL SOP 00022	EPA 366.0 m
Reactive Silica	3	N/A	2016/03/22	ATL SOP 00022	EPA 366.0 m
Sulphate	8	N/A	2016/03/18	ATL SOP 00023	ASTMD516-11 m
Sulphate	3	N/A	2016/03/21	ATL SOP 00023	ASTMD516-11 m

Your Project #: 21347
Your C.O.C. #: 552099-01-01

Attention:Lisa Ladouceur

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

Report Date: 2016/03/23
Report #: R3939408
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B652954
Received: 2016/03/16, 12:30

Sample Matrix: Drinking Water
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Total Dissolved Solids (TDS calc)	11	N/A	2016/03/22		Auto Calc.
Organic carbon - Total (TOC) (2)	11	N/A	2016/03/18	ATL SOP 00037	SM 22 5310C m
Turbidity	11	N/A	2016/03/18	ATL SOP 00011	EPA 180.1 R2 m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(2) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Avery Withrow, Project Manager
Email: AWithrow@maxxam.ca
Phone# (902)420-0203 Ext:233

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (DRINKING WATER)

Maxxam ID		CAL486	CAL486	CAL487	CAL488	CAL489			
Sampling Date		2016/03/15 08:40	2016/03/15 08:40	2016/03/15 10:30	2016/03/15 13:00	2016/03/15 09:00			
COC Number		552099-01-01	552099-01-01	552099-01-01	552099-01-01	552099-01-01			
	UNITS	PW1	PW1 Lab-Dup	PW2	PW3	PW4	RDL	QC Batch	MDL
Calculated Parameters									
Anion Sum	me/L	0.840		1.48	2.86	1.68	N/A	4419342	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	26		37	9.5	59	1.0	4419338	0.20
Calculated TDS	mg/L	53		95	170	110	1.0	4419347	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0		<1.0	<1.0	<1.0	1.0	4419338	0.20
Cation Sum	me/L	0.820		1.41	2.55	1.60	N/A	4419342	N/A
Hardness (CaCO3)	mg/L	27		45	22	61	1.0	4419340	1.0
Ion Balance (% Difference)	%	1.20		2.42	5.73	2.44	N/A	4419341	N/A
Langelier Index (@ 20C)	N/A	-2.63		-1.70	-3.33	-0.985		4419345	
Langelier Index (@ 4C)	N/A	-2.88		-1.95	-3.58	-1.24		4419346	
Nitrate (N)	mg/L	0.56		0.42	0.093	0.15	0.050	4419343	N/A
Saturation pH (@ 20C)	N/A	9.04		8.63	9.61	8.28		4419345	
Saturation pH (@ 4C)	N/A	9.29		8.88	9.86	8.53		4419346	
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	26		37	9.5	59	5.0	4421941	N/A
Dissolved Chloride (Cl)	mg/L	6.7		16	87	9.5	1.0	4421961	N/A
Colour	TCU	6.9		<5.0	13	<5.0	5.0	4421983	N/A
Nitrate + Nitrite (N)	mg/L	0.56		0.42	0.093	0.15	0.050	4421991	N/A
Nitrite (N)	mg/L	<0.010		<0.010	<0.010	<0.010	0.010	4421995	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050		<0.050	<0.050	<0.050	0.050	4426140	N/A
Total Organic Carbon (C)	mg/L	2.6		<0.50	0.74	<0.50	0.50	4423332	N/A
Orthophosphate (P)	mg/L	<0.010		0.012	<0.010	0.016	0.010	4421987	N/A
pH	pH	6.41		6.93	6.28	7.29	N/A	4423103	N/A
Reactive Silica (SiO2)	mg/L	7.2		14	5.4	17	0.50	4421974	N/A
Dissolved Sulphate (SO4)	mg/L	4.1		12	9.5	11	2.0	4421971	N/A
Turbidity	NTU	0.39		0.71	0.37	0.10	0.10	4423300	0.10
Conductivity	uS/cm	79		140	290	140	1.0	4423102	N/A
Metals									
Total Aluminum (Al)	ug/L	83	79	24	110	6.3	5.0	4421889	N/A
Total Antimony (Sb)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	4421889	N/A
Total Arsenic (As)	ug/L	1.2	1.2	<1.0	<1.0	3.1	1.0	4421889	N/A
Total Barium (Ba)	ug/L	13	13	8.1	19	6.4	1.0	4421889	N/A
Total Beryllium (Be)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	4421889	N/A
Total Bismuth (Bi)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4421889	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (DRINKING WATER)

Maxxam ID		CAL486	CAL486	CAL487	CAL488	CAL489			
Sampling Date		2016/03/15 08:40	2016/03/15 08:40	2016/03/15 10:30	2016/03/15 13:00	2016/03/15 09:00			
COC Number		552099-01-01	552099-01-01	552099-01-01	552099-01-01	552099-01-01			
	UNITS	PW1	PW1 Lab-Dup	PW2	PW3	PW4	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	<50	<50	<50	<50	50	4421889	N/A
Total Cadmium (Cd)	ug/L	0.092	0.083	0.038	0.063	0.014	0.010	4421889	N/A
Total Calcium (Ca)	ug/L	7100	7200	14000	6200	20000	100	4421889	N/A
Total Chromium (Cr)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	4421889	N/A
Total Cobalt (Co)	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	4421889	N/A
Total Copper (Cu)	ug/L	82	81	59	7.5	110	2.0	4421889	N/A
Total Iron (Fe)	ug/L	76	76	<50	210	<50	50	4421889	N/A
Total Lead (Pb)	ug/L	1.2	1.1	1.1	1.1	<0.50	0.50	4421889	N/A
Total Magnesium (Mg)	ug/L	2100	2100	2600	1700	2800	100	4421889	N/A
Total Manganese (Mn)	ug/L	6.2	6.0	10	42	<2.0	2.0	4421889	N/A
Total Molybdenum (Mo)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4421889	N/A
Total Nickel (Ni)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	2.0	4421889	N/A
Total Phosphorus (P)	ug/L	<100	<100	<100	<100	<100	100	4421889	N/A
Total Potassium (K)	ug/L	2700	2700	1600	680	1000	100	4421889	N/A
Total Selenium (Se)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	4421889	N/A
Total Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	4421889	N/A
Total Sodium (Na)	ug/L	5000	4900	11000	48000	8300	100	4421889	N/A
Total Strontium (Sr)	ug/L	55	53	83	37	77	2.0	4421889	N/A
Total Thallium (Tl)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	0.10	4421889	N/A
Total Tin (Sn)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4421889	N/A
Total Titanium (Ti)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4421889	N/A
Total Uranium (U)	ug/L	0.16	0.16	<0.10	<0.10	<0.10	0.10	4421889	N/A
Total Vanadium (V)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4421889	N/A
Total Zinc (Zn)	ug/L	6.2	6.6	29	39	17	5.0	4421889	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (DRINKING WATER)

Maxxam ID		CAL490	CAL491	CAL491	CAL492			
Sampling Date		2016/03/15 09:15	2016/03/15 10:05	2016/03/15 10:05	2016/03/15 09:55			
COC Number		552099-01-01	552099-01-01	552099-01-01	552099-01-01			
	UNITS	PW5	PW6	PW6 Lab-Dup	PW7	RDL	QC Batch	MDL
Calculated Parameters								
Anion Sum	me/L	1.80	1.22		1.05	N/A	4419342	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	61	24		14	1.0	4419338	0.20
Calculated TDS	mg/L	120	84		69	1.0	4419347	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	<1.0		<1.0	1.0	4419338	0.20
Cation Sum	me/L	1.78	1.16		0.980	N/A	4419342	N/A
Hardness (CaCO3)	mg/L	62	32		18	1.0	4419340	1.0
Ion Balance (% Difference)	%	0.560	2.52		3.45	N/A	4419341	N/A
Langelier Index (@ 20C)	N/A	-1.05	-2.01		-2.97		4419345	
Langelier Index (@ 4C)	N/A	-1.30	-2.26		-3.22		4419346	
Nitrate (N)	mg/L	0.26	0.11		0.13	0.050	4419343	N/A
Saturation pH (@ 20C)	N/A	8.33	8.99		9.58		4419345	
Saturation pH (@ 4C)	N/A	8.58	9.25		9.83		4419346	
Inorganics								
Total Alkalinity (Total as CaCO3)	mg/L	61	24		14	5.0	4421941	N/A
Dissolved Chloride (Cl)	mg/L	13	17		20	1.0	4421961	N/A
Colour	TCU	<5.0	<5.0		<5.0	5.0	4421983	N/A
Nitrate + Nitrite (N)	mg/L	0.26	0.12		0.13	0.050	4421991	N/A
Nitrite (N)	mg/L	<0.010	0.011		<0.010	0.010	4421995	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.42	0.058		0.076	0.050	4426154	N/A
Total Organic Carbon (C)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	4423332	N/A
Orthophosphate (P)	mg/L	0.014	0.011		0.013	0.010	4421987	N/A
pH	pH	7.28	6.99		6.61	N/A	4423103	N/A
Reactive Silica (SiO2)	mg/L	22	16		11	0.50	4421974	N/A
Dissolved Sulphate (SO4)	mg/L	9.6	12		8.8	2.0	4421971	N/A
Turbidity	NTU	<0.10	5.2		0.28	0.10	4423300	0.10
Conductivity	uS/cm	160	120		100	1.0	4423102	N/A
Metals								
Total Aluminum (Al)	ug/L	<5.0	9.3		44	5.0	4421889	N/A
Total Antimony (Sb)	ug/L	<1.0	<1.0		<1.0	1.0	4421889	N/A
Total Arsenic (As)	ug/L	<1.0	<1.0		1.1	1.0	4421889	N/A
Total Barium (Ba)	ug/L	4.2	6.8		4.8	1.0	4421889	N/A
Total Beryllium (Be)	ug/L	<1.0	<1.0		<1.0	1.0	4421889	N/A
Total Bismuth (Bi)	ug/L	<2.0	<2.0		<2.0	2.0	4421889	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (DRINKING WATER)

Maxxam ID		CAL490	CAL491	CAL491	CAL492			
Sampling Date		2016/03/15 09:15	2016/03/15 10:05	2016/03/15 10:05	2016/03/15 09:55			
COC Number		552099-01-01	552099-01-01	552099-01-01	552099-01-01			
	UNITS	PW5	PW6	PW6 Lab-Dup	PW7	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	<50		<50	50	4421889	N/A
Total Cadmium (Cd)	ug/L	<0.010	<0.010		0.030	0.010	4421889	N/A
Total Calcium (Ca)	ug/L	17000	9000		4000	100	4421889	N/A
Total Chromium (Cr)	ug/L	<1.0	<1.0		<1.0	1.0	4421889	N/A
Total Cobalt (Co)	ug/L	<0.40	<0.40		<0.40	0.40	4421889	N/A
Total Copper (Cu)	ug/L	13	27		160	2.0	4421889	N/A
Total Iron (Fe)	ug/L	<50	360		<50	50	4421889	N/A
Total Lead (Pb)	ug/L	<0.50	0.52		1.1	0.50	4421889	N/A
Total Magnesium (Mg)	ug/L	4500	2200		1800	100	4421889	N/A
Total Manganese (Mn)	ug/L	<2.0	53		8.3	2.0	4421889	N/A
Total Molybdenum (Mo)	ug/L	<2.0	<2.0		<2.0	2.0	4421889	N/A
Total Nickel (Ni)	ug/L	<2.0	<2.0		2.1	2.0	4421889	N/A
Total Phosphorus (P)	ug/L	<100	<100		<100	100	4421889	N/A
Total Potassium (K)	ug/L	1500	1000		550	100	4421889	N/A
Total Selenium (Se)	ug/L	<1.0	<1.0		<1.0	1.0	4421889	N/A
Total Silver (Ag)	ug/L	<0.10	<0.10		<0.10	0.10	4421889	N/A
Total Sodium (Na)	ug/L	11000	11000		14000	100	4421889	N/A
Total Strontium (Sr)	ug/L	92	47		32	2.0	4421889	N/A
Total Thallium (Tl)	ug/L	<0.10	<0.10		<0.10	0.10	4421889	N/A
Total Tin (Sn)	ug/L	<2.0	<2.0		<2.0	2.0	4421889	N/A
Total Titanium (Ti)	ug/L	<2.0	<2.0		<2.0	2.0	4421889	N/A
Total Uranium (U)	ug/L	0.16	0.12		<0.10	0.10	4421889	N/A
Total Vanadium (V)	ug/L	<2.0	<2.0		<2.0	2.0	4421889	N/A
Total Zinc (Zn)	ug/L	9.3	11		36	5.0	4421889	N/A

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N/A = Not Applicable

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (DRINKING WATER)

Maxxam ID		CAL493		CAL494	CAL494		CAL495			
Sampling Date		2016/03/15 13:45		2016/03/15 08:50	2016/03/15 08:50		2016/03/15 14:15			
COC Number		552099-01-01		552099-01-01	552099-01-01		552099-01-01			
	UNITS	PW8	QC Batch	PW9	PW9 Lab-Dup	QC Batch	PW10	RDL	QC Batch	MDL
Calculated Parameters										
Anion Sum	me/L	2.77	4419342	0.800		4419342	1.35	N/A	4419342	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	61	4419338	25		4419338	45	1.0	4419338	0.20
Calculated TDS	mg/L	170	4419347	55		4419347	89	1.0	4419347	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	4419338	<1.0		4419338	<1.0	1.0	4419338	0.20
Cation Sum	me/L	2.62	4419342	0.770		4419342	1.25	N/A	4419342	N/A
Hardness (CaCO3)	mg/L	83	4419340	23		4419340	43	1.0	4419340	1.0
Ion Balance (% Difference)	%	2.78	4419341	1.91		4419341	3.85	N/A	4419341	N/A
Langelier Index (@ 20C)	N/A	-0.737	4419345	-2.28		4419345	-1.45		4419345	
Langelier Index (@ 4C)	N/A	-0.987	4419346	-2.53		4419346	-1.71		4419346	
Nitrate (N)	mg/L	<0.050	4419343	0.25		4419343	0.21	0.050	4419343	N/A
Saturation pH (@ 20C)	N/A	8.20	4419345	9.16		4419345	8.57		4419345	
Saturation pH (@ 4C)	N/A	8.45	4419346	9.41		4419346	8.82		4419346	
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	61	4424665	25	25	4422005	45	5.0	4424665	N/A
Dissolved Chloride (Cl)	mg/L	47	4424669	6.3	6.1	4422013	10	1.0	4424669	N/A
Colour	TCU	<5.0	4424672	5.8	<5.0	4422051	<5.0	5.0	4424672	N/A
Nitrate + Nitrite (N)	mg/L	<0.050	4424674	0.26	0.27	4422028	0.21	0.050	4424674	N/A
Nitrite (N)	mg/L	<0.010	4424675	0.011	<0.010	4422037	<0.010	0.010	4424675	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.068	4426154	<0.050		4426154	0.050	0.050	4426154	N/A
Total Organic Carbon (C)	mg/L	<0.50	4423332	1.7		4423332	<0.50	0.50	4423332	N/A
Orthophosphate (P)	mg/L	0.020	4424673	0.011	0.011	4422039	0.020	0.010	4424673	N/A
pH	pH	7.47	4423103	6.88		4423103	7.11	N/A	4423103	N/A
Reactive Silica (SiO2)	mg/L	21	4424671	13	13	4422048	19	0.50	4424671	N/A
Dissolved Sulphate (SO4)	mg/L	10	4424670	4.5	4.5	4422018	7.4	2.0	4424670	N/A
Turbidity	NTU	7.4	4423300	0.34		4423300	0.16	0.10	4423300	0.10
Conductivity	uS/cm	250	4423102	70		4423102	120	1.0	4423102	N/A
Metals										
Total Aluminum (Al)	ug/L	<5.0	4421889	35		4421889	9.0	5.0	4421889	N/A
Total Antimony (Sb)	ug/L	<1.0	4421889	<1.0		4421889	<1.0	1.0	4421889	N/A
Total Arsenic (As)	ug/L	1.1	4421889	<1.0		4421889	1.3	1.0	4421889	N/A
Total Barium (Ba)	ug/L	18	4421889	2.2		4421889	7.5	1.0	4421889	N/A
Total Beryllium (Be)	ug/L	<1.0	4421889	<1.0		4421889	<1.0	1.0	4421889	N/A
Total Bismuth (Bi)	ug/L	<2.0	4421889	<2.0		4421889	<2.0	2.0	4421889	N/A

RDL = Reportable Detection Limit
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Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (DRINKING WATER)

Maxxam ID		CAL493		CAL494	CAL494		CAL495			
Sampling Date		2016/03/15 13:45		2016/03/15 08:50	2016/03/15 08:50		2016/03/15 14:15			
COC Number		552099-01-01		552099-01-01	552099-01-01		552099-01-01			
	UNITS	PW8	QC Batch	PW9	PW9 Lab-Dup	QC Batch	PW10	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	4421889	<50		4421889	<50	50	4421889	N/A
Total Cadmium (Cd)	ug/L	<0.010	4421889	<0.010		4421889	0.022	0.010	4421889	N/A
Total Calcium (Ca)	ug/L	24000	4421889	5600		4421889	13000	100	4421889	N/A
Total Chromium (Cr)	ug/L	<1.0	4421889	<1.0		4421889	<1.0	1.0	4421889	N/A
Total Cobalt (Co)	ug/L	<0.40	4421889	<0.40		4421889	<0.40	0.40	4421889	N/A
Total Copper (Cu)	ug/L	<2.0	4421889	80		4421889	210	2.0	4421889	N/A
Total Iron (Fe)	ug/L	800	4421889	72		4421889	<50	50	4421889	N/A
Total Lead (Pb)	ug/L	<0.50	4421889	0.74		4421889	<0.50	0.50	4421889	N/A
Total Magnesium (Mg)	ug/L	5400	4421889	2100		4421889	2500	100	4421889	N/A
Total Manganese (Mn)	ug/L	350	4421889	2.2		4421889	<2.0	2.0	4421889	N/A
Total Molybdenum (Mo)	ug/L	<2.0	4421889	<2.0		4421889	<2.0	2.0	4421889	N/A
Total Nickel (Ni)	ug/L	<2.0	4421889	2.4		4421889	<2.0	2.0	4421889	N/A
Total Phosphorus (P)	ug/L	<100	4421889	<100		4421889	<100	100	4421889	N/A
Total Potassium (K)	ug/L	1600	4421889	540		4421889	1000	100	4421889	N/A
Total Selenium (Se)	ug/L	<1.0	4421889	<1.0		4421889	<1.0	1.0	4421889	N/A
Total Silver (Ag)	ug/L	<0.10	4421889	<0.10		4421889	<0.10	0.10	4421889	N/A
Total Sodium (Na)	ug/L	20000	4421889	6900		4421889	8100	100	4421889	N/A
Total Strontium (Sr)	ug/L	150	4421889	41		4421889	47	2.0	4421889	N/A
Total Thallium (Tl)	ug/L	<0.10	4421889	<0.10		4421889	<0.10	0.10	4421889	N/A
Total Tin (Sn)	ug/L	<2.0	4421889	<2.0		4421889	<2.0	2.0	4421889	N/A
Total Titanium (Ti)	ug/L	<2.0	4421889	<2.0		4421889	<2.0	2.0	4421889	N/A
Total Uranium (U)	ug/L	<0.10	4421889	<0.10		4421889	<0.10	0.10	4421889	N/A
Total Vanadium (V)	ug/L	<2.0	4421889	<2.0		4421889	<2.0	2.0	4421889	N/A
Total Zinc (Zn)	ug/L	<5.0	4421889	10		4421889	15	5.0	4421889	N/A

RDL = Reportable Detection Limit
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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (DRINKING WATER)

Maxxam ID		CAL496			
Sampling Date		2016/03/15			
COC Number		552099-01-01			
	UNITS	PW-DUP	RDL	QC Batch	MDL
Calculated Parameters					
Anion Sum	me/L	2.88	N/A	4419342	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	10	1.0	4419338	0.20
Calculated TDS	mg/L	170	1.0	4419347	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	4419338	0.20
Cation Sum	me/L	2.63	N/A	4419342	N/A
Hardness (CaCO3)	mg/L	23	1.0	4419340	1.0
Ion Balance (% Difference)	%	4.54	N/A	4419341	N/A
Langelier Index (@ 20C)	N/A	-3.32		4419345	
Langelier Index (@ 4C)	N/A	-3.57		4419346	
Nitrate (N)	mg/L	0.10	0.050	4419343	N/A
Saturation pH (@ 20C)	N/A	9.54		4419345	
Saturation pH (@ 4C)	N/A	9.79		4419346	
Inorganics					
Total Alkalinity (Total as CaCO3)	mg/L	10	5.0	4424665	N/A
Dissolved Chloride (Cl)	mg/L	87	1.0	4424669	N/A
Colour	TCU	5.7	5.0	4424672	N/A
Nitrate + Nitrite (N)	mg/L	0.10	0.050	4424674	N/A
Nitrite (N)	mg/L	<0.010	0.010	4424675	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	4426154	N/A
Total Organic Carbon (C)	mg/L	0.61	0.50	4423332	N/A
Orthophosphate (P)	mg/L	0.012	0.010	4424673	N/A
pH	pH	6.23	N/A	4423116	N/A
Reactive Silica (SiO2)	mg/L	5.7	0.50	4424671	N/A
Dissolved Sulphate (SO4)	mg/L	10	2.0	4424670	N/A
Turbidity	NTU	0.40	0.10	4423300	0.10
Conductivity	uS/cm	290	1.0	4423113	N/A
Metals					
Total Aluminum (Al)	ug/L	110	5.0	4421889	N/A
Total Antimony (Sb)	ug/L	<1.0	1.0	4421889	N/A
Total Arsenic (As)	ug/L	<1.0	1.0	4421889	N/A
Total Barium (Ba)	ug/L	20	1.0	4421889	N/A
Total Beryllium (Be)	ug/L	<1.0	1.0	4421889	N/A
Total Bismuth (Bi)	ug/L	<2.0	2.0	4421889	N/A
Total Boron (B)	ug/L	<50	50	4421889	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (DRINKING WATER)

Maxxam ID		CAL496			
Sampling Date		2016/03/15			
COC Number		552099-01-01			
	UNITS	PW-DUP	RDL	QC Batch	MDL
Total Cadmium (Cd)	ug/L	0.055	0.010	4421889	N/A
Total Calcium (Ca)	ug/L	6500	100	4421889	N/A
Total Chromium (Cr)	ug/L	<1.0	1.0	4421889	N/A
Total Cobalt (Co)	ug/L	<0.40	0.40	4421889	N/A
Total Copper (Cu)	ug/L	6.3	2.0	4421889	N/A
Total Iron (Fe)	ug/L	180	50	4421889	N/A
Total Lead (Pb)	ug/L	1.1	0.50	4421889	N/A
Total Magnesium (Mg)	ug/L	1700	100	4421889	N/A
Total Manganese (Mn)	ug/L	44	2.0	4421889	N/A
Total Molybdenum (Mo)	ug/L	<2.0	2.0	4421889	N/A
Total Nickel (Ni)	ug/L	<2.0	2.0	4421889	N/A
Total Phosphorus (P)	ug/L	<100	100	4421889	N/A
Total Potassium (K)	ug/L	730	100	4421889	N/A
Total Selenium (Se)	ug/L	<1.0	1.0	4421889	N/A
Total Silver (Ag)	ug/L	<0.10	0.10	4421889	N/A
Total Sodium (Na)	ug/L	49000	100	4421889	N/A
Total Strontium (Sr)	ug/L	38	2.0	4421889	N/A
Total Thallium (Tl)	ug/L	<0.10	0.10	4421889	N/A
Total Tin (Sn)	ug/L	<2.0	2.0	4421889	N/A
Total Titanium (Ti)	ug/L	<2.0	2.0	4421889	N/A
Total Uranium (U)	ug/L	<0.10	0.10	4421889	N/A
Total Vanadium (V)	ug/L	<2.0	2.0	4421889	N/A
Total Zinc (Zn)	ug/L	24	5.0	4421889	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B652954
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Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

MERCURY BY COLD VAPOUR AA (DRINKING WATER)

Maxxam ID		CAL486	CAL486	CAL487	CAL488	CAL489	CAL490			
Sampling Date		2016/03/15 08:40	2016/03/15 08:40	2016/03/15 10:30	2016/03/15 13:00	2016/03/15 09:00	2016/03/15 09:15			
COC Number		552099-01-01	552099-01-01	552099-01-01	552099-01-01	552099-01-01	552099-01-01			
	UNITS	PW1	PW1 Lab-Dup	PW2	PW3	PW4	PW5	RDL	QC Batch	MDL
Metals										
Total Mercury (Hg)	ug/L	0.028	0.028	0.020	0.013	0.043	0.015	0.013	4423106	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Maxxam ID		CAL491	CAL492	CAL493	CAL494	CAL495	CAL496			
Sampling Date		2016/03/15 10:05	2016/03/15 09:55	2016/03/15 13:45	2016/03/15 08:50	2016/03/15 14:15	2016/03/15			
COC Number		552099-01-01	552099-01-01	552099-01-01	552099-01-01	552099-01-01	552099-01-01			
	UNITS	PW6	PW7	PW8	PW9	PW10	PW-DUP	RDL	QC Batch	MDL
Metals										
Total Mercury (Hg)	ug/L	0.027	0.072	<0.013	0.023	0.035	<0.013	0.013	4423106	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Englobe Corp.
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Sampler Initials: LL

MICROBIOLOGY COLILERT (DRINKING WATER)

Maxxam ID		CAL488	CAL493			
Sampling Date		2016/03/15 13:00	2016/03/15 13:45			
COC Number		552099-01-01	552099-01-01			
	UNITS	PW3	PW8	RDL	QC Batch	MDL
Microbiological						
Escherichia coli	CFU/100mL	<1.0	<1.0	1.0	4420305	N/A
Total Coliforms	CFU/100mL	14	<1.0	1.0	4420305	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CAL486
Sample ID: PW1
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4421941	N/A	2016/03/17	Mary Clancey
Chloride	KONE	4421961	N/A	2016/03/18	Mary Clancey
Colour	KONE	4421983	N/A	2016/03/18	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/18	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426140	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4421991	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4421995	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4421987	N/A	2016/03/18	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4421974	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4421971	N/A	2016/03/18	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL486 Dup
Sample ID: PW1
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine

Maxxam ID: CAL487
Sample ID: PW2
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4421941	N/A	2016/03/17	Mary Clancey
Chloride	KONE	4421961	N/A	2016/03/18	Mary Clancey
Colour	KONE	4421983	N/A	2016/03/18	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine

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Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CAL487
Sample ID: PW2
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426140	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4421991	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4421995	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4421987	N/A	2016/03/18	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4421974	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4421971	N/A	2016/03/18	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL488
Sample ID: PW3
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4421941	N/A	2016/03/17	Mary Clancey
Chloride	KONE	4421961	N/A	2016/03/18	Mary Clancey
TC/EC Drinking Water CFU/100mL		4420305	N/A	2016/03/16	Jessica Romo
Colour	KONE	4421983	N/A	2016/03/18	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426140	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4421991	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4421995	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4421987	N/A	2016/03/18	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4421974	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4421971	N/A	2016/03/18	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CAL489
Sample ID: PW4
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4421941	N/A	2016/03/17	Mary Clancey
Chloride	KONE	4421961	N/A	2016/03/18	Mary Clancey
Colour	KONE	4421983	N/A	2016/03/18	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426140	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4421991	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4421995	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4421987	N/A	2016/03/18	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4421974	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4421971	N/A	2016/03/18	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL490
Sample ID: PW5
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4421941	N/A	2016/03/17	Mary Clancey
Chloride	KONE	4421961	N/A	2016/03/18	Mary Clancey
Colour	KONE	4421983	N/A	2016/03/18	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426154	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4421991	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4421995	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4421987	N/A	2016/03/18	Mary Clancey

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Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CAL490
Sample ID: PW5
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4421974	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4421971	N/A	2016/03/18	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL491
Sample ID: PW6
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4421941	N/A	2016/03/17	Mary Clancey
Chloride	KONE	4421961	N/A	2016/03/18	Mary Clancey
Colour	KONE	4421983	N/A	2016/03/18	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426154	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4421991	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4421995	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4421987	N/A	2016/03/18	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4421974	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4421971	N/A	2016/03/18	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL491 Dup
Sample ID: PW6
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CAL492
Sample ID: PW7
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4421941	N/A	2016/03/17	Mary Clancey
Chloride	KONE	4421961	N/A	2016/03/18	Mary Clancey
Colour	KONE	4421983	N/A	2016/03/18	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426154	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4421991	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4421995	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4421987	N/A	2016/03/18	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4421974	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4421971	N/A	2016/03/18	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL493
Sample ID: PW8
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4424665	N/A	2016/03/21	Mary Clancey
Chloride	KONE	4424669	N/A	2016/03/21	Mary Clancey
TC/EC Drinking Water CFU/100mL		4420305	N/A	2016/03/16	Jessica Romo
Colour	KONE	4424672	N/A	2016/03/22	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426154	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4424674	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4424675	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CAL493
Sample ID: PW8
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus - ortho	KONE	4424673	N/A	2016/03/22	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4424671	N/A	2016/03/22	Mary Clancey
Sulphate	KONE	4424670	N/A	2016/03/21	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL494
Sample ID: PW9
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4422005	N/A	2016/03/17	Nancy Rogers
Chloride	KONE	4422013	N/A	2016/03/18	Nancy Rogers
Colour	KONE	4422051	N/A	2016/03/18	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426154	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4422028	N/A	2016/03/21	Nancy Rogers
Nitrogen - Nitrite	KONE	4422037	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4422039	N/A	2016/03/18	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4422048	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4422018	N/A	2016/03/18	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL494 Dup
Sample ID: PW9
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	KONE	4422005	N/A	2016/03/17	Nancy Rogers
Chloride	KONE	4422013	N/A	2016/03/18	Nancy Rogers

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Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CAL494 Dup
Sample ID: PW9
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour	KONE	4422051	N/A	2016/03/18	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4422028	N/A	2016/03/21	Nancy Rogers
Nitrogen - Nitrite	KONE	4422037	N/A	2016/03/18	Mary Clancey
Phosphorus - ortho	KONE	4422039	N/A	2016/03/18	Mary Clancey
Reactive Silica	KONE	4422048	N/A	2016/03/18	Nancy Rogers
Sulphate	KONE	4422018	N/A	2016/03/18	Nancy Rogers

Maxxam ID: CAL495
Sample ID: PW10
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4424665	N/A	2016/03/21	Mary Clancey
Chloride	KONE	4424669	N/A	2016/03/21	Mary Clancey
Colour	KONE	4424672	N/A	2016/03/22	Mary Clancey
Conductance - water	AT	4423102	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426154	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4424674	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4424675	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423103	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4424673	N/A	2016/03/22	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4424671	N/A	2016/03/22	Mary Clancey
Sulphate	KONE	4424670	N/A	2016/03/21	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAL496
Sample ID: PW-DUP
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4419338	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4424665	N/A	2016/03/21	Mary Clancey
Chloride	KONE	4424669	N/A	2016/03/21	Mary Clancey
Colour	KONE	4424672	N/A	2016/03/22	Mary Clancey

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Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CAL496
Sample ID: PW-DUP
Matrix: Drinking Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT	4423113	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4419340	N/A	2016/03/21	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423106	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421889	2016/03/18	2016/03/18	Bryon Angevine
Ion Balance (% Difference)	CALC	4419341	N/A	2016/03/22	Automated Statchk
Anion and Cation Sum	CALC	4419342	N/A	2016/03/22	Automated Statchk
Nitrogen Ammonia - water	KONE	4426154	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4424674	N/A	2016/03/21	Mary Clancey
Nitrogen - Nitrite	KONE	4424675	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4419343	N/A	2016/03/22	Automated Statchk
pH	AT	4423116	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4424673	N/A	2016/03/22	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4419345	N/A	2016/03/22	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4419346	N/A	2016/03/22	Automated Statchk
Reactive Silica	KONE	4424671	N/A	2016/03/22	Mary Clancey
Sulphate	KONE	4424670	N/A	2016/03/21	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4419347	N/A	2016/03/22	Automated Statchk
Organic carbon - Total (TOC)	TECH	4423332	N/A	2016/03/18	Soraya Merchant
Turbidity	TURB	4423300	N/A	2016/03/18	Tiffany Morash

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GENERAL COMMENTS

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

Package 1	-0.3°C

Sample CAL488-01 : Poor RCAp Ion Balance due to sample matrix.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4420305	JRM	Method Blank	Escherichia coli	2016/03/16	<1.0		CFU/100	
			Total Coliforms	2016/03/16	<1.0		CFU/100	
4421889	BAN	Matrix Spike(CAL486)	Total Aluminum (Al)	2016/03/18		101	%	80 - 120
			Total Antimony (Sb)	2016/03/18		102	%	80 - 120
			Total Arsenic (As)	2016/03/18		94	%	80 - 120
			Total Barium (Ba)	2016/03/18		94	%	80 - 120
			Total Beryllium (Be)	2016/03/18		96	%	80 - 120
			Total Bismuth (Bi)	2016/03/18		101	%	80 - 120
			Total Boron (B)	2016/03/18		97	%	80 - 120
			Total Cadmium (Cd)	2016/03/18		98	%	80 - 120
			Total Calcium (Ca)	2016/03/18		100	%	80 - 120
			Total Chromium (Cr)	2016/03/18		94	%	80 - 120
			Total Cobalt (Co)	2016/03/18		95	%	80 - 120
			Total Copper (Cu)	2016/03/18		NC	%	80 - 120
			Total Iron (Fe)	2016/03/18		100	%	80 - 120
			Total Lead (Pb)	2016/03/18		96	%	80 - 120
			Total Magnesium (Mg)	2016/03/18		100	%	80 - 120
			Total Manganese (Mn)	2016/03/18		96	%	80 - 120
			Total Molybdenum (Mo)	2016/03/18		98	%	80 - 120
			Total Nickel (Ni)	2016/03/18		94	%	80 - 120
			Total Phosphorus (P)	2016/03/18		103	%	80 - 120
			Total Potassium (K)	2016/03/18		102	%	80 - 120
			Total Selenium (Se)	2016/03/18		94	%	80 - 120
			Total Silver (Ag)	2016/03/18		97	%	80 - 120
			Total Sodium (Na)	2016/03/18		101	%	80 - 120
			Total Strontium (Sr)	2016/03/18		NC	%	80 - 120
			Total Thallium (Tl)	2016/03/18		101	%	80 - 120
			Total Tin (Sn)	2016/03/18		101	%	80 - 120
			Total Titanium (Ti)	2016/03/18		99	%	80 - 120
			Total Uranium (U)	2016/03/18		106	%	80 - 120
			Total Vanadium (V)	2016/03/18		98	%	80 - 120
			Total Zinc (Zn)	2016/03/18		96	%	80 - 120
4421889	BAN	Spiked Blank	Total Aluminum (Al)	2016/03/18		101	%	80 - 120
			Total Antimony (Sb)	2016/03/18		100	%	80 - 120
			Total Arsenic (As)	2016/03/18		94	%	80 - 120
			Total Barium (Ba)	2016/03/18		94	%	80 - 120
			Total Beryllium (Be)	2016/03/18		96	%	80 - 120
			Total Bismuth (Bi)	2016/03/18		100	%	80 - 120
			Total Boron (B)	2016/03/18		96	%	80 - 120
			Total Cadmium (Cd)	2016/03/18		96	%	80 - 120
			Total Calcium (Ca)	2016/03/18		100	%	80 - 120
			Total Chromium (Cr)	2016/03/18		93	%	80 - 120
			Total Cobalt (Co)	2016/03/18		94	%	80 - 120
			Total Copper (Cu)	2016/03/18		94	%	80 - 120
			Total Iron (Fe)	2016/03/18		99	%	80 - 120
			Total Lead (Pb)	2016/03/18		96	%	80 - 120
			Total Magnesium (Mg)	2016/03/18		99	%	80 - 120
			Total Manganese (Mn)	2016/03/18		97	%	80 - 120
			Total Molybdenum (Mo)	2016/03/18		98	%	80 - 120
			Total Nickel (Ni)	2016/03/18		94	%	80 - 120
			Total Phosphorus (P)	2016/03/18		101	%	80 - 120
			Total Potassium (K)	2016/03/18		98	%	80 - 120
			Total Selenium (Se)	2016/03/18		95	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Total Silver (Ag)	2016/03/18		95	%	80 - 120
			Total Sodium (Na)	2016/03/18		101	%	80 - 120
			Total Strontium (Sr)	2016/03/18		98	%	80 - 120
			Total Thallium (Tl)	2016/03/18		98	%	80 - 120
			Total Tin (Sn)	2016/03/18		102	%	80 - 120
			Total Titanium (Ti)	2016/03/18		97	%	80 - 120
			Total Uranium (U)	2016/03/18		104	%	80 - 120
			Total Vanadium (V)	2016/03/18		96	%	80 - 120
			Total Zinc (Zn)	2016/03/18		96	%	80 - 120
4421889	BAN	Method Blank	Total Aluminum (Al)	2016/03/18	<5.0		ug/L	
			Total Antimony (Sb)	2016/03/18	<1.0		ug/L	
			Total Arsenic (As)	2016/03/18	<1.0		ug/L	
			Total Barium (Ba)	2016/03/18	<1.0		ug/L	
			Total Beryllium (Be)	2016/03/18	<1.0		ug/L	
			Total Bismuth (Bi)	2016/03/18	<2.0		ug/L	
			Total Boron (B)	2016/03/18	<50		ug/L	
			Total Cadmium (Cd)	2016/03/18	<0.010		ug/L	
			Total Calcium (Ca)	2016/03/18	<100		ug/L	
			Total Chromium (Cr)	2016/03/18	<1.0		ug/L	
			Total Cobalt (Co)	2016/03/18	<0.40		ug/L	
			Total Copper (Cu)	2016/03/18	<2.0		ug/L	
			Total Iron (Fe)	2016/03/18	<50		ug/L	
			Total Lead (Pb)	2016/03/18	<0.50		ug/L	
			Total Magnesium (Mg)	2016/03/18	<100		ug/L	
			Total Manganese (Mn)	2016/03/18	<2.0		ug/L	
			Total Molybdenum (Mo)	2016/03/18	<2.0		ug/L	
			Total Nickel (Ni)	2016/03/18	<2.0		ug/L	
			Total Phosphorus (P)	2016/03/18	<100		ug/L	
			Total Potassium (K)	2016/03/18	<100		ug/L	
			Total Selenium (Se)	2016/03/18	<1.0		ug/L	
			Total Silver (Ag)	2016/03/18	<0.10		ug/L	
			Total Sodium (Na)	2016/03/18	<100		ug/L	
			Total Strontium (Sr)	2016/03/18	<2.0		ug/L	
			Total Thallium (Tl)	2016/03/18	<0.10		ug/L	
			Total Tin (Sn)	2016/03/18	<2.0		ug/L	
			Total Titanium (Ti)	2016/03/18	<2.0		ug/L	
			Total Uranium (U)	2016/03/18	<0.10		ug/L	
			Total Vanadium (V)	2016/03/18	<2.0		ug/L	
			Total Zinc (Zn)	2016/03/18	<5.0		ug/L	
4421889	BAN	RPD - Sample/Sample Dup	Total Aluminum (Al)	2016/03/18	5.7		%	20
			Total Antimony (Sb)	2016/03/18	NC		%	20
			Total Arsenic (As)	2016/03/18	NC		%	20
			Total Barium (Ba)	2016/03/18	0.82		%	20
			Total Beryllium (Be)	2016/03/18	NC		%	20
			Total Bismuth (Bi)	2016/03/18	NC		%	20
			Total Boron (B)	2016/03/18	NC		%	20
			Total Cadmium (Cd)	2016/03/18	10		%	20
			Total Calcium (Ca)	2016/03/18	0.32		%	20
			Total Chromium (Cr)	2016/03/18	NC		%	20
			Total Cobalt (Co)	2016/03/18	NC		%	20
			Total Copper (Cu)	2016/03/18	0.70		%	20
			Total Iron (Fe)	2016/03/18	NC		%	20
			Total Lead (Pb)	2016/03/18	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Total Magnesium (Mg)	2016/03/18	0.42		%	20
			Total Manganese (Mn)	2016/03/18	NC		%	20
			Total Molybdenum (Mo)	2016/03/18	NC		%	20
			Total Nickel (Ni)	2016/03/18	NC		%	20
			Total Phosphorus (P)	2016/03/18	NC		%	20
			Total Potassium (K)	2016/03/18	1.1		%	20
			Total Selenium (Se)	2016/03/18	NC		%	20
			Total Silver (Ag)	2016/03/18	NC		%	20
			Total Sodium (Na)	2016/03/18	1.8		%	20
			Total Strontium (Sr)	2016/03/18	2.2		%	20
			Total Thallium (Tl)	2016/03/18	NC		%	20
			Total Tin (Sn)	2016/03/18	NC		%	20
			Total Titanium (Ti)	2016/03/18	NC		%	20
			Total Uranium (U)	2016/03/18	NC		%	20
			Total Vanadium (V)	2016/03/18	NC		%	20
			Total Zinc (Zn)	2016/03/18	NC		%	20
4421941	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2016/03/17		NC	%	80 - 120
4421941	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/17		103	%	80 - 120
4421941	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/17	<5.0		mg/L	
4421941	MCN	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/17	0.12		%	25
4421961	MCN	Matrix Spike	Dissolved Chloride (Cl)	2016/03/18		NC	%	80 - 120
4421961	MCN	QC Standard	Dissolved Chloride (Cl)	2016/03/18		104	%	80 - 120
4421961	MCN	Spiked Blank	Dissolved Chloride (Cl)	2016/03/18		102	%	80 - 120
4421961	MCN	Method Blank	Dissolved Chloride (Cl)	2016/03/18	<1.0		mg/L	
4421961	MCN	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/18	1.1		%	25
4421971	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2016/03/18		NC	%	80 - 120
4421971	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/18		107	%	80 - 120
4421971	MCN	Method Blank	Dissolved Sulphate (SO4)	2016/03/18	<2.0		mg/L	
4421971	MCN	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/18	2.1		%	25
4421974	NRG	Matrix Spike	Reactive Silica (SiO2)	2016/03/18		98	%	80 - 120
4421974	NRG	Spiked Blank	Reactive Silica (SiO2)	2016/03/18		95	%	80 - 120
4421974	NRG	Method Blank	Reactive Silica (SiO2)	2016/03/18	<0.50		mg/L	
4421974	NRG	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/18	NC		%	25
4421983	MCN	Spiked Blank	Colour	2016/03/18		107	%	80 - 120
4421983	MCN	Method Blank	Colour	2016/03/18	<5.0		TCU	
4421983	MCN	RPD - Sample/Sample Dup	Colour	2016/03/18	NC		%	20
4421987	MCN	Matrix Spike	Orthophosphate (P)	2016/03/18		NC	%	80 - 120
4421987	MCN	Spiked Blank	Orthophosphate (P)	2016/03/18		97	%	80 - 120
4421987	MCN	Method Blank	Orthophosphate (P)	2016/03/18	<0.010		mg/L	
4421987	MCN	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/18	1.5		%	25
4421991	MCN	Matrix Spike	Nitrate + Nitrite (N)	2016/03/21		102	%	80 - 120
4421991	MCN	Spiked Blank	Nitrate + Nitrite (N)	2016/03/21		107	%	80 - 120
4421991	MCN	Method Blank	Nitrate + Nitrite (N)	2016/03/21	<0.050		mg/L	
4421991	MCN	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/21	2.0		%	25
4421995	MCN	Matrix Spike	Nitrite (N)	2016/03/18		73 (1)	%	80 - 120
4421995	MCN	Spiked Blank	Nitrite (N)	2016/03/18		97	%	80 - 120
4421995	MCN	Method Blank	Nitrite (N)	2016/03/18	<0.010		mg/L	
4421995	MCN	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/18	NC		%	25
4422005	NRG	Matrix Spike(CAL494)	Total Alkalinity (Total as CaCO3)	2016/03/17		NC	%	80 - 120
4422005	NRG	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/17		102	%	80 - 120
4422005	NRG	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/17	<5.0		mg/L	
4422005	NRG	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/17	0.0055		%	25
4422013	NRG	Matrix Spike(CAL494)	Dissolved Chloride (Cl)	2016/03/18		96	%	80 - 120

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4422013	NRG	QC Standard	Dissolved Chloride (Cl)	2016/03/18		104	%	80 - 120
4422013	NRG	Spiked Blank	Dissolved Chloride (Cl)	2016/03/18		99	%	80 - 120
4422013	NRG	Method Blank	Dissolved Chloride (Cl)	2016/03/18	<1.0		mg/L	
4422013	NRG	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/18	2.6		%	25
4422018	NRG	Matrix Spike(CAL494)	Dissolved Sulphate (SO4)	2016/03/18		106	%	80 - 120
4422018	NRG	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/18		102	%	80 - 120
4422018	NRG	Method Blank	Dissolved Sulphate (SO4)	2016/03/18	<2.0		mg/L	
4422018	NRG	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/18	NC		%	25
4422028	NRG	Matrix Spike(CAL494)	Nitrate + Nitrite (N)	2016/03/21		108	%	80 - 120
4422028	NRG	Spiked Blank	Nitrate + Nitrite (N)	2016/03/21		103	%	80 - 120
4422028	NRG	Method Blank	Nitrate + Nitrite (N)	2016/03/21	<0.050		mg/L	
4422028	NRG	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/21	5.1		%	25
4422037	MCN	Matrix Spike(CAL494)	Nitrite (N)	2016/03/18		95	%	80 - 120
4422037	MCN	Spiked Blank	Nitrite (N)	2016/03/18		107	%	80 - 120
4422037	MCN	Method Blank	Nitrite (N)	2016/03/18	<0.010		mg/L	
4422037	MCN	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/18	NC		%	25
4422039	MCN	Matrix Spike(CAL494)	Orthophosphate (P)	2016/03/18		90	%	80 - 120
4422039	MCN	Spiked Blank	Orthophosphate (P)	2016/03/18		97	%	80 - 120
4422039	MCN	Method Blank	Orthophosphate (P)	2016/03/18	<0.010		mg/L	
4422039	MCN	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/18	NC		%	25
4422048	NRG	Matrix Spike(CAL494)	Reactive Silica (SiO2)	2016/03/18		NC	%	80 - 120
4422048	NRG	Spiked Blank	Reactive Silica (SiO2)	2016/03/18		98	%	80 - 120
4422048	NRG	Method Blank	Reactive Silica (SiO2)	2016/03/18	<0.50		mg/L	
4422048	NRG	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/18	0.38		%	25
4422051	MCN	Spiked Blank	Colour	2016/03/18		109	%	80 - 120
4422051	MCN	Method Blank	Colour	2016/03/18	<5.0		TCU	
4422051	MCN	RPD - Sample/Sample Dup	Colour	2016/03/18	NC		%	20
4423102	TMO	Spiked Blank	Conductivity	2016/03/18		104	%	80 - 120
4423102	TMO	Method Blank	Conductivity	2016/03/18	<1.0		uS/cm	
4423102	TMO	RPD - Sample/Sample Dup	Conductivity	2016/03/18	1.0		%	25
4423103	TMO	QC Standard	pH	2016/03/18		100	%	97 - 103
4423103	TMO	RPD - Sample/Sample Dup	pH	2016/03/18	0.46		%	N/A
4423106	ARS	Matrix Spike(CAL487)	Total Mercury (Hg)	2016/03/22		100	%	80 - 120
4423106	ARS	Spiked Blank	Total Mercury (Hg)	2016/03/22		100	%	80 - 120
4423106	ARS	Method Blank	Total Mercury (Hg)	2016/03/22	<0.013		ug/L	
4423106	ARS	RPD - Sample/Sample Dup	Total Mercury (Hg)	2016/03/22	NC		%	20
4423113	TMO	Spiked Blank	Conductivity	2016/03/18		105	%	80 - 120
4423113	TMO	Method Blank	Conductivity	2016/03/18	1.0, RDL=1.0		uS/cm	
4423113	TMO	RPD - Sample/Sample Dup	Conductivity	2016/03/18	1.5		%	25
4423116	TMO	QC Standard	pH	2016/03/18		100	%	97 - 103
4423116	TMO	RPD - Sample/Sample Dup	pH	2016/03/18	0.53		%	N/A
4423300	TMO	QC Standard	Turbidity	2016/03/18		104	%	80 - 120
4423300	TMO	Method Blank	Turbidity	2016/03/18	<0.10		NTU	
4423300	TMO	RPD - Sample/Sample Dup	Turbidity	2016/03/18	NC		%	20
4423332	SMT	Matrix Spike(CAL492)	Total Organic Carbon (C)	2016/03/18		112	%	80 - 120
4423332	SMT	Spiked Blank	Total Organic Carbon (C)	2016/03/18		104	%	80 - 120
4423332	SMT	Method Blank	Total Organic Carbon (C)	2016/03/18	<0.50		mg/L	
4423332	SMT	RPD - Sample/Sample Dup	Total Organic Carbon (C)	2016/03/18	NC		%	20
4424665	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2016/03/21		NC	%	80 - 120
4424665	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/21		105	%	80 - 120
4424665	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/21	<5.0		mg/L	
4424665	MCN	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/21	0.90		%	25

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4424669	MCN	Matrix Spike	Dissolved Chloride (Cl)	2016/03/21		NC	%	80 - 120
4424669	MCN	QC Standard	Dissolved Chloride (Cl)	2016/03/21		107	%	80 - 120
4424669	MCN	Spiked Blank	Dissolved Chloride (Cl)	2016/03/21		102	%	80 - 120
4424669	MCN	Method Blank	Dissolved Chloride (Cl)	2016/03/21	<1.0		mg/L	
4424669	MCN	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/21	0.70		%	25
4424670	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2016/03/21		111	%	80 - 120
4424670	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/21		115	%	80 - 120
4424670	MCN	Method Blank	Dissolved Sulphate (SO4)	2016/03/21	<2.0		mg/L	
4424670	MCN	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/21	NC		%	25
4424671	MCN	Matrix Spike	Reactive Silica (SiO2)	2016/03/22		NC	%	80 - 120
4424671	MCN	Spiked Blank	Reactive Silica (SiO2)	2016/03/22		100	%	80 - 120
4424671	MCN	Method Blank	Reactive Silica (SiO2)	2016/03/22	<0.50		mg/L	
4424671	MCN	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/22	1.6		%	25
4424672	MCN	Spiked Blank	Colour	2016/03/22		99	%	80 - 120
4424672	MCN	Method Blank	Colour	2016/03/22	<5.0		TCU	
4424672	MCN	RPD - Sample/Sample Dup	Colour	2016/03/22	NC		%	20
4424673	MCN	Matrix Spike	Orthophosphate (P)	2016/03/22		92	%	80 - 120
4424673	MCN	Spiked Blank	Orthophosphate (P)	2016/03/22		99	%	80 - 120
4424673	MCN	Method Blank	Orthophosphate (P)	2016/03/22	<0.010		mg/L	
4424673	MCN	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/22	NC		%	25
4424674	MCN	Matrix Spike	Nitrate + Nitrite (N)	2016/03/21		106	%	80 - 120
4424674	MCN	Spiked Blank	Nitrate + Nitrite (N)	2016/03/21		101	%	80 - 120
4424674	MCN	Method Blank	Nitrate + Nitrite (N)	2016/03/21	<0.050		mg/L	
4424674	MCN	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/21	NC		%	25
4424675	MCN	Matrix Spike	Nitrite (N)	2016/03/22		97	%	80 - 120
4424675	MCN	Spiked Blank	Nitrite (N)	2016/03/22		101	%	80 - 120
4424675	MCN	Method Blank	Nitrite (N)	2016/03/22	<0.010		mg/L	
4424675	MCN	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/22	NC		%	25
4426140	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2016/03/21		99	%	80 - 120
4426140	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2016/03/21		105	%	80 - 120
4426140	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2016/03/22	<0.050		mg/L	
4426140	MCN	RPD - Sample/Sample Dup	Nitrogen (Ammonia Nitrogen)	2016/03/21	NC		%	20
4426154	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2016/03/22		91	%	80 - 120
4426154	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2016/03/21		104	%	80 - 120
4426154	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2016/03/21	<0.050		mg/L	
4426154	MCN	RPD - Sample/Sample Dup	Nitrogen (Ammonia Nitrogen)	2016/03/22	NC		%	20

N/A = Not Applicable

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Poor spike recovery due to sample matrix, recovery confirmed with repeat analysis.

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Maxxam Job #: B652954
Report Date: 2016/03/23

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Andrew VanWychen, Bedford Micro

Mike MacGillivray, Scientific Specialist (Inorganics)

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp.	Company Name		Quotation #	B61795	Maxxam Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Lisa Ladouceur / Avon Cole	P.O. #		B652954	552099
Address	97 Troop Ave Dartmouth NS B3B 2A7	Address		Project #	21347	Chain Of Custody Record	Project Manager
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Project Name		C#552099-01-01	Avery Withrow
Email	Dartmouth.AP@englobecorp.com	Email	lisa.ladouceur@englobecorp.com	Site #			
				Sampled By	LL		

Regulatory Criteria:

Special Instructions

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

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RCAp-MS Total Metals in Water	Mercury - Total (CVAA,LL)	TC/EC Drinking Water CFU/100mL							# of Bottles	Comments / Hazards / Other Required Analysis
1		PW1	3/15/16	8h40	PW	N		X	X								4	
2		PW2		10h30		N		X	X								4	
3		PW3		13h00		N		X	X	X							5	
4		PW4		9h00		N		X	X								4	
5		PW5		9h15		N		X	X								4	
6		PW6		10h05		N		X	X								4	
7		PW7		9h55		N		X	X								4	
8		PW8		13h45		N		X	X	X							5	
9		PW9		8h50		N		X	X								4	
10		PW10		14h15		N		X	X								4	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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

X

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

2016 MAR 16 12:30

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Lisa Ladouceur	16/3/16	12h30	ERICA CHAFE				☐	1, -1, -1	☐ Yes ☐ No

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

White: Maxxam Yellow: Client

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp.	Company Name		Quotation #	B61795	Maxxam Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Lisa Ladouceur / Aven Cole	P.O. #		B652954	552099
Address	97 Troop Ave Dartmouth NS B3B 2A7	Address		Project #	21347	Chain Of Custody Record	Project Manager
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Project Name		C#552099-02-01	Avery Withrow
Email	Dartmouth.AP@englobecorp.com	Email	lisa.ladouceur@englobecorp.com	Site #			
				Sampled By	LL		

Regulatory Criteria:

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

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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

X

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RCAp-MS Total Metals in Water	Mercury - Total (CVAA,LL)	TC/EC Drinking Water CFU/100mL	# of Bottles	Comments / Hazards / Other Required Analysis
1		~~PW11~~						~~X~~	~~X~~			
2		PW-DUP	3/15/16		PW	X		X	X		4	
3												
4												
5												
6												
7												
8												
9												
10												

2016 MAR 16 12:30

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (ºC) on Receipt	Custody Seal Intact on Cooler?
Lisa Ladouceur	16/3/16	12h30	ERICA CHAFE				☐	4, -1, -1	☐ Yes ☐ No

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

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Your Project #: 21347
Your C.O.C. #: 552098-01-01, 552098-02-01

Attention:Lisa Ladouceur

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

Report Date: 2016/03/28
Report #: R3943198
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B653134
Received: 2016/03/16, 12:29

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Carbonate, Bicarbonate and Hydroxide	14	N/A	2016/03/21	N/A	SM 22 4500-CO2 D
Alkalinity	14	N/A	2016/03/22	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	14	N/A	2016/03/23	ATL SOP 00014	SM 22 4500-Cl- E m
Colour	14	N/A	2016/03/23	ATL SOP 00020	SM 22 2120C m
Acid Extractables by GC/MS (1)	5	2016/03/22	2016/03/22	CAM SOP-00332	EPA 8270 m
Chromium (VI) in Water (1)	5	N/A	2016/03/18	CAM SOP-00436	EPA 7199 m
Conductance - water	14	N/A	2016/03/18	ATL SOP 00004	SM 22 2510B m
Hardness (calculated as CaCO3)	11	N/A	2016/03/22	ATL SOP 00048	SM 22 2340 B
Hardness (calculated as CaCO3)	3	N/A	2016/03/23	ATL SOP 00048	SM 22 2340 B
Mercury - Total (CVAA,LL)	14	2016/03/18	2016/03/22	ATL SOP 00026	EPA 245.1 R3 m
Metals Water Total MS	10	2016/03/18	2016/03/21	ATL SOP 00058	EPA 6020A R1 m
Metals Water Total MS	4	2016/03/18	2016/03/22	ATL SOP 00058	EPA 6020A R1 m
Ion Balance (% Difference)	14	N/A	2016/03/24		Auto Calc.
Anion and Cation Sum	14	N/A	2016/03/24		Auto Calc.
Nitrogen Ammonia - water	11	N/A	2016/03/22	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen Ammonia - water	3	N/A	2016/03/23	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	14	N/A	2016/03/24	ATL SOP 00016	USGS SOPINCF0452.2 m
Nitrogen - Nitrite	14	N/A	2016/03/22	ATL SOP 00017	SM 22 4500-NO2- B m
Nitrogen - Nitrate (as N)	14	N/A	2016/03/24	ATL SOP 00018	ASTM D3867
pH (2)	14	N/A	2016/03/18	ATL SOP 00003	SM 22 4500-H+ B m
Phosphorus - ortho	14	N/A	2016/03/23	ATL SOP 00021	EPA 365.2 m
Sat. pH and Langelier Index (@ 20C)	14	N/A	2016/03/24	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	14	N/A	2016/03/24	ATL SOP 00049	Auto Calc.
Reactive Silica	14	N/A	2016/03/22	ATL SOP 00022	EPA 366.0 m
Sulphate	14	N/A	2016/03/24	ATL SOP 00023	ASTMD516-11 m
Total Dissolved Solids (TDS calc)	14	N/A	2016/03/24		Auto Calc.
Organic carbon - Total (TOC) (3)	14	N/A	2016/03/23	ATL SOP 00037	SM 22 5310C m
Turbidity	6	N/A	2016/03/18	ATL SOP 00011	EPA 180.1 R2 m
Turbidity	8	N/A	2016/03/21	ATL SOP 00011	EPA 180.1 R2 m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Your Project #: 21347
Your C.O.C. #: 552098-01-01, 552098-02-01

Attention:Lisa Ladouceur

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

Report Date: 2016/03/28
Report #: R3943198
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B653134
Received: 2016/03/16, 12:29

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Analytics Mississauga
(2) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(3) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Avery Withrow, Project Manager
Email: AWithrow@maxxam.ca
Phone# (902)420-0203 Ext:233

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM405			CAM406		CAM407	CAM407			
Sampling Date		2016/03/14			2016/03/14 16:30		2016/03/14 16:10	2016/03/14 16:10			
COC Number		552098-01-01			552098-01-01		552098-01-01	552098-01-01			
	UNITS	SW1	RDL	QC Batch	SW2	RDL	SW3	SW3 Lab-Dup	RDL	QC Batch	MDL
Calculated Parameters											
Anion Sum	me/L	0.630	N/A	4421216	0.440	N/A	1.46		N/A	4421216	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	4421212	<1.0	1.0	39		1.0	4421212	0.20
Calculated TDS	mg/L	49	1.0	4421221	37	1.0	95		1.0	4421221	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	4421212	<1.0	1.0	<1.0		1.0	4421212	0.20
Cation Sum	me/L	0.780	N/A	4421216	0.640	N/A	1.66		N/A	4421216	N/A
Hardness (CaCO3)	mg/L	4.0	1.0	4421214	6.3	1.0	26		1.0	4421214	1.0
Ion Balance (% Difference)	%	10.6	N/A	4421215	18.5	N/A	6.41		N/A	4421215	N/A
Langelier Index (@ 20C)	N/A	NC		4421219	NC		-1.88			4421219	
Langelier Index (@ 4C)	N/A	NC		4421220	NC		-2.13			4421220	
Nitrate (N)	mg/L	0.051	0.050	4421217	0.13	0.050	0.17		0.050	4421217	N/A
Saturation pH (@ 20C)	N/A	NC		4421219	NC		8.92			4421219	
Saturation pH (@ 4C)	N/A	NC		4421220	NC		9.17			4421220	
Inorganics											
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	4427773	<5.0	5.0	39		5.0	4427773	N/A
Dissolved Chloride (Cl)	mg/L	18	1.0	4427780	13	1.0	21		1.0	4427780	N/A
Colour	TCU	610	130	4427796	260	50	410		100	4427796	N/A
Nitrate + Nitrite (N)	mg/L	0.051	0.050	4427801	0.13	0.050	0.17		0.050	4427801	N/A
Nitrite (N)	mg/L	<0.010	0.010	4427817	<0.010	0.010	<0.010		0.010	4427817	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.17	0.050	4427927	<0.050	0.050	0.11		0.050	4427927	N/A
Total Organic Carbon (C)	mg/L	21 (1)	5.0	4429412	15 (1)	1.0	22 (1)		5.0	4429412	N/A
Orthophosphate (P)	mg/L	0.028	0.010	4427799	0.023	0.010	0.033		0.010	4427799	N/A
pH	pH	5.61	N/A	4423117	5.86	N/A	7.04	7.05	N/A	4423117	N/A
Reactive Silica (SiO2)	mg/L	5.2	0.50	4427791	4.5	0.50	5.4		0.50	4427791	N/A
Dissolved Sulphate (SO4)	mg/L	5.4	2.0	4427789	2.5	2.0	3.3		2.0	4427789	N/A
Turbidity	NTU	4.2	0.10	4423311	2.8	0.10	21		0.10	4423311	0.10
Conductivity	uS/cm	79	1.0	4423118	60	1.0	140	140	1.0	4423118	N/A
Metals											
Total Aluminum (Al)	ug/L	580	5.0	4421891	380	5.0	610		5.0	4423089	N/A
Total Antimony (Sb)	ug/L	<1.0	1.0	4421891	<1.0	1.0	<1.0		1.0	4423089	N/A
Total Arsenic (As)	ug/L	1.1	1.0	4421891	<1.0	1.0	1.7		1.0	4423089	N/A
Total Barium (Ba)	ug/L	2.2	1.0	4421891	2.6	1.0	8.9		1.0	4423089	N/A
Total Beryllium (Be)	ug/L	<1.0	1.0	4421891	<1.0	1.0	<1.0		1.0	4423089	N/A
Total Bismuth (Bi)	ug/L	<2.0	2.0	4421891	<2.0	2.0	<2.0		2.0	4423089	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM405			CAM406		CAM407	CAM407			
Sampling Date		2016/03/14			2016/03/14 16:30		2016/03/14 16:10	2016/03/14 16:10			
COC Number		552098-01-01			552098-01-01		552098-01-01	552098-01-01			
	UNITS	SW1	RDL	QC Batch	SW2	RDL	SW3	SW3 Lab-Dup	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	50	4421891	<50	50	<50		50	4423089	N/A
Total Cadmium (Cd)	ug/L	0.15	0.010	4421891	0.069	0.010	0.037		0.010	4423089	N/A
Total Calcium (Ca)	ug/L	860	100	4421891	1200	100	6900		100	4423089	N/A
Total Chromium (Cr)	ug/L	1.1	1.0	4421891	46	1.0	1.8		1.0	4423089	N/A
Total Cobalt (Co)	ug/L	0.93	0.40	4421891	0.63	0.40	1.4		0.40	4423089	N/A
Total Copper (Cu)	ug/L	5.8	2.0	4421891	3.7	2.0	4.1		2.0	4423089	N/A
Total Iron (Fe)	ug/L	780	50	4421891	650	50	2700		50	4423089	N/A
Total Lead (Pb)	ug/L	10	0.50	4421891	3.2	0.50	1.3		0.50	4423089	N/A
Total Magnesium (Mg)	ug/L	440	100	4421891	820	100	2200		100	4423089	N/A
Total Manganese (Mn)	ug/L	12	2.0	4421891	17	2.0	180		2.0	4423089	N/A
Total Molybdenum (Mo)	ug/L	<2.0	2.0	4421891	5.5	2.0	<2.0		2.0	4423089	N/A
Total Nickel (Ni)	ug/L	5.7	2.0	4421891	19	2.0	4.1		2.0	4423089	N/A
Total Phosphorus (P)	ug/L	130	100	4421891	130	100	170		100	4423089	N/A
Total Potassium (K)	ug/L	5100	100	4421891	4200	100	11000		100	4423089	N/A
Total Selenium (Se)	ug/L	<1.0	1.0	4421891	<1.0	1.0	<1.0		1.0	4423089	N/A
Total Silver (Ag)	ug/L	<0.10	0.10	4421891	<0.10	0.10	<0.10		0.10	4423089	N/A
Total Sodium (Na)	ug/L	12000	100	4421891	8700	100	17000		100	4423089	N/A
Total Strontium (Sr)	ug/L	6.1	2.0	4421891	7.4	2.0	34		2.0	4423089	N/A
Total Thallium (Tl)	ug/L	<0.10	0.10	4421891	<0.10	0.10	<0.10		0.10	4423089	N/A
Total Tin (Sn)	ug/L	<2.0	2.0	4421891	<2.0	2.0	<2.0		2.0	4423089	N/A
Total Titanium (Ti)	ug/L	11	2.0	4421891	5.0	2.0	11		2.0	4423089	N/A
Total Uranium (U)	ug/L	<0.10	0.10	4421891	<0.10	0.10	0.10		0.10	4423089	N/A
Total Vanadium (V)	ug/L	2.4	2.0	4421891	<2.0	2.0	<2.0		2.0	4423089	N/A
Total Zinc (Zn)	ug/L	8.5	5.0	4421891	7.5	5.0	17		5.0	4423089	N/A

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM408		CAM409		CAM410			
Sampling Date		2016/03/14		2016/03/14		2016/03/14			
COC Number		552098-01-01		552098-01-01		552098-01-01			
	UNITS	SW4	QC Batch	SW5	RDL	SW6	RDL	QC Batch	MDL
Calculated Parameters									
Anion Sum	me/L	1.21	4421216	1.30	N/A	1.43	N/A	4421216	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	4421212	34	1.0	25	1.0	4421212	0.20
Calculated TDS	mg/L	80	4421221	85	1.0	89	1.0	4421221	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	4421212	<1.0	1.0	<1.0	1.0	4421212	0.20
Cation Sum	me/L	1.32	4421216	1.46	N/A	1.51	N/A	4421216	N/A
Hardness (CaCO3)	mg/L	12	4421214	23	1.0	22	1.0	4421214	1.0
Ion Balance (% Difference)	%	4.35	4421215	5.80	N/A	2.72	N/A	4421215	N/A
Langelier Index (@ 20C)	N/A	NC	4421219	-2.03		-1.97		4421219	
Langelier Index (@ 4C)	N/A	NC	4421220	-2.29		-2.22		4421220	
Nitrate (N)	mg/L	0.31	4421217	0.35	0.050	0.31	0.050	4421217	N/A
Saturation pH (@ 20C)	N/A	NC	4421219	9.03		9.18		4421219	
Saturation pH (@ 4C)	N/A	NC	4421220	9.28		9.43		4421220	
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	4427773	34	5.0	26	5.0	4427827	N/A
Dissolved Chloride (Cl)	mg/L	40	4427780	19	1.0	29	1.0	4427839	N/A
Colour	TCU	420	4427796	360	100	230	25	4427846	N/A
Nitrate + Nitrite (N)	mg/L	0.31	4427801	0.35	0.050	0.31	0.050	4427861	N/A
Nitrite (N)	mg/L	<0.010	4427817	<0.010	0.010	<0.010	0.010	4427864	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	4427927	0.078	0.050	0.058	0.050	4427927	N/A
Total Organic Carbon (C)	mg/L	14 (1)	4429412	19 (1)	5.0	13 (1)	5.0	4429412	N/A
Orthophosphate (P)	mg/L	0.018	4427799	0.032	0.010	0.022	0.010	4427848	N/A
pH	pH	6.00	4423117	7.00	N/A	7.21	N/A	4423117	N/A
Reactive Silica (SiO2)	mg/L	5.1	4427791	5.4	0.50	4.7	0.50	4427845	N/A
Dissolved Sulphate (SO4)	mg/L	3.4	4427789	2.9	2.0	3.1	2.0	4427844	N/A
Turbidity	NTU	2.7	4423311	13	0.10	4.7	0.10	4423311	0.10
Conductivity	uS/cm	130	4423118	130	1.0	140	1.0	4423118	N/A
Metals									
Total Aluminum (Al)	ug/L	490	4423089	580	5.0	350	5.0	4423089	N/A
Total Antimony (Sb)	ug/L	<1.0	4423089	<1.0	1.0	<1.0	1.0	4423089	N/A
Total Arsenic (As)	ug/L	<1.0	4423089	1.3	1.0	<1.0	1.0	4423089	N/A
Total Barium (Ba)	ug/L	4.3	4423089	7.7	1.0	6.3	1.0	4423089	N/A
Total Beryllium (Be)	ug/L	<1.0	4423089	<1.0	1.0	<1.0	1.0	4423089	N/A
Total Bismuth (Bi)	ug/L	<2.0	4423089	<2.0	2.0	<2.0	2.0	4423089	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM408		CAM409		CAM410			
Sampling Date		2016/03/14		2016/03/14		2016/03/14			
COC Number		552098-01-01		552098-01-01		552098-01-01			
	UNITS	SW4	QC Batch	SW5	RDL	SW6	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	4423089	<50	50	<50	50	4423089	N/A
Total Cadmium (Cd)	ug/L	0.091	4423089	0.048	0.010	0.033	0.010	4423089	N/A
Total Calcium (Ca)	ug/L	2800	4423089	5900	100	5600	100	4423089	N/A
Total Chromium (Cr)	ug/L	<1.0	4423089	1.5	1.0	1.1	1.0	4423089	N/A
Total Cobalt (Co)	ug/L	0.84	4423089	1.1	0.40	<0.40	0.40	4423089	N/A
Total Copper (Cu)	ug/L	4.7	4423089	4.8	2.0	3.9	2.0	4423089	N/A
Total Iron (Fe)	ug/L	970	4423089	2400	50	1200	50	4423089	N/A
Total Lead (Pb)	ug/L	5.1	4423089	1.3	0.50	0.57	0.50	4423089	N/A
Total Magnesium (Mg)	ug/L	1300	4423089	2000	100	1900	100	4423089	N/A
Total Manganese (Mn)	ug/L	23	4423089	120	2.0	16	2.0	4423089	N/A
Total Molybdenum (Mo)	ug/L	<2.0	4423089	<2.0	2.0	<2.0	2.0	4423089	N/A
Total Nickel (Ni)	ug/L	3.9	4423089	3.7	2.0	2.9	2.0	4423089	N/A
Total Phosphorus (P)	ug/L	110	4423089	200	100	130	100	4423089	N/A
Total Potassium (K)	ug/L	3600	4423089	11000	100	7400	100	4423089	N/A
Total Selenium (Se)	ug/L	<1.0	4423089	<1.0	1.0	<1.0	1.0	4423089	N/A
Total Silver (Ag)	ug/L	<0.10	4423089	<0.10	0.10	<0.10	0.10	4423089	N/A
Total Sodium (Na)	ug/L	22000	4423089	15000	100	19000	100	4423089	N/A
Total Strontium (Sr)	ug/L	18	4423089	29	2.0	29	2.0	4423089	N/A
Total Thallium (Tl)	ug/L	<0.10	4423089	<0.10	0.10	<0.10	0.10	4423089	N/A
Total Tin (Sn)	ug/L	<2.0	4423089	<2.0	2.0	<2.0	2.0	4423089	N/A
Total Titanium (Ti)	ug/L	7.9	4423089	14	2.0	7.5	2.0	4423089	N/A
Total Uranium (U)	ug/L	<0.10	4423089	0.10	0.10	<0.10	0.10	4423089	N/A
Total Vanadium (V)	ug/L	<2.0	4423089	<2.0	2.0	<2.0	2.0	4423089	N/A
Total Zinc (Zn)	ug/L	6.6	4423089	16	5.0	14	5.0	4423089	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM411		CAM412		CAM413		CAM414			
Sampling Date		2016/03/14 16:40		2016/03/14 17:05		2016/03/14 17:20		2016/03/15 11:20			
COC Number		552098-01-01		552098-01-01		552098-01-01		552098-01-01			
	UNITS	SW7	RDL	SW8	RDL	SW9	RDL	SW10	RDL	QC Batch	MDL
Calculated Parameters											
Anion Sum	me/L	0.410	N/A	1.05	N/A	3.77	N/A	0.280	N/A	4421216	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	34	1.0	130	1.0	<1.0	1.0	4421212	0.20
Calculated TDS	mg/L	34	1.0	63	1.0	590	1.0	20	1.0	4421221	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	4421212	0.20
Cation Sum	me/L	0.590	N/A	1.28	N/A	18.3	N/A	0.320	N/A	4421216	N/A
Hardness (CaCO3)	mg/L	5.3	1.0	37	1.0	280	1.0	4.1	1.0	4421214	1.0
Ion Balance (% Difference)	%	18.0	N/A	9.87	N/A	65.8	N/A	6.67	N/A	4421215	N/A
Langelier Index (@ 20C)	N/A	NC		-1.51		0.134		NC		4421219	
Langelier Index (@ 4C)	N/A	NC		-1.77		-0.113		NC		4421220	
Nitrate (N)	mg/L	<0.050	0.050	<0.050	0.050	0.12	0.050	0.051	0.050	4421217	N/A
Saturation pH (@ 20C)	N/A	NC		8.76		7.51		NC		4421219	
Saturation pH (@ 4C)	N/A	NC		9.01		7.75		NC		4421220	
Inorganics											
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	34	5.0	140	25	<5.0	5.0	4427827	N/A
Dissolved Chloride (Cl)	mg/L	13	1.0	11	1.0	27	1.0	9.8	1.0	4427839	N/A
Colour	TCU	250	50	290	50	880	250	190	25	4427846	N/A
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	<0.050	0.050	0.12	0.050	0.051	0.050	4427861	N/A
Nitrite (N)	mg/L	<0.010	0.010	<0.010	0.010	<0.010	0.010	<0.010	0.010	4427864	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.14	0.050	<0.050	0.050	0.20	0.050	<0.050	0.050	4427927	N/A
Total Organic Carbon (C)	mg/L	14 (1)	1.0	15 (1)	5.0	72 (1)	50	16 (1)	1.0	4429412	N/A
Orthophosphate (P)	mg/L	0.016	0.010	0.31	0.010	0.33	0.010	0.012	0.010	4427848	N/A
pH	pH	6.16	N/A	7.24	N/A	7.64	N/A	5.31	N/A	4423117	N/A
Reactive Silica (SiO2)	mg/L	4.6	0.50	0.56	0.50	3.5	0.50	3.5	0.50	4427845	N/A
Dissolved Sulphate (SO4)	mg/L	2.5	2.0	2.2	2.0	13	2.0	<2.0	2.0	4427844	N/A
Turbidity	NTU	2.0	0.10	16	0.10	170	1.0	110	1.0	4425819	0.10
Conductivity	uS/cm	58	1.0	100	1.0	380	1.0	54	1.0	4423118	N/A
Metals											
Total Aluminum (Al)	ug/L	340	5.0	600	5.0	67000	5.0	520	5.0	4423089	N/A
Total Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	1.1	1.0	<1.0	1.0	4423089	N/A
Total Arsenic (As)	ug/L	<1.0	1.0	1.5	1.0	120	1.0	<1.0	1.0	4423089	N/A
Total Barium (Ba)	ug/L	2.0	1.0	5.3	1.0	410	1.0	2.6	1.0	4423089	N/A
Total Beryllium (Be)	ug/L	<1.0	1.0	<1.0	1.0	3.9	1.0	<1.0	1.0	4423089	N/A
Total Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	4423089	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM411		CAM412		CAM413		CAM414			
Sampling Date		2016/03/14 16:40		2016/03/14 17:05		2016/03/14 17:20		2016/03/15 11:20			
COC Number		552098-01-01		552098-01-01		552098-01-01		552098-01-01			
	UNITS	SW7	RDL	SW8	RDL	SW9	RDL	SW10	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	50	<50	50	120	50	<50	50	4423089	N/A
Total Cadmium (Cd)	ug/L	0.064	0.010	0.043	0.010	2.1	0.010	0.036	0.010	4423089	N/A
Total Calcium (Ca)	ug/L	930	100	11000	100	71000	100	480	100	4423089	N/A
Total Chromium (Cr)	ug/L	<1.0	1.0	1.6	1.0	94	1.0	<1.0	1.0	4423089	N/A
Total Cobalt (Co)	ug/L	0.41	0.40	0.59	0.40	93	0.40	0.46	0.40	4423089	N/A
Total Copper (Cu)	ug/L	2.4	2.0	5.5	2.0	200	2.0	<2.0	2.0	4423089	N/A
Total Iron (Fe)	ug/L	340	50	1100	50	270000	500	470	50	4423089	N/A
Total Lead (Pb)	ug/L	3.0	0.50	2.3	0.50	160	0.50	1.2	0.50	4423089	N/A
Total Magnesium (Mg)	ug/L	730	100	2400	100	25000	100	700	100	4423089	N/A
Total Manganese (Mn)	ug/L	12	2.0	33	2.0	4300	2.0	14	2.0	4423089	N/A
Total Molybdenum (Mo)	ug/L	<2.0	2.0	<2.0	2.0	24	2.0	<2.0	2.0	4423089	N/A
Total Nickel (Ni)	ug/L	2.4	2.0	<2.0	2.0	210	2.0	<2.0	2.0	4423089	N/A
Total Phosphorus (P)	ug/L	110	100	580	100	11000	100	<100	100	4423089	N/A
Total Potassium (K)	ug/L	3800	100	6000	100	55000	100	100	100	4423089	N/A
Total Selenium (Se)	ug/L	<1.0	1.0	<1.0	1.0	3.5	1.0	<1.0	1.0	4423089	N/A
Total Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	0.58	0.10	<0.10	0.10	4423089	N/A
Total Sodium (Na)	ug/L	8500	100	8100	100	37000	100	4900	100	4423089	N/A
Total Strontium (Sr)	ug/L	6.1	2.0	47	2.0	430	2.0	6.1	2.0	4423089	N/A
Total Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	0.53	0.10	<0.10	0.10	4423089	N/A
Total Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	4.3	2.0	<2.0	2.0	4423089	N/A
Total Titanium (Ti)	ug/L	5.7	2.0	17	2.0	1400	2.0	4.6	2.0	4423089	N/A
Total Uranium (U)	ug/L	<0.10	0.10	<0.10	0.10	7.2	0.10	<0.10	0.10	4423089	N/A
Total Vanadium (V)	ug/L	<2.0	2.0	2.1	2.0	150	2.0	<2.0	2.0	4423089	N/A
Total Zinc (Zn)	ug/L	6.4	5.0	13	5.0	460	5.0	5.7	5.0	4423089	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM414			CAM436			CAM437			
Sampling Date		2016/03/15 11:20			2016/03/15 15:45			2016/03/15			
COC Number		552098-01-01			552098-02-01			552098-02-01			
	UNITS	SW10 Lab-Dup	RDL	QC Batch	SW11	RDL	QC Batch	SW-DUP	RDL	QC Batch	MDL
Calculated Parameters											
Anion Sum	me/L		N/A	4421216	0.660	N/A	4421216	3.75	N/A	4421216	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L		1.0	4421212	<1.0	1.0	4421212	130	1.0	4421212	0.20
Calculated TDS	mg/L		1.0	4421221	50	1.0	4421221	280	1.0	4421221	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L		1.0	4421212	<1.0	1.0	4421212	<1.0	1.0	4421212	0.20
Cation Sum	me/L		N/A	4421216	0.780	N/A	4421216	6.14	N/A	4421216	N/A
Hardness (CaCO3)	mg/L		1.0	4421214	3.2	1.0	4421214	110	1.0	4421214	1.0
Ion Balance (% Difference)	%		N/A	4421215	8.33	N/A	4421215	24.2	N/A	4421215	N/A
Langelier Index (@ 20C)	N/A			4421219	NC		4421219	-0.397		4421219	
Langelier Index (@ 4C)	N/A			4421220	NC		4421220	-0.646		4421220	
Nitrate (N)	mg/L		0.050	4421217	0.069	0.050	4421217	0.23	0.050	4421217	N/A
Saturation pH (@ 20C)	N/A			4421219	NC		4421219	7.84		4421219	
Saturation pH (@ 4C)	N/A			4421220	NC		4421220	8.09		4421220	
Inorganics											
Total Alkalinity (Total as CaCO3)	mg/L		5.0	4427827	<5.0	5.0	4427925	130	25	4427925	N/A
Dissolved Chloride (Cl)	mg/L		1.0	4427839	19	1.0	4427968	28	1.0	4427968	N/A
Colour	TCU		25	4427846	740	150	4427976	780	150	4427976	N/A
Nitrate + Nitrite (N)	mg/L		0.050	4427861	0.069	0.050	4427988	0.23	0.050	4427988	N/A
Nitrite (N)	mg/L		0.010	4427864	<0.010	0.010	4428002	<0.010	0.010	4428002	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	4427927	0.061	0.050	4427948	0.16	0.050	4427948	N/A
Total Organic Carbon (C)	mg/L		1.0	4429412	27 (1)	5.0	4429412	41 (1)	25	4429414	N/A
Orthophosphate (P)	mg/L		0.010	4427848	0.029	0.010	4427991	0.17	0.010	4427991	N/A
pH	pH		N/A	4423117	4.94	N/A	4423117	7.44	N/A	4423117	N/A
Reactive Silica (SiO2)	mg/L		0.50	4427845	5.4	0.50	4427955	2.1	0.50	4427955	N/A
Dissolved Sulphate (SO4)	mg/L		2.0	4427844	5.5	2.0	4427958	12	2.0	4427958	N/A
Turbidity	NTU		1.0	4425819	14	0.10	4425819	>1000	1.0	4425819	0.10
Conductivity	uS/cm		1.0	4423118	84	1.0	4423118	380	1.0	4423118	N/A
Metals											
Total Aluminum (Al)	ug/L		5.0	4423089	700	5.0	4423089	14000	5.0	4423089	N/A
Total Antimony (Sb)	ug/L		1.0	4423089	<1.0	1.0	4423089	<1.0	1.0	4423089	N/A
Total Arsenic (As)	ug/L		1.0	4423089	1.3	1.0	4423089	25	1.0	4423089	N/A
Total Barium (Ba)	ug/L		1.0	4423089	2.1	1.0	4423089	75	1.0	4423089	N/A
Total Beryllium (Be)	ug/L		1.0	4423089	<1.0	1.0	4423089	<1.0	1.0	4423089	N/A
Total Bismuth (Bi)	ug/L		2.0	4423089	<2.0	2.0	4423089	<2.0	2.0	4423089	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM414			CAM436			CAM437			
Sampling Date		2016/03/15 11:20			2016/03/15 15:45			2016/03/15			
COC Number		552098-01-01			552098-02-01			552098-02-01			
	UNITS	SW10 Lab-Dup	RDL	QC Batch	SW11	RDL	QC Batch	SW-DUP	RDL	QC Batch	MDL
Total Boron (B)	ug/L		50	4423089	<50	50	4423089	92	50	4423089	N/A
Total Cadmium (Cd)	ug/L		0.010	4423089	0.18	0.010	4423089	0.60	0.010	4423089	N/A
Total Calcium (Ca)	ug/L		100	4423089	700	100	4423089	28000	100	4423089	N/A
Total Chromium (Cr)	ug/L		1.0	4423089	1.4	1.0	4423089	25	1.0	4423089	N/A
Total Cobalt (Co)	ug/L		0.40	4423089	1.1	0.40	4423089	17	0.40	4423089	N/A
Total Copper (Cu)	ug/L		2.0	4423089	6.8	2.0	4423089	66	2.0	4423089	N/A
Total Iron (Fe)	ug/L		50	4423089	840	50	4423089	32000	50	4423089	N/A
Total Lead (Pb)	ug/L		0.50	4423089	12	0.50	4423089	37	0.50	4423089	N/A
Total Magnesium (Mg)	ug/L		100	4423089	340	100	4423089	10000	100	4423089	N/A
Total Manganese (Mn)	ug/L		2.0	4423089	8.6	2.0	4423089	710	2.0	4423089	N/A
Total Molybdenum (Mo)	ug/L		2.0	4423089	<2.0	2.0	4423089	8.7	2.0	4423089	N/A
Total Nickel (Ni)	ug/L		2.0	4423089	6.9	2.0	4423089	41	2.0	4423089	N/A
Total Phosphorus (P)	ug/L		100	4423089	150	100	4423089	3800	100	4423089	N/A
Total Potassium (K)	ug/L		100	4423089	6400	100	4423089	48000	100	4423089	N/A
Total Selenium (Se)	ug/L		1.0	4423089	<1.0	1.0	4423089	<1.0	1.0	4423089	N/A
Total Silver (Ag)	ug/L		0.10	4423089	<0.10	0.10	4423089	0.20	0.10	4423089	N/A
Total Sodium (Na)	ug/L		100	4423089	12000	100	4423089	35000	100	4423089	N/A
Total Strontium (Sr)	ug/L		2.0	4423089	4.9	2.0	4423089	140	2.0	4423089	N/A
Total Thallium (Tl)	ug/L		0.10	4423089	<0.10	0.10	4423089	0.14	0.10	4423089	N/A
Total Tin (Sn)	ug/L		2.0	4423089	<2.0	2.0	4423089	<2.0	2.0	4423089	N/A
Total Titanium (Ti)	ug/L		2.0	4423089	12	2.0	4423089	380	2.0	4423089	N/A
Total Uranium (U)	ug/L		0.10	4423089	<0.10	0.10	4423089	1.6	0.10	4423089	N/A
Total Vanadium (V)	ug/L		2.0	4423089	3.0	2.0	4423089	26	2.0	4423089	N/A
Total Zinc (Zn)	ug/L		5.0	4423089	10	5.0	4423089	120	5.0	4423089	N/A

RDL = Reportable Detection Limit
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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM438		CAM439			
Sampling Date		2016/03/15 16:25		2016/03/15 15:30			
COC Number		552098-02-01		552098-02-01			
	UNITS	SW12	RDL	BACKGROUND	RDL	QC Batch	MDL
Calculated Parameters							
Anion Sum	me/L	0.280	N/A	0.320	N/A	4421216	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	4421212	0.20
Calculated TDS	mg/L	21	1.0	22	1.0	4421221	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	4421212	0.20
Cation Sum	me/L	0.350	N/A	0.330	N/A	4421216	N/A
Hardness (CaCO3)	mg/L	4.5	1.0	3.4	1.0	4421214	1.0
Ion Balance (% Difference)	%	11.1	N/A	1.54	N/A	4421215	N/A
Langelier Index (@ 20C)	N/A	NC		NC		4421219	
Langelier Index (@ 4C)	N/A	NC		NC		4421220	
Nitrate (N)	mg/L	<0.050	0.050	<0.050	0.050	4421217	N/A
Saturation pH (@ 20C)	N/A	NC		NC		4421219	
Saturation pH (@ 4C)	N/A	NC		NC		4421220	
Inorganics							
Total Alkalinity (Total as CaCO3)	mg/L	<5.0	5.0	<5.0	5.0	4427925	N/A
Dissolved Chloride (Cl)	mg/L	9.7	1.0	11	1.0	4427968	N/A
Colour	TCU	220	25	46	5.0	4427976	N/A
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	<0.050	0.050	4427988	N/A
Nitrite (N)	mg/L	<0.010	0.010	<0.010	0.010	4428002	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	0.078	0.050	4427948	N/A
Total Organic Carbon (C)	mg/L	16 (1)	1.0	9.7	0.50	4429414	N/A
Orthophosphate (P)	mg/L	0.011	0.010	0.011	0.010	4427991	N/A
pH	pH	5.20	N/A	5.70	N/A	4423117	N/A
Reactive Silica (SiO2)	mg/L	3.5	0.50	4.1	0.50	4427955	N/A
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	<2.0	2.0	4427958	N/A
Turbidity	NTU	3.2	0.10	0.25	0.10	4425819	0.10
Conductivity	uS/cm	36	1.0	49	1.0	4423118	N/A
Metals							
Total Aluminum (Al)	ug/L	420	5.0	510	5.0	4423089	N/A
Total Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	4423089	N/A
Total Arsenic (As)	ug/L	<1.0	1.0	<1.0	1.0	4423089	N/A
Total Barium (Ba)	ug/L	2.6	1.0	2.9	1.0	4423089	N/A
Total Beryllium (Be)	ug/L	<1.0	1.0	<1.0	1.0	4423089	N/A
Total Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	4423089	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CAM438		CAM439			
Sampling Date		2016/03/15 16:25		2016/03/15 15:30			
COC Number		552098-02-01		552098-02-01			
	UNITS	SW12	RDL	BACKGROUND	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	50	<50	50	4423089	N/A
Total Cadmium (Cd)	ug/L	0.023	0.010	0.024	0.010	4423089	N/A
Total Calcium (Ca)	ug/L	740	100	240	100	4423089	N/A
Total Chromium (Cr)	ug/L	<1.0	1.0	1.6	1.0	4423089	N/A
Total Cobalt (Co)	ug/L	0.46	0.40	<0.40	0.40	4423089	N/A
Total Copper (Cu)	ug/L	<2.0	2.0	<2.0	2.0	4423089	N/A
Total Iron (Fe)	ug/L	970	50	280	50	4423089	N/A
Total Lead (Pb)	ug/L	0.72	0.50	<0.50	0.50	4423089	N/A
Total Magnesium (Mg)	ug/L	650	100	680	100	4423089	N/A
Total Manganese (Mn)	ug/L	20	2.0	9.6	2.0	4423089	N/A
Total Molybdenum (Mo)	ug/L	<2.0	2.0	<2.0	2.0	4423089	N/A
Total Nickel (Ni)	ug/L	<2.0	2.0	<2.0	2.0	4423089	N/A
Total Phosphorus (P)	ug/L	160	100	<100	100	4423089	N/A
Total Potassium (K)	ug/L	360	100	<100	100	4423089	N/A
Total Selenium (Se)	ug/L	<1.0	1.0	<1.0	1.0	4423089	N/A
Total Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	4423089	N/A
Total Sodium (Na)	ug/L	4900	100	5600	100	4423089	N/A
Total Strontium (Sr)	ug/L	4.9	2.0	3.4	2.0	4423089	N/A
Total Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	4423089	N/A
Total Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	4423089	N/A
Total Titanium (Ti)	ug/L	4.9	2.0	2.4	2.0	4423089	N/A
Total Uranium (U)	ug/L	<0.10	0.10	<0.10	0.10	4423089	N/A
Total Vanadium (V)	ug/L	<2.0	2.0	<2.0	2.0	4423089	N/A
Total Zinc (Zn)	ug/L	<5.0	5.0	<5.0	5.0	4423089	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		CAM405	CAM406	CAM407	CAM408	CAM409	CAM410			
Sampling Date		2016/03/14	2016/03/14 16:30	2016/03/14 16:10	2016/03/14	2016/03/14	2016/03/14			
COC Number		552098-01-01	552098-01-01	552098-01-01	552098-01-01	552098-01-01	552098-01-01			
	UNITS	SW1	SW2	SW3	SW4	SW5	SW6	RDL	QC Batch	MDL
Metals										
Total Mercury (Hg)	ug/L	0.035	0.017	<0.013	0.015	<0.013	<0.013	0.013	4423107	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		CAM411	CAM412	CAM413	CAM414	CAM436	CAM437			
Sampling Date		2016/03/14 16:40	2016/03/14 17:05	2016/03/14 17:20	2016/03/15 11:20	2016/03/15 15:45	2016/03/15			
COC Number		552098-01-01	552098-01-01	552098-01-01	552098-01-01	552098-02-01	552098-02-01			
	UNITS	SW7	SW8	SW9	SW10	SW11	SW-DUP	RDL	QC Batch	MDL
Metals										
Total Mercury (Hg)	ug/L	<0.013	<0.013	0.13	<0.013	0.013	0.065	0.013	4423107	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		CAM438	CAM439			
Sampling Date		2016/03/15 16:25	2016/03/15 15:30			
COC Number		552098-02-01	552098-02-01			
	UNITS	SW12	BACKGROUND	RDL	QC Batch	MDL
Metals						
Total Mercury (Hg)	ug/L	<0.013	<0.013	0.013	4423107	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Report Date: 2016/03/28

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ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		CAM405	CAM407	CAM413	CAM437	CAM439			
Sampling Date		2016/03/14	2016/03/14 16:10	2016/03/14 17:20	2016/03/15	2016/03/15 15:30			
COC Number		552098-01-01	552098-01-01	552098-01-01	552098-02-01	552098-02-01			
	UNITS	SW1	SW3	SW9	SW-DUP	BACKGROUND	RDL	QC Batch	MDL
Metals									
Chromium (VI)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	4424065	0.30

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CAM405	CAM407		CAM413		CAM437		CAM439			
Sampling Date		2016/03/14	2016/03/14 16:10		2016/03/14 17:20		2016/03/15		2016/03/15 15:30			
COC Number		552098-01-01	552098-01-01		552098-01-01		552098-02-01		552098-02-01			
	UNITS	SW1	SW3	RDL	SW9	RDL	SW-DUP	RDL	BACKGROUND	RDL	QC Batch	MDL
Phenolics												
2-Chlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,3,4,6-Tetrachlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,3,5-Trichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,4-Dichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,4-Dimethylphenol	ug/L	<1	<1	1	<5	5	<1	1	<1	1	4427167	0.05
2,4,6-Trichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,6-Dichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
4-Chloro-3-Methylphenol	ug/L	<0.1	<0.1	0.1	<5 (1)	5	<0.5 (1)	0.5	<0.1	0.1	4427167	0.05
4-Nitrophenol	ug/L	<1	<1	1	<5	5	<1	1	<1	1	4427167	0.05
m/p-Cresol	ug/L	<0.5	<0.5	0.5	<2.5	2.5	<0.5	0.5	<0.5	0.5	4427167	0.05
o-Cresol	ug/L	<0.5	<0.5	0.5	<2.5	2.5	<0.5	0.5	<0.5	0.5	4427167	0.05
Pentachlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
Phenol	ug/L	<0.5	<0.5	0.5	<2.5	2.5	<0.5	0.5	<0.5	0.5	4427167	0.05
2,3,4,5-Tetrachlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,3,5,6-Tetrachlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,3,4-Trichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,3,6-Trichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,4,5-Trichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
3,4,5-Trichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,4-Dinitrophenol	ug/L	<1	<1	1	<5	5	<1	1	<1	1	4427167	0.2
2,3-Dichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2,5-Dichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
3,4-Dichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
3,5-Dichlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
4,6-Dinitro-2-methylphenol	ug/L	<1	<1	1	<5	5	<1	1	<1	1	4427167	0.05
3 & 4-Chlorophenol	ug/L	<0.1	<0.1	0.1	<0.5	0.5	<0.1	0.1	<0.1	0.1	4427167	0.05
2-Nitrophenol	ug/L	<1	<1	1	<5	5	<1	1	<1	1	4427167	0.05
Surrogate Recovery (%)												
2,4,6-Tribromophenol	%	71	49 (2)		87		87		88		4427167	
2-Fluorophenol	%	35 (2)	25 (2)		34 (2)		29 (2)		60		4427167	
D5-Phenol	%	39	31		40		30		48		4427167	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.
(2) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CAM439			
Sampling Date		2016/03/15 15:30			
COC Number		552098-02-01			
	UNITS	BACKGROUND Lab-Dup	RDL	QC Batch	MDL
Phenolics					
2-Chlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,3,4,6-Tetrachlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,3,5-Trichlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,4-Dichlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,4-Dimethylphenol	ug/L	<1	1	4427167	0.05
2,4,6-Trichlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,6-Dichlorophenol	ug/L	<0.1	0.1	4427167	0.05
4-Chloro-3-Methylphenol	ug/L	<0.1	0.1	4427167	0.05
4-Nitrophenol	ug/L	<1	1	4427167	0.05
m/p-Cresol	ug/L	<0.5	0.5	4427167	0.05
o-Cresol	ug/L	<0.5	0.5	4427167	0.05
Pentachlorophenol	ug/L	<0.1	0.1	4427167	0.05
Phenol	ug/L	<0.5	0.5	4427167	0.05
2,3,4,5-Tetrachlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,3,5,6-Tetrachlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,3,4-Trichlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,3,6-Trichlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,4,5-Trichlorophenol	ug/L	<0.1	0.1	4427167	0.05
3,4,5-Trichlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,4-Dinitrophenol	ug/L	<1	1	4427167	0.2
2,3-Dichlorophenol	ug/L	<0.1	0.1	4427167	0.05
2,5-Dichlorophenol	ug/L	<0.1	0.1	4427167	0.05
3,4-Dichlorophenol	ug/L	<0.1	0.1	4427167	0.05
3,5-Dichlorophenol	ug/L	<0.1	0.1	4427167	0.05
4,6-Dinitro-2-methylphenol	ug/L	<1	1	4427167	0.05
3 & 4-Chlorophenol	ug/L	<0.1	0.1	4427167	0.05
2-Nitrophenol	ug/L	<1	1	4427167	0.05
Surrogate Recovery (%)					
2,4,6-Tribromophenol	%	84		4427167	
2-Fluorophenol	%	42 (1)		4427167	
D5-Phenol	%	43		4427167	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM405
Sample ID: SW1
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427773	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427780	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427796	N/A	2016/03/23	Nancy Rogers
Acid Extractables by GC/MS	GC/MS	4427167	2016/03/22	2016/03/22	May Yin Mak
Chromium (VI) in Water	IC	4424065	N/A	2016/03/18	Lang Le
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4421891	2016/03/18	2016/03/22	Bryon Angevine
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427801	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427817	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427799	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427791	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427789	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4423311	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAM406
Sample ID: SW2
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427773	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427780	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427796	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427801	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427817	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM406
Sample ID: SW2
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus - ortho	KONE	4427799	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427791	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427789	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4423311	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAM407
Sample ID: SW3
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427773	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427780	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427796	N/A	2016/03/23	Nancy Rogers
Acid Extractables by GC/MS	GC/MS	4427167	2016/03/22	2016/03/22	May Yin Mak
Chromium (VI) in Water	IC	4424065	N/A	2016/03/18	Lang Le
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427801	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427817	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427799	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427791	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427789	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4423311	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAM407 Dup
Sample ID: SW3
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM407 Dup
Sample ID: SW3
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAM408
Sample ID: SW4
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427773	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427780	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427796	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427801	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427817	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427799	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427791	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427789	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4423311	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAM409
Sample ID: SW5
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427827	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427839	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427846	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM409
Sample ID: SW5
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427861	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427864	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427848	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427845	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427844	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4423311	N/A	2016/03/18	Tiffany Morash

Maxxam ID: CAM410
Sample ID: SW6
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427827	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427839	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427846	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427861	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427864	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427848	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427845	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427844	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4423311	N/A	2016/03/18	Tiffany Morash

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM411
Sample ID: SW7
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427827	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427839	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427846	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427861	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427864	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427848	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427845	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427844	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4425819	N/A	2016/03/21	Tiffany Morash

Maxxam ID: CAM412
Sample ID: SW8
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427827	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427839	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427846	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427861	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427864	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427848	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM412
Sample ID: SW8
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427845	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427844	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4425819	N/A	2016/03/21	Tiffany Morash

Maxxam ID: CAM413
Sample ID: SW9
Matrix: Water

Collected: 2016/03/14
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427827	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427839	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427846	N/A	2016/03/23	Nancy Rogers
Acid Extractables by GC/MS	GC/MS	4427167	2016/03/22	2016/03/22	May Yin Mak
Chromium (VI) in Water	IC	4424065	N/A	2016/03/18	Lang Le
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/23	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/22	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427861	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427864	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427848	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427845	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427844	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4425819	N/A	2016/03/21	Tiffany Morash

Maxxam ID: CAM414
Sample ID: SW10
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427827	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427839	N/A	2016/03/23	Nancy Rogers

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM414
Sample ID: SW10
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour	KONE	4427846	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427861	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4427864	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427848	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427845	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427844	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4425819	N/A	2016/03/21	Tiffany Morash

Maxxam ID: CAM414 Dup
Sample ID: SW10
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen Ammonia - water	KONE	4427927	N/A	2016/03/22	Mary Clancey

Maxxam ID: CAM436
Sample ID: SW11
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427925	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427968	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427976	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/23	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/22	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427948	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427988	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4428002	N/A	2016/03/22	Nancy Rogers

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM436
Sample ID: SW11
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427991	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427955	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427958	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429412	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4425819	N/A	2016/03/21	Tiffany Morash

Maxxam ID: CAM437
Sample ID: SW-DUP
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427925	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427968	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427976	N/A	2016/03/23	Nancy Rogers
Acid Extractables by GC/MS	GC/MS	4427167	2016/03/22	2016/03/22	May Yin Mak
Chromium (VI) in Water	IC	4424065	N/A	2016/03/18	Lang Le
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/23	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/22	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427948	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427988	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4428002	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427991	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427955	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427958	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429414	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4425819	N/A	2016/03/21	Tiffany Morash

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM438
Sample ID: SW12
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427925	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427968	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427976	N/A	2016/03/23	Nancy Rogers
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427948	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427988	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4428002	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash
Phosphorus - ortho	KONE	4427991	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427955	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427958	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429414	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4425819	N/A	2016/03/21	Tiffany Morash

Maxxam ID: CAM439
Sample ID: BACKGROUND
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4421212	N/A	2016/03/21	Automated Statchk
Alkalinity	KONE	4427925	N/A	2016/03/22	Nancy Rogers
Chloride	KONE	4427968	N/A	2016/03/23	Nancy Rogers
Colour	KONE	4427976	N/A	2016/03/23	Nancy Rogers
Acid Extractables by GC/MS	GC/MS	4427167	2016/03/22	2016/03/22	May Yin Mak
Chromium (VI) in Water	IC	4424065	N/A	2016/03/18	Lang Le
Conductance - water	AT	4423118	N/A	2016/03/18	Tiffany Morash
Hardness (calculated as CaCO3)		4421214	N/A	2016/03/22	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4423107	2016/03/18	2016/03/22	Arlene Rossiter
Metals Water Total MS	CICP/MS	4423089	2016/03/18	2016/03/21	Mike Leblanc
Ion Balance (% Difference)	CALC	4421215	N/A	2016/03/24	Automated Statchk
Anion and Cation Sum	CALC	4421216	N/A	2016/03/24	Automated Statchk
Nitrogen Ammonia - water	KONE	4427948	N/A	2016/03/22	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4427988	N/A	2016/03/24	Nancy Rogers
Nitrogen - Nitrite	KONE	4428002	N/A	2016/03/22	Nancy Rogers
Nitrogen - Nitrate (as N)	CALC	4421217	N/A	2016/03/24	Automated Statchk
pH	AT	4423117	N/A	2016/03/18	Tiffany Morash

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Maxxam Job #: B653134
Report Date: 2016/03/28

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CAM439
Sample ID: BACKGROUND
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus - ortho	KONE	4427991	N/A	2016/03/23	Nancy Rogers
Sat. pH and Langelier Index (@ 20C)	CALC	4421219	N/A	2016/03/24	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4421220	N/A	2016/03/24	Automated Statchk
Reactive Silica	KONE	4427955	N/A	2016/03/22	Nancy Rogers
Sulphate	KONE	4427958	N/A	2016/03/24	Nancy Rogers
Total Dissolved Solids (TDS calc)	CALC	4421221	N/A	2016/03/24	Automated Statchk
Organic carbon - Total (TOC)	TECH	4429414	N/A	2016/03/23	Soraya Merchant
Turbidity	TURB	4425819	N/A	2016/03/21	Tiffany Morash

Maxxam ID: CAM439 Dup
Sample ID: BACKGROUND
Matrix: Water

Collected: 2016/03/15
Shipped:
Received: 2016/03/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4427167	2016/03/22	2016/03/22	May Yin Mak

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GENERAL COMMENTS

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

Package 1	-0.3°C

Sample CAM405-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample CAM406-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample CAM407-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample CAM409-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample CAM411-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample CAM412-01 : Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample CAM413-01 : CPH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample CAM414-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample CAM436-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample CAM437-01 : Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample CAM438-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4421891	BAN	Matrix Spike	Total Aluminum (Al)	2016/03/19		101	%	80 - 120
			Total Antimony (Sb)	2016/03/19		106	%	80 - 120
			Total Arsenic (As)	2016/03/19		92	%	80 - 120
			Total Barium (Ba)	2016/03/19		96	%	80 - 120
			Total Beryllium (Be)	2016/03/19		97	%	80 - 120
			Total Bismuth (Bi)	2016/03/19		100	%	80 - 120
			Total Boron (B)	2016/03/19		93	%	80 - 120
			Total Cadmium (Cd)	2016/03/19		98	%	80 - 120
			Total Calcium (Ca)	2016/03/19		99	%	80 - 120
			Total Chromium (Cr)	2016/03/19		90	%	80 - 120
			Total Cobalt (Co)	2016/03/19		89	%	80 - 120
			Total Copper (Cu)	2016/03/19		86	%	80 - 120
			Total Iron (Fe)	2016/03/19		94	%	80 - 120
			Total Lead (Pb)	2016/03/19		96	%	80 - 120
			Total Magnesium (Mg)	2016/03/19		97	%	80 - 120
			Total Manganese (Mn)	2016/03/19		93	%	80 - 120
			Total Molybdenum (Mo)	2016/03/19		100	%	80 - 120
			Total Nickel (Ni)	2016/03/19		89	%	80 - 120
			Total Phosphorus (P)	2016/03/19		98	%	80 - 120
			Total Potassium (K)	2016/03/19		97	%	80 - 120
			Total Selenium (Se)	2016/03/19		88	%	80 - 120
			Total Silver (Ag)	2016/03/19		94	%	80 - 120
			Total Sodium (Na)	2016/03/19		NC	%	80 - 120
			Total Strontium (Sr)	2016/03/19		97	%	80 - 120
			Total Thallium (Tl)	2016/03/19		95	%	80 - 120
			Total Tin (Sn)	2016/03/19		106	%	80 - 120
			Total Titanium (Ti)	2016/03/19		94	%	80 - 120
			Total Uranium (U)	2016/03/19		105	%	80 - 120
			Total Vanadium (V)	2016/03/19		95	%	80 - 120
			Total Zinc (Zn)	2016/03/19		94	%	80 - 120
4421891	BAN	Spiked Blank	Total Aluminum (Al)	2016/03/19		101	%	80 - 120
			Total Antimony (Sb)	2016/03/19		101	%	80 - 120
			Total Arsenic (As)	2016/03/19		90	%	80 - 120
			Total Barium (Ba)	2016/03/19		94	%	80 - 120
			Total Beryllium (Be)	2016/03/19		94	%	80 - 120
			Total Bismuth (Bi)	2016/03/19		101	%	80 - 120
			Total Boron (B)	2016/03/19		92	%	80 - 120
			Total Cadmium (Cd)	2016/03/19		97	%	80 - 120
			Total Calcium (Ca)	2016/03/19		99	%	80 - 120
			Total Chromium (Cr)	2016/03/19		91	%	80 - 120
			Total Cobalt (Co)	2016/03/19		91	%	80 - 120
			Total Copper (Cu)	2016/03/19		91	%	80 - 120
			Total Iron (Fe)	2016/03/19		96	%	80 - 120
			Total Lead (Pb)	2016/03/19		97	%	80 - 120
			Total Magnesium (Mg)	2016/03/19		96	%	80 - 120
			Total Manganese (Mn)	2016/03/19		95	%	80 - 120
			Total Molybdenum (Mo)	2016/03/19		99	%	80 - 120
			Total Nickel (Ni)	2016/03/19		93	%	80 - 120
			Total Phosphorus (P)	2016/03/19		99	%	80 - 120
			Total Potassium (K)	2016/03/19		99	%	80 - 120
			Total Selenium (Se)	2016/03/19		90	%	80 - 120
			Total Silver (Ag)	2016/03/19		96	%	80 - 120
			Total Sodium (Na)	2016/03/19		99	%	80 - 120
			Total Strontium (Sr)	2016/03/19		98	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Total Thallium (Tl)	2016/03/19		96	%	80 - 120
			Total Tin (Sn)	2016/03/19		103	%	80 - 120
			Total Titanium (Ti)	2016/03/19		95	%	80 - 120
			Total Uranium (U)	2016/03/19		104	%	80 - 120
			Total Vanadium (V)	2016/03/19		94	%	80 - 120
			Total Zinc (Zn)	2016/03/19		94	%	80 - 120
4421891	BAN	Method Blank	Total Aluminum (Al)	2016/03/19	<5.0		ug/L	
			Total Antimony (Sb)	2016/03/19	<1.0		ug/L	
			Total Arsenic (As)	2016/03/19	<1.0		ug/L	
			Total Barium (Ba)	2016/03/19	<1.0		ug/L	
			Total Beryllium (Be)	2016/03/19	<1.0		ug/L	
			Total Bismuth (Bi)	2016/03/19	<2.0		ug/L	
			Total Boron (B)	2016/03/19	<50		ug/L	
			Total Cadmium (Cd)	2016/03/19	<0.010		ug/L	
			Total Calcium (Ca)	2016/03/19	<100		ug/L	
			Total Chromium (Cr)	2016/03/19	<1.0		ug/L	
			Total Cobalt (Co)	2016/03/19	<0.40		ug/L	
			Total Copper (Cu)	2016/03/19	<2.0		ug/L	
			Total Iron (Fe)	2016/03/19	<50		ug/L	
			Total Lead (Pb)	2016/03/19	<0.50		ug/L	
			Total Magnesium (Mg)	2016/03/19	<100		ug/L	
			Total Manganese (Mn)	2016/03/19	<2.0		ug/L	
			Total Molybdenum (Mo)	2016/03/19	<2.0		ug/L	
			Total Nickel (Ni)	2016/03/19	<2.0		ug/L	
			Total Phosphorus (P)	2016/03/19	<100		ug/L	
			Total Potassium (K)	2016/03/19	<100		ug/L	
			Total Selenium (Se)	2016/03/19	<1.0		ug/L	
			Total Silver (Ag)	2016/03/19	<0.10		ug/L	
			Total Sodium (Na)	2016/03/19	<100		ug/L	
			Total Strontium (Sr)	2016/03/19	<2.0		ug/L	
			Total Thallium (Tl)	2016/03/19	<0.10		ug/L	
			Total Tin (Sn)	2016/03/19	<2.0		ug/L	
			Total Titanium (Ti)	2016/03/19	<2.0		ug/L	
			Total Uranium (U)	2016/03/19	<0.10		ug/L	
			Total Vanadium (V)	2016/03/19	<2.0		ug/L	
			Total Zinc (Zn)	2016/03/19	<5.0		ug/L	
4421891	BAN	RPD - Sample/Sample Dup	Total Aluminum (Al)	2016/03/19	NC		%	20
			Total Antimony (Sb)	2016/03/19	NC		%	20
			Total Arsenic (As)	2016/03/19	0.23		%	20
			Total Barium (Ba)	2016/03/19	NC		%	20
			Total Beryllium (Be)	2016/03/19	NC		%	20
			Total Bismuth (Bi)	2016/03/19	NC		%	20
			Total Boron (B)	2016/03/19	NC		%	20
			Total Cadmium (Cd)	2016/03/19	NC		%	20
			Total Calcium (Ca)	2016/03/19	NC		%	20
			Total Chromium (Cr)	2016/03/19	NC		%	20
			Total Cobalt (Co)	2016/03/19	NC		%	20
			Total Copper (Cu)	2016/03/19	3.8		%	20
			Total Iron (Fe)	2016/03/19	NC		%	20
			Total Lead (Pb)	2016/03/19	NC		%	20
			Total Magnesium (Mg)	2016/03/19	NC		%	20
			Total Manganese (Mn)	2016/03/19	NC		%	20
			Total Molybdenum (Mo)	2016/03/19	NC		%	20
			Total Nickel (Ni)	2016/03/19	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Total Phosphorus (P)	2016/03/19	NC		%	20
			Total Potassium (K)	2016/03/19	NC		%	20
			Total Selenium (Se)	2016/03/19	NC		%	20
			Total Silver (Ag)	2016/03/19	NC		%	20
			Total Sodium (Na)	2016/03/19	1.4		%	20
			Total Strontium (Sr)	2016/03/19	NC		%	20
			Total Thallium (Tl)	2016/03/19	NC		%	20
			Total Tin (Sn)	2016/03/19	NC		%	20
			Total Titanium (Ti)	2016/03/19	NC		%	20
			Total Uranium (U)	2016/03/19	7.4		%	20
			Total Vanadium (V)	2016/03/19	5.8		%	20
			Total Zinc (Zn)	2016/03/19	NC		%	20
4423089	MLB	Matrix Spike	Total Aluminum (Al)	2016/03/21		99	%	80 - 120
			Total Antimony (Sb)	2016/03/21		96	%	80 - 120
			Total Arsenic (As)	2016/03/21		94	%	80 - 120
			Total Barium (Ba)	2016/03/21		NC	%	80 - 120
			Total Beryllium (Be)	2016/03/21		90	%	80 - 120
			Total Bismuth (Bi)	2016/03/21		96	%	80 - 120
			Total Boron (B)	2016/03/21		91	%	80 - 120
			Total Cadmium (Cd)	2016/03/21		95	%	80 - 120
			Total Calcium (Ca)	2016/03/21		94	%	80 - 120
			Total Chromium (Cr)	2016/03/21		92	%	80 - 120
			Total Cobalt (Co)	2016/03/21		94	%	80 - 120
			Total Copper (Cu)	2016/03/21		93	%	80 - 120
			Total Iron (Fe)	2016/03/21		97	%	80 - 120
			Total Lead (Pb)	2016/03/21		93	%	80 - 120
			Total Magnesium (Mg)	2016/03/21		98	%	80 - 120
			Total Manganese (Mn)	2016/03/21		96	%	80 - 120
			Total Molybdenum (Mo)	2016/03/21		96	%	80 - 120
			Total Nickel (Ni)	2016/03/21		95	%	80 - 120
			Total Phosphorus (P)	2016/03/21		100	%	80 - 120
			Total Potassium (K)	2016/03/21		97	%	80 - 120
			Total Selenium (Se)	2016/03/21		97	%	80 - 120
			Total Silver (Ag)	2016/03/21		93	%	80 - 120
			Total Sodium (Na)	2016/03/21		99	%	80 - 120
			Total Strontium (Sr)	2016/03/21		96	%	80 - 120
			Total Thallium (Tl)	2016/03/21		96	%	80 - 120
			Total Tin (Sn)	2016/03/21		98	%	80 - 120
			Total Titanium (Ti)	2016/03/21		98	%	80 - 120
			Total Uranium (U)	2016/03/21		101	%	80 - 120
			Total Vanadium (V)	2016/03/21		92	%	80 - 120
			Total Zinc (Zn)	2016/03/21		97	%	80 - 120
4423089	MLB	Spiked Blank	Total Aluminum (Al)	2016/03/21		101	%	80 - 120
			Total Antimony (Sb)	2016/03/21		96	%	80 - 120
			Total Arsenic (As)	2016/03/21		95	%	80 - 120
			Total Barium (Ba)	2016/03/21		91	%	80 - 120
			Total Beryllium (Be)	2016/03/21		90	%	80 - 120
			Total Bismuth (Bi)	2016/03/21		97	%	80 - 120
			Total Boron (B)	2016/03/21		91	%	80 - 120
			Total Cadmium (Cd)	2016/03/21		96	%	80 - 120
			Total Calcium (Ca)	2016/03/21		97	%	80 - 120
			Total Chromium (Cr)	2016/03/21		95	%	80 - 120
			Total Cobalt (Co)	2016/03/21		97	%	80 - 120
			Total Copper (Cu)	2016/03/21		96	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Total Iron (Fe)	2016/03/21		100	%	80 - 120
			Total Lead (Pb)	2016/03/21		94	%	80 - 120
			Total Magnesium (Mg)	2016/03/21		101	%	80 - 120
			Total Manganese (Mn)	2016/03/21		98	%	80 - 120
			Total Molybdenum (Mo)	2016/03/21		96	%	80 - 120
			Total Nickel (Ni)	2016/03/21		98	%	80 - 120
			Total Phosphorus (P)	2016/03/21		103	%	80 - 120
			Total Potassium (K)	2016/03/21		101	%	80 - 120
			Total Selenium (Se)	2016/03/21		97	%	80 - 120
			Total Silver (Ag)	2016/03/21		97	%	80 - 120
			Total Sodium (Na)	2016/03/21		103	%	80 - 120
			Total Strontium (Sr)	2016/03/21		97	%	80 - 120
			Total Thallium (Tl)	2016/03/21		96	%	80 - 120
			Total Tin (Sn)	2016/03/21		99	%	80 - 120
			Total Titanium (Ti)	2016/03/21		100	%	80 - 120
			Total Uranium (U)	2016/03/21		103	%	80 - 120
			Total Vanadium (V)	2016/03/21		95	%	80 - 120
			Total Zinc (Zn)	2016/03/21		98	%	80 - 120
4423089	MLB	Method Blank	Total Aluminum (Al)	2016/03/21	8.3, RDL=5.0		ug/L	
			Total Antimony (Sb)	2016/03/21	<1.0		ug/L	
			Total Arsenic (As)	2016/03/21	<1.0		ug/L	
			Total Barium (Ba)	2016/03/21	<1.0		ug/L	
			Total Beryllium (Be)	2016/03/21	<1.0		ug/L	
			Total Bismuth (Bi)	2016/03/21	<2.0		ug/L	
			Total Boron (B)	2016/03/21	<50		ug/L	
			Total Cadmium (Cd)	2016/03/21	<0.010		ug/L	
			Total Calcium (Ca)	2016/03/21	<100		ug/L	
			Total Chromium (Cr)	2016/03/21	<1.0		ug/L	
			Total Cobalt (Co)	2016/03/21	<0.40		ug/L	
			Total Copper (Cu)	2016/03/21	<2.0		ug/L	
			Total Iron (Fe)	2016/03/21	<50		ug/L	
			Total Lead (Pb)	2016/03/21	<0.50		ug/L	
			Total Magnesium (Mg)	2016/03/21	<100		ug/L	
			Total Manganese (Mn)	2016/03/21	<2.0		ug/L	
			Total Molybdenum (Mo)	2016/03/21	<2.0		ug/L	
			Total Nickel (Ni)	2016/03/21	<2.0		ug/L	
			Total Phosphorus (P)	2016/03/21	<100		ug/L	
			Total Potassium (K)	2016/03/21	<100		ug/L	
			Total Selenium (Se)	2016/03/21	<1.0		ug/L	
			Total Silver (Ag)	2016/03/21	<0.10		ug/L	
			Total Sodium (Na)	2016/03/21	<100		ug/L	
			Total Strontium (Sr)	2016/03/21	<2.0		ug/L	
			Total Thallium (Tl)	2016/03/21	<0.10		ug/L	
			Total Tin (Sn)	2016/03/21	<2.0		ug/L	
			Total Titanium (Ti)	2016/03/21	<2.0		ug/L	
			Total Uranium (U)	2016/03/21	<0.10		ug/L	
			Total Vanadium (V)	2016/03/21	<2.0		ug/L	
			Total Zinc (Zn)	2016/03/21	<5.0		ug/L	
4423089	MLB	RPD - Sample/Sample Dup	Total Arsenic (As)	2016/03/21	NC		%	20
4423107	ARS	Matrix Spike	Total Mercury (Hg)	2016/03/22		100	%	80 - 120
4423107	ARS	Spiked Blank	Total Mercury (Hg)	2016/03/22		99	%	80 - 120
4423107	ARS	Method Blank	Total Mercury (Hg)	2016/03/22	<0.013		ug/L	
4423107	ARS	RPD - Sample/Sample Dup	Total Mercury (Hg)	2016/03/22	NC		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4423117	TMO	QC Standard	pH	2016/03/18		100	%	97 - 103
4423117	TMO	RPD - Sample/Sample Dup	pH	2016/03/18	0.14		%	N/A
4423118	TMO	Spiked Blank	Conductivity	2016/03/18		107	%	80 - 120
4423118	TMO	Method Blank	Conductivity	2016/03/18	1.2, RDL=1.0		uS/cm	
4423118	TMO	RPD - Sample/Sample Dup	Conductivity	2016/03/18	0.067		%	25
4423311	TMO	QC Standard	Turbidity	2016/03/18		105	%	80 - 120
4423311	TMO	Method Blank	Turbidity	2016/03/18	<0.10		NTU	
4423311	TMO	RPD - Sample/Sample Dup	Turbidity	2016/03/18	NC		%	20
4424065	LLE	Matrix Spike	Chromium (VI)	2016/03/18		100	%	80 - 120
4424065	LLE	Spiked Blank	Chromium (VI)	2016/03/18		96	%	80 - 120
4424065	LLE	Method Blank	Chromium (VI)	2016/03/18	<0.50		ug/L	
4424065	LLE	RPD - Sample/Sample Dup	Chromium (VI)	2016/03/18	NC		%	20
4425819	TMO	QC Standard	Turbidity	2016/03/21		103	%	80 - 120
4425819	TMO	Method Blank	Turbidity	2016/03/21	<0.10		NTU	
4425819	TMO	RPD - Sample/Sample Dup	Turbidity	2016/03/21	0.60		%	20
4427167	MYI	Matrix Spike	2,4,6-Tribromophenol	2016/03/23		71	%	50 - 130
			2-Fluorophenol	2016/03/23		31 (1)	%	50 - 130
			D5-Phenol	2016/03/23		37	%	30 - 130
4427167	MYI	Matrix Spike(CAM407)	2-Chlorophenol	2016/03/23		50 (2)	%	50 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/23		65	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/23		72	%	10 - 130
			2,4-Dichlorophenol	2016/03/23		69	%	50 - 130
			2,4-Dimethylphenol	2016/03/23		71	%	30 - 130
			2,4,6-Trichlorophenol	2016/03/23		68	%	10 - 130
			2,6-Dichlorophenol	2016/03/23		78	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/23		98	%	10 - 130
			4-Nitrophenol	2016/03/23		46	%	10 - 130
			m/p-Cresol	2016/03/23		62	%	10 - 130
			o-Cresol	2016/03/23		85	%	10 - 130
			Pentachlorophenol	2016/03/23		75	%	50 - 130
			Phenol	2016/03/23		39	%	30 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/23		73	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/23		76	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/23		76	%	10 - 130
			2,3,6-Trichlorophenol	2016/03/23		76	%	30 - 130
			2,4,5-Trichlorophenol	2016/03/23		68	%	50 - 130
			3,4,5-Trichlorophenol	2016/03/23		71	%	10 - 130
			2,4-Dinitrophenol	2016/03/23		57	%	30 - 130
			2,3-Dichlorophenol	2016/03/23		74	%	10 - 130
			2,5-Dichlorophenol	2016/03/23		75	%	10 - 130
			3,4-Dichlorophenol	2016/03/23		59	%	10 - 130
			3,5-Dichlorophenol	2016/03/23		79	%	10 - 130
			4,6-Dinitro-2-methylphenol	2016/03/23		60	%	10 - 130
			3 & 4-Chlorophenol	2016/03/23		71	%	10 - 130
			2-Nitrophenol	2016/03/23		56	%	10 - 130
4427167	MYI	Spiked Blank	2,4,6-Tribromophenol	2016/03/22		89	%	50 - 130
			2-Fluorophenol	2016/03/22		59	%	50 - 130
			D5-Phenol	2016/03/22		60	%	30 - 130
			2-Chlorophenol	2016/03/22		85	%	50 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/22		82	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/22		93	%	10 - 130
			2,4-Dichlorophenol	2016/03/22		96	%	50 - 130
			2,4-Dimethylphenol	2016/03/22		86	%	30 - 130

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Client Project #: 21347

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			2,4,6-Trichlorophenol	2016/03/22		90	%	10 - 130
			2,6-Dichlorophenol	2016/03/22		107	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/22		118	%	10 - 130
			4-Nitrophenol	2016/03/22		75	%	10 - 130
			m/p-Cresol	2016/03/22		86	%	10 - 130
			o-Cresol	2016/03/22		97	%	10 - 130
			Pentachlorophenol	2016/03/22		96	%	50 - 130
			Phenol	2016/03/22		65	%	30 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/22		94	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/22		95	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/22		103	%	10 - 130
			2,3,6-Trichlorophenol	2016/03/22		98	%	30 - 130
			2,4,5-Trichlorophenol	2016/03/22		87	%	50 - 130
			3,4,5-Trichlorophenol	2016/03/22		87	%	10 - 130
			2,4-Dinitrophenol	2016/03/22		70	%	30 - 130
			2,3-Dichlorophenol	2016/03/22		100	%	10 - 130
			2,5-Dichlorophenol	2016/03/22		102	%	10 - 130
			3,4-Dichlorophenol	2016/03/22		90	%	10 - 130
			3,5-Dichlorophenol	2016/03/22		105	%	10 - 130
			4,6-Dinitro-2-methylphenol	2016/03/22		75	%	10 - 130
			3 & 4-Chlorophenol	2016/03/22		95	%	10 - 130
			2-Nitrophenol	2016/03/22		86	%	10 - 130
4427167	MYI	Method Blank	2,4,6-Tribromophenol	2016/03/22		78	%	50 - 130
			2-Fluorophenol	2016/03/22		53	%	50 - 130
			D5-Phenol	2016/03/22		63	%	30 - 130
			2-Chlorophenol	2016/03/22	<0.1		ug/L	
			2,3,4,6-Tetrachlorophenol	2016/03/22	<0.1		ug/L	
			2,3,5-Trichlorophenol	2016/03/22	<0.1		ug/L	
			2,4-Dichlorophenol	2016/03/22	<0.1		ug/L	
			2,4-Dimethylphenol	2016/03/22	<1		ug/L	
			2,4,6-Trichlorophenol	2016/03/22	<0.1		ug/L	
			2,6-Dichlorophenol	2016/03/22	<0.1		ug/L	
			4-Chloro-3-Methylphenol	2016/03/22	<0.1		ug/L	
			4-Nitrophenol	2016/03/22	<1		ug/L	
			m/p-Cresol	2016/03/22	<0.5		ug/L	
			o-Cresol	2016/03/22	<0.5		ug/L	
			Pentachlorophenol	2016/03/22	<0.1		ug/L	
			Phenol	2016/03/22	<0.5		ug/L	
			2,3,4,5-Tetrachlorophenol	2016/03/22	<0.1		ug/L	
			2,3,5,6-Tetrachlorophenol	2016/03/22	<0.1		ug/L	
			2,3,4-Trichlorophenol	2016/03/22	<0.1		ug/L	
			2,3,6-Trichlorophenol	2016/03/22	<0.1		ug/L	
			2,4,5-Trichlorophenol	2016/03/22	<0.1		ug/L	
			3,4,5-Trichlorophenol	2016/03/22	<0.1		ug/L	
			2,4-Dinitrophenol	2016/03/22	<1		ug/L	
			2,3-Dichlorophenol	2016/03/22	<0.1		ug/L	
			2,5-Dichlorophenol	2016/03/22	<0.1		ug/L	
			3,4-Dichlorophenol	2016/03/22	<0.1		ug/L	
			3,5-Dichlorophenol	2016/03/22	<0.1		ug/L	
			4,6-Dinitro-2-methylphenol	2016/03/22	<1		ug/L	
			3 & 4-Chlorophenol	2016/03/22	<0.1		ug/L	
			2-Nitrophenol	2016/03/22	<1		ug/L	
4427167	MYI	RPD - Sample/Sample Dup	2-Chlorophenol	2016/03/22	NC		%	30
			2,3,4,6-Tetrachlorophenol	2016/03/22	NC		%	40

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			2,3,5-Trichlorophenol	2016/03/22	NC		%	40
			2,4-Dichlorophenol	2016/03/22	NC		%	30
			2,4-Dimethylphenol	2016/03/22	NC		%	30
			2,4,6-Trichlorophenol	2016/03/22	NC		%	30
			2,6-Dichlorophenol	2016/03/22	NC		%	40
			4-Chloro-3-Methylphenol	2016/03/22	NC		%	40
			4-Nitrophenol	2016/03/22	NC		%	40
			m/p-Cresol	2016/03/22	NC		%	40
			o-Cresol	2016/03/22	NC		%	40
			Pentachlorophenol	2016/03/22	NC		%	30
			Phenol	2016/03/22	NC		%	30
			2,3,4,5-Tetrachlorophenol	2016/03/22	NC		%	40
			2,3,5,6-Tetrachlorophenol	2016/03/22	NC		%	40
			2,3,4-Trichlorophenol	2016/03/22	NC		%	40
			2,3,6-Trichlorophenol	2016/03/22	NC		%	40
			2,4,5-Trichlorophenol	2016/03/22	NC		%	30
			3,4,5-Trichlorophenol	2016/03/22	NC		%	40
			2,4-Dinitrophenol	2016/03/22	NC		%	30
			2,3-Dichlorophenol	2016/03/22	NC		%	40
			2,5-Dichlorophenol	2016/03/22	NC		%	40
			3,4-Dichlorophenol	2016/03/22	NC		%	40
			3,5-Dichlorophenol	2016/03/22	NC		%	40
			4,6-Dinitro-2-methylphenol	2016/03/22	NC		%	40
			3 & 4-Chlorophenol	2016/03/22	NC		%	40
			2-Nitrophenol	2016/03/22	NC		%	40
4427773	NRG	Matrix Spike	Total Alkalinity (Total as CaCO3)	2016/03/22		NC	%	80 - 120
4427773	NRG	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/22		101	%	80 - 120
4427773	NRG	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/22	<5.0		mg/L	
4427773	NRG	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/22	0.80		%	25
4427780	NRG	Matrix Spike	Dissolved Chloride (Cl)	2016/03/23		NC	%	80 - 120
4427780	NRG	QC Standard	Dissolved Chloride (Cl)	2016/03/23		108	%	80 - 120
4427780	NRG	Spiked Blank	Dissolved Chloride (Cl)	2016/03/23		101	%	80 - 120
4427780	NRG	Method Blank	Dissolved Chloride (Cl)	2016/03/23	<1.0		mg/L	
4427780	NRG	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/23	0.21		%	25
4427789	NRG	Matrix Spike	Dissolved Sulphate (SO4)	2016/03/24		NC	%	80 - 120
4427789	NRG	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/24		106	%	80 - 120
4427789	NRG	Method Blank	Dissolved Sulphate (SO4)	2016/03/24	<2.0		mg/L	
4427789	NRG	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/24	0.65		%	25
4427791	NRG	Matrix Spike	Reactive Silica (SiO2)	2016/03/22		NC	%	80 - 120
4427791	NRG	Spiked Blank	Reactive Silica (SiO2)	2016/03/22		102	%	80 - 120
4427791	NRG	Method Blank	Reactive Silica (SiO2)	2016/03/22	<0.50		mg/L	
4427791	NRG	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/22	0.59		%	25
4427796	NRG	Spiked Blank	Colour	2016/03/23		103	%	80 - 120
4427796	NRG	Method Blank	Colour	2016/03/23	<5.0		TCU	
4427796	NRG	RPD - Sample/Sample Dup	Colour	2016/03/23	NC		%	20
4427799	NRG	Matrix Spike	Orthophosphate (P)	2016/03/23		96	%	80 - 120
4427799	NRG	Spiked Blank	Orthophosphate (P)	2016/03/23		102	%	80 - 120
4427799	NRG	Method Blank	Orthophosphate (P)	2016/03/23	<0.010		mg/L	
4427799	NRG	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/23	NC		%	25
4427801	NRG	Matrix Spike	Nitrate + Nitrite (N)	2016/03/24		103	%	80 - 120
4427801	NRG	Spiked Blank	Nitrate + Nitrite (N)	2016/03/24		110	%	80 - 120
4427801	NRG	Method Blank	Nitrate + Nitrite (N)	2016/03/24	<0.050		mg/L	
4427801	NRG	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/24	5.9		%	25
4427817	NRG	Matrix Spike	Nitrite (N)	2016/03/22		92	%	80 - 120

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4427817	NRG	Spiked Blank	Nitrite (N)	2016/03/22		93	%	80 - 120
4427817	NRG	Method Blank	Nitrite (N)	2016/03/22	<0.010		mg/L	
4427817	NRG	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/22	NC		%	25
4427827	NRG	Matrix Spike	Total Alkalinity (Total as CaCO3)	2016/03/22		95	%	80 - 120
4427827	NRG	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/22		100	%	80 - 120
4427827	NRG	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/22	<5.0		mg/L	
4427827	NRG	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/22	NC		%	25
4427839	NRG	Matrix Spike	Dissolved Chloride (Cl)	2016/03/23		98	%	80 - 120
4427839	NRG	QC Standard	Dissolved Chloride (Cl)	2016/03/23		107	%	80 - 120
4427839	NRG	Spiked Blank	Dissolved Chloride (Cl)	2016/03/23		110	%	80 - 120
4427839	NRG	Method Blank	Dissolved Chloride (Cl)	2016/03/23	<1.0		mg/L	
4427839	NRG	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/23	NC		%	25
4427844	NRG	Matrix Spike	Dissolved Sulphate (SO4)	2016/03/24		102	%	80 - 120
4427844	NRG	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/24		105	%	80 - 120
4427844	NRG	Method Blank	Dissolved Sulphate (SO4)	2016/03/24	<2.0		mg/L	
4427844	NRG	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/24	NC		%	25
4427845	NRG	Matrix Spike	Reactive Silica (SiO2)	2016/03/22		108	%	80 - 120
4427845	NRG	Spiked Blank	Reactive Silica (SiO2)	2016/03/22		101	%	80 - 120
4427845	NRG	Method Blank	Reactive Silica (SiO2)	2016/03/22	0.58, RDL=0.50		mg/L	
4427845	NRG	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/22	NC		%	25
4427846	NRG	Spiked Blank	Colour	2016/03/23		103	%	80 - 120
4427846	NRG	Method Blank	Colour	2016/03/23	<5.0		TCU	
4427846	NRG	RPD - Sample/Sample Dup	Colour	2016/03/23	NC		%	20
4427848	NRG	Matrix Spike	Orthophosphate (P)	2016/03/23		98	%	80 - 120
4427848	NRG	Spiked Blank	Orthophosphate (P)	2016/03/23		101	%	80 - 120
4427848	NRG	Method Blank	Orthophosphate (P)	2016/03/23	<0.010		mg/L	
4427848	NRG	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/23	NC		%	25
4427861	NRG	Matrix Spike	Nitrate + Nitrite (N)	2016/03/24		110	%	80 - 120
4427861	NRG	Spiked Blank	Nitrate + Nitrite (N)	2016/03/24		105	%	80 - 120
4427861	NRG	Method Blank	Nitrate + Nitrite (N)	2016/03/24	<0.050		mg/L	
4427861	NRG	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/24	NC		%	25
4427864	NRG	Matrix Spike	Nitrite (N)	2016/03/22		91	%	80 - 120
4427864	NRG	Spiked Blank	Nitrite (N)	2016/03/22		93	%	80 - 120
4427864	NRG	Method Blank	Nitrite (N)	2016/03/22	<0.010		mg/L	
4427864	NRG	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/22	NC		%	25
4427925	NRG	Matrix Spike	Total Alkalinity (Total as CaCO3)	2016/03/22		92	%	80 - 120
4427925	NRG	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/22		101	%	80 - 120
4427925	NRG	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/22	<5.0		mg/L	
4427925	NRG	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/22	NC		%	25
4427927	MCN	Matrix Spike(CAM414)	Nitrogen (Ammonia Nitrogen)	2016/03/22		91	%	80 - 120
4427927	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2016/03/22		94	%	80 - 120
4427927	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2016/03/22	<0.050		mg/L	
4427927	MCN	RPD - Sample/Sample Dup	Nitrogen (Ammonia Nitrogen)	2016/03/22	NC		%	20
4427948	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2016/03/22		96	%	80 - 120
4427948	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2016/03/22		94	%	80 - 120
4427948	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2016/03/22	<0.050		mg/L	
4427948	MCN	RPD - Sample/Sample Dup	Nitrogen (Ammonia Nitrogen)	2016/03/22	NC		%	20
4427955	NRG	Matrix Spike	Reactive Silica (SiO2)	2016/03/22		NC	%	80 - 120
4427955	NRG	Spiked Blank	Reactive Silica (SiO2)	2016/03/22		101	%	80 - 120
4427955	NRG	Method Blank	Reactive Silica (SiO2)	2016/03/22	<0.50		mg/L	
4427955	NRG	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/22	0.86		%	25
4427958	NRG	Matrix Spike	Dissolved Sulphate (SO4)	2016/03/24		NC	%	80 - 120
4427958	NRG	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/24		104	%	80 - 120

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4427958	NRG	Method Blank	Dissolved Sulphate (SO4)	2016/03/24	<2.0		mg/L	
4427958	NRG	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/24	1.6		%	25
4427968	NRG	Matrix Spike	Dissolved Chloride (Cl)	2016/03/23		NC	%	80 - 120
4427968	NRG	QC Standard	Dissolved Chloride (Cl)	2016/03/23		106	%	80 - 120
4427968	NRG	Spiked Blank	Dissolved Chloride (Cl)	2016/03/23		109	%	80 - 120
4427968	NRG	Method Blank	Dissolved Chloride (Cl)	2016/03/23	<1.0		mg/L	
4427968	NRG	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/23	3.2		%	25
4427976	NRG	Spiked Blank	Colour	2016/03/23		107	%	80 - 120
4427976	NRG	Method Blank	Colour	2016/03/23	<5.0		TCU	
4427976	NRG	RPD - Sample/Sample Dup	Colour	2016/03/23	0.15		%	20
4427988	NRG	Matrix Spike	Nitrate + Nitrite (N)	2016/03/24		112	%	80 - 120
4427988	NRG	Spiked Blank	Nitrate + Nitrite (N)	2016/03/24		112	%	80 - 120
4427988	NRG	Method Blank	Nitrate + Nitrite (N)	2016/03/24	<0.050		mg/L	
4427988	NRG	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/24	NC		%	25
4427991	NRG	Matrix Spike	Orthophosphate (P)	2016/03/23		80	%	80 - 120
4427991	NRG	Spiked Blank	Orthophosphate (P)	2016/03/23		101	%	80 - 120
4427991	NRG	Method Blank	Orthophosphate (P)	2016/03/23	<0.010		mg/L	
4427991	NRG	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/23	NC		%	25
4428002	NRG	Matrix Spike	Nitrite (N)	2016/03/22		97	%	80 - 120
4428002	NRG	Spiked Blank	Nitrite (N)	2016/03/22		94	%	80 - 120
4428002	NRG	Method Blank	Nitrite (N)	2016/03/22	<0.010		mg/L	
4428002	NRG	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/22	NC		%	25
4429412	SMT	Matrix Spike	Total Organic Carbon (C)	2016/03/23		109	%	80 - 120
4429412	SMT	Spiked Blank	Total Organic Carbon (C)	2016/03/23		106	%	80 - 120
4429412	SMT	Method Blank	Total Organic Carbon (C)	2016/03/23	<0.50		mg/L	
4429412	SMT	RPD - Sample/Sample Dup	Total Organic Carbon (C)	2016/03/23	NC		%	20
4429414	SMT	Matrix Spike	Total Organic Carbon (C)	2016/03/23		101	%	80 - 120
4429414	SMT	Spiked Blank	Total Organic Carbon (C)	2016/03/23		109	%	80 - 120
4429414	SMT	Method Blank	Total Organic Carbon (C)	2016/03/23	<0.50		mg/L	
4429414	SMT	RPD - Sample/Sample Dup	Total Organic Carbon (C)	2016/03/23	NC		%	20

N/A = Not Applicable

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

(2) The recovery was below the lower control limit. This may represent a low bias in some results for this specific analyte.

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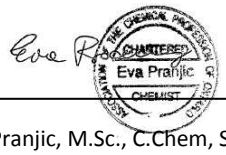
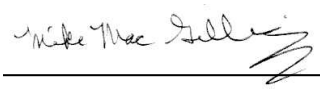
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist



Mike MacGillivray, Scientific Specialist (Inorganics)

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.maxxamanalytics.com

Maxxam Analytics International Corporation o/a Maxxam Analytics
200 Bluewater Road, Bedford Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-Free:(800) 565-7227 Fax:(902) 420-8612 www.maxxam.ca

Chain Of Custody Record

Page 1 of 1

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp.	Company Name		Quotation #	B61795	Maxxam Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Lisa Ladouceur	P.O. #		B653134	552098
Address	97 Troop Ave Dartmouth NS B3B 2A7	Address		Project #	21347	Chain Of Custody Record	Project Manager
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Project Name		C#552098-01-01	Avery Withrow
Email	Dartmouth.AP@englobecorp.com	Email	lisa.ladouceur@englobecorp.com	Site #			
				Sampled By			

Regulatory Criteria:

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

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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

X

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RCAp-MS Total Metals in Water	Mercury - Total (CVAA,LL)	Chromium (VI) in Water	Chlorinated Phenols - Acid Extractables by GC/MS	RBCA Hydrocarbons in Water	PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	3/14/16		SW	X		X	X	X	X			7	
2		SW2		16h30		X		X	X					4	
3		SW3		16h10		X		X	X	X	X			7	
4		SW4				X		X	X					4	
5		SW5				X		X	X					4	
6		SW6				X		X	X					4	
7		SW7		16h40		X		X	X					4	
8		SW8		17h05		X		X	X					4	
9		SW9	↓	17h20		X		X	X	X	X			7	2016 MAR 16 12:29
10		SW10	3/15/16	11h20	↓	X		X	X					4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Lisa Ladouceur	16/3/16	12h30	ERICA CHAFE				☐	1, -1, -1	☐ Yes ☐ No

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

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam Analytics International Corporation o/a Maxxam Analytics
200 Bluewater Road, Bedford, Nova Scotia Canada B4B 1G9 Tel:(902) 420-0203 Toll-Free:(800) 565-7227 Fax:(902) 420-8612 www.maxxam.ca

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp.	Company Name		Quotation #	B61795	Maxxam Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Lisa Ladouceur	P.O. #		B653134	552098
Address	97 Troop Ave Dartmouth NS B3B 2A7	Address		Project #	21347	Chain Of Custody Record	Project Manager
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Project Name		C#552098-02-01	Avery Withrow
Email	Dartmouth.AP@englobecorp.com	Email	lisa.ladouceur@englobecorp.com	Site #			
				Sampled By			

Regulatory Criteria:

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

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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

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

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

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RCAp-MS Total Metals in Water	Mercury - Total (CVAA,LL)	Chromium (VI) in Water	Chlorinated Phenols - Acid Extractables by GC/MS	RBCA Hydrocarbons in Water	PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	# of Bottles	Comments / Hazards / Other Required Analysis
1		SW11	3/15/16	15h45	SW	X		X	X					4	
2		SW-DUP	3/15/16			X		X	X	X	X			~~7~~	
3		~~DC~~ SW12	3/15/16	16h25	↓	X		X	X					4	
4		~~P2~~						~~X~~	~~X~~						
5		~~P3~~						~~X~~	~~X~~						
6		~~P4~~						~~X~~	~~X~~						
7		BACKGROUND	3/15/16	15h30	SW	X		X	X	X	X			7	
8												~~X~~	~~X~~		
9												X	X		2016 MAR 16 12:29
10												X	X		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Lisa Ladouceur	16/3/16	12h30	ERICA CHAFE				☐	1, -1, -1	☐ Yes ☐ No

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

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Your Project #: 21347
Your C.O.C. #: 552097-01-01, 552097-02-01

Attention:Lisa Ladouceur

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

Report Date: 2016/03/31
Report #: R3946828
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B656142
Received: 2016/03/21, 12:29

Sample Matrix: Water
Samples Received: 18

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Carbonate, Bicarbonate and Hydroxide	18	N/A	2016/03/24	N/A	SM 22 4500-CO2 D
Alkalinity	18	N/A	2016/03/28	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	18	N/A	2016/03/29	ATL SOP 00014	SM 22 4500-Cl- E m
Colour	18	N/A	2016/03/29	ATL SOP 00020	SM 22 2120C m
Acid Extractables by GC/MS (1)	7	2016/03/26	2016/03/28	CAM SOP-00332	EPA 8270 m
Acid Extractables by GC/MS (1)	3	2016/03/26	2016/03/29	CAM SOP-00332	EPA 8270 m
Acid Extractables by GC/MS (1)	2	2016/03/26	2016/03/30	CAM SOP-00332	EPA 8270 m
Conductance - water	14	N/A	2016/03/24	ATL SOP 00004	SM 22 2510B m
Conductance - water	4	N/A	2016/03/28	ATL SOP 00004	SM 22 2510B m
Hardness (calculated as CaCO3)	18	N/A	2016/03/24	ATL SOP 00048	SM 22 2340 B
Mercury - Total (CVAA,LL)	15	2016/03/23	2016/03/24	ATL SOP 00026	EPA 245.1 R3 m
Mercury - Total (CVAA,LL)	3	2016/03/24	2016/03/28	ATL SOP 00026	EPA 245.1 R3 m
Metals Water Diss. MS (2)	8	N/A	2016/03/23	ATL SOP 00058	EPA 6020A R1 m
Metals Water Diss. MS (2)	4	N/A	2016/03/24	ATL SOP 00058	EPA 6020A R1 m
Metals Water Diss. MS (as rec'd)	6	N/A	2016/03/23	ATL SOP 00058	EPA 6020A R1 m
Metals Water Total MS	13	2016/03/23	2016/03/23	ATL SOP 00058	EPA 6020A R1 m
Metals Water Total MS	5	2016/03/23	2016/03/24	ATL SOP 00058	EPA 6020A R1 m
Ion Balance (% Difference)	18	N/A	2016/03/30		Auto Calc.
Anion and Cation Sum	18	N/A	2016/03/29		Auto Calc.
Nitrogen Ammonia - water	18	N/A	2016/03/23	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	18	N/A	2016/03/30	ATL SOP 00016	USGS SOPINCF0452.2 m
Nitrogen - Nitrite	18	N/A	2016/03/30	ATL SOP 00017	SM 22 4500-NO2- B m
Nitrogen - Nitrate (as N)	18	N/A	2016/03/30	ATL SOP 00018	ASTM D3867
PAH in Water by GC/MS (SIM)	5	2016/03/23	2016/03/25	ATL SOP 00103	EPA 8270D 2007 m
pH (3)	18	N/A	2016/03/24	ATL SOP 00003	SM 22 4500-H+ B m
Phosphorus - ortho	18	N/A	2016/03/29	ATL SOP 00021	EPA 365.2 m
Sat. pH and Langelier Index (@ 20C)	18	N/A	2016/03/30	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	18	N/A	2016/03/30	ATL SOP 00049	Auto Calc.
Reactive Silica	18	N/A	2016/03/29	ATL SOP 00022	EPA 366.0 m
Sulphate	18	N/A	2016/03/30	ATL SOP 00023	ASTMD516-11 m

Your Project #: 21347
Your C.O.C. #: 552097-01-01, 552097-02-01

Attention:Lisa Ladouceur

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

Report Date: 2016/03/31
Report #: R3946828
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B656142
Received: 2016/03/21, 12:29

Sample Matrix: Water
Samples Received: 18

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Total Dissolved Solids (TDS calc)	18	N/A	2016/03/30		Auto Calc.
Organic carbon - Total (TOC) (4)	18	N/A	2016/03/24	ATL SOP 00037	SM 22 5310C m
Turbidity	18	N/A	2016/03/28	ATL SOP 00011	EPA 180.1 R2 m

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Analytics Mississauga
(2) Sample filtered in laboratory prior to analysis for dissolved metals.
(3) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(4) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Avery Withrow, Project Manager
Email: AWithrow@maxxam.ca
Phone# (902)420-0203 Ext:233

==========

This report has been generated and distributed using a secure automated process.
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC681			CBC683		CBC687			
Sampling Date		2016/03/20			2016/03/20		2016/03/20			
COC Number		552097-01-01			552097-01-01		552097-01-01			
	UNITS	MW1S	RDL	QC Batch	MW2S	RDL	MW4S	RDL	QC Batch	MDL
Calculated Parameters										
Anion Sum	me/L	3.36	N/A	4425427	5.37	N/A	1.40	N/A	4425427	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	130	1.0	4425433	140	1.0	25	1.0	4425433	0.20
Calculated TDS	mg/L	270	1.0	4425432	310	1.0	87	1.0	4425432	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	4425433	<1.0	1.0	<1.0	1.0	4425433	0.20
Cation Sum	me/L	6.39	N/A	4425427	5.02	N/A	1.14	N/A	4425427	N/A
Hardness (CaCO3)	mg/L	150	1.0	4425435	140	1.0	40	1.0	4425435	1.0
Ion Balance (% Difference)	%	31.1	N/A	4425436	3.37	N/A	10.2	N/A	4425436	N/A
Langelier Index (@ 20C)	N/A	-1.50		4425430	-0.591		-2.95		4425430	
Langelier Index (@ 4C)	N/A	-1.75		4425431	-0.840		-3.20		4425431	
Nitrate (N)	mg/L	<0.050	0.050	4425428	3.2	0.050	0.18	0.050	4425428	N/A
Saturation pH (@ 20C)	N/A	7.76		4425430	7.54		8.96		4425430	
Saturation pH (@ 4C)	N/A	8.01		4425431	7.79		9.21		4425431	
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	130	25	4433560	140	25	25	5.0	4433560	N/A
Dissolved Chloride (Cl)	mg/L	24	1.0	4433574	45	1.0	22	1.0	4433574	N/A
Colour	TCU	2100	400	4433625	24	5.0	<5.0	5.0	4433625	N/A
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	4433638	3.2	0.050	0.21	0.050	4433638	N/A
Nitrite (N)	mg/L	<0.010	0.010	4433647	0.034	0.010	0.025	0.010	4433647	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	2.4	0.25	4429631	0.18	0.050	0.27	0.050	4429631	N/A
Total Organic Carbon (C)	mg/L	<50 (1)	50	4430928	<25 (1)	25	<25 (1)	25	4430928	N/A
Orthophosphate (P)	mg/L	0.011	0.010	4433626	<0.010	0.010	<0.010	0.010	4433626	N/A
pH	pH	6.26	N/A	4430869	6.95	N/A	6.01	N/A	4430663	N/A
Reactive Silica (SiO2)	mg/L	18	0.50	4433568	5.8	0.50	7.2	0.50	4433568	N/A
Dissolved Sulphate (SO4)	mg/L	<2.0	2.0	4433623	48	10	13	2.0	4433623	N/A
Turbidity	NTU	>1000	1.0	4433248	>1000	1.0	>1000	1.0	4433248	0.10
Conductivity	uS/cm	350	1.0	4433399	520	1.0	130	1.0	4430660	N/A
Metals										
Dissolved Aluminum (Al)	ug/L	110	5.0	4428740	68	5.0	82	5.0	4428740	N/A
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Arsenic (As)	ug/L	1.5	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Barium (Ba)	ug/L	67	1.0	4428740	67	1.0	20	1.0	4428740	N/A
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	4428740	<2.0	2.0	<2.0	2.0	4428740	N/A
Dissolved Boron (B)	ug/L	<50	50	4428740	180	50	<50	50	4428740	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC681			CBC683		CBC687			
Sampling Date		2016/03/20			2016/03/20		2016/03/20			
COC Number		552097-01-01			552097-01-01		552097-01-01			
	UNITS	MW1S	RDL	QC Batch	MW2S	RDL	MW4S	RDL	QC Batch	MDL
Dissolved Cadmium (Cd)	ug/L	0.13	0.010	4428740	0.037	0.010	0.11	0.010	4428740	N/A
Dissolved Calcium (Ca)	ug/L	33000	100	4428740	53000	100	9500	100	4428740	N/A
Dissolved Chromium (Cr)	ug/L	3.9	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Cobalt (Co)	ug/L	50	0.40	4428740	1.3	0.40	38	0.40	4428740	N/A
Dissolved Copper (Cu)	ug/L	4.0	2.0	4428740	13	2.0	3.8	2.0	4428740	N/A
Dissolved Iron (Fe)	ug/L	76000	50	4428740	74	50	55	50	4428740	N/A
Dissolved Lead (Pb)	ug/L	<0.50	0.50	4428740	<0.50	0.50	<0.50	0.50	4428740	N/A
Dissolved Magnesium (Mg)	ug/L	15000	100	4428740	2400	100	3900	100	4428740	N/A
Dissolved Manganese (Mn)	ug/L	8200	2.0	4428740	1100	2.0	7000	2.0	4428740	N/A
Dissolved Molybdenum (Mo)	ug/L	<2.0	2.0	4428740	<2.0	2.0	<2.0	2.0	4428740	N/A
Dissolved Nickel (Ni)	ug/L	20	2.0	4428740	<2.0	2.0	9.6	2.0	4428740	N/A
Dissolved Phosphorus (P)	ug/L	<100	100	4428740	<100	100	<100	100	4428740	N/A
Dissolved Potassium (K)	ug/L	7100	100	4428740	17000	100	1900	100	4428740	N/A
Dissolved Selenium (Se)	ug/L	<1.0	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Silver (Ag)	ug/L	<0.10	0.10	4428740	<0.10	0.10	<0.10	0.10	4428740	N/A
Dissolved Sodium (Na)	ug/L	8400	100	4428740	40000	100	6300	100	4428740	N/A
Dissolved Strontium (Sr)	ug/L	270	2.0	4428740	160	2.0	61	2.0	4428740	N/A
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	4428740	<0.10	0.10	<0.10	0.10	4428740	N/A
Dissolved Tin (Sn)	ug/L	<2.0	2.0	4428740	<2.0	2.0	<2.0	2.0	4428740	N/A
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	4428740	<2.0	2.0	<2.0	2.0	4428740	N/A
Dissolved Uranium (U)	ug/L	0.41	0.10	4428740	0.44	0.10	<0.10	0.10	4428740	N/A
Dissolved Vanadium (V)	ug/L	<2.0	2.0	4428740	<2.0	2.0	<2.0	2.0	4428740	N/A
Dissolved Zinc (Zn)	ug/L	9.9	5.0	4428740	<5.0	5.0	<5.0	5.0	4428740	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC688		CBC689			CBC690			
Sampling Date		2016/03/20		2016/03/20			2016/03/20			
COC Number		552097-01-01		552097-01-01			552097-01-01			
	UNITS	MW4D	RDL	MW5	RDL	QC Batch	MW6S	RDL	QC Batch	MDL
Calculated Parameters										
Anion Sum	me/L	0.820	N/A	2.11	N/A	4425427	5.06	N/A	4425427	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	16	1.0	85	1.0	4425433	170	1.0	4425433	0.20
Calculated TDS	mg/L	59	1.0	130	1.0	4425432	320	1.0	4425432	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	<1.0	1.0	4425433	<1.0	1.0	4425433	0.20
Cation Sum	me/L	0.750	N/A	2.02	N/A	4425427	6.30	N/A	4425427	N/A
Hardness (CaCO3)	mg/L	23	1.0	62	1.0	4425435	170	1.0	4425435	1.0
Ion Balance (% Difference)	%	4.46	N/A	2.18	N/A	4425436	10.9	N/A	4425436	N/A
Langelier Index (@ 20C)	N/A	-3.03		-1.11		4425430	-1.33		4425430	
Langelier Index (@ 4C)	N/A	-3.28		-1.36		4425431	-1.58		4425431	
Nitrate (N)	mg/L	0.31	0.050	<0.050	0.050	4425428	0.37	0.050	4425428	N/A
Saturation pH (@ 20C)	N/A	9.37		8.23		4425430	7.61		4425430	
Saturation pH (@ 4C)	N/A	9.62		8.48		4425431	7.86		4425431	
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	16	5.0	85	5.0	4433560	170	25	4433560	N/A
Dissolved Chloride (Cl)	mg/L	5.8	1.0	11	1.0	4433574	58	1.0	4433574	N/A
Colour	TCU	37	5.0	9.1	5.0	4433625	730	250	4433625	N/A
Nitrate + Nitrite (N)	mg/L	0.31	0.050	<0.050	0.050	4433638	0.39	0.050	4433638	N/A
Nitrite (N)	mg/L	<0.010	0.010	<0.010	0.010	4433647	0.015	0.010	4433647	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	<0.050	0.050	0.61	0.050	4429631	4.3	0.25	4429631	N/A
Total Organic Carbon (C)	mg/L	<5.0 (1)	5.0	<25 (1)	25	4430928	58 (1)	25	4430928	N/A
Orthophosphate (P)	mg/L	0.010	0.010	0.015	0.010	4433626	0.020	0.010	4433626	N/A
pH	pH	6.34	N/A	7.11	N/A	4430663	6.28	N/A	4430869	N/A
Reactive Silica (SiO2)	mg/L	11	0.50	22	0.50	4433568	25	0.50	4433568	N/A
Dissolved Sulphate (SO4)	mg/L	15	2.0	3.8	2.0	4433623	<2.0	2.0	4433623	N/A
Turbidity	NTU	120	1.0	>1000	1.0	4433248	>1000	1.0	4433248	0.10
Conductivity	uS/cm	77	1.0	180	1.0	4430660	510	1.0	4433399	N/A
Metals										
Dissolved Aluminum (Al)	ug/L	39	5.0	14	5.0	4428740	210	5.0	4428740	N/A
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	4428740	<1.0	1.0	4428740	N/A
Dissolved Arsenic (As)	ug/L	<1.0	1.0	2.0	1.0	4428740	14	1.0	4428740	N/A
Dissolved Barium (Ba)	ug/L	11	1.0	33	1.0	4428740	57	1.0	4428740	N/A
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<1.0	1.0	4428740	<1.0	1.0	4428740	N/A
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	4428740	<2.0	2.0	4428740	N/A
Dissolved Boron (B)	ug/L	<50	50	<50	50	4428740	<50	50	4428740	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC688		CBC689			CBC690			
Sampling Date		2016/03/20		2016/03/20			2016/03/20			
COC Number		552097-01-01		552097-01-01			552097-01-01			
	UNITS	MW4D	RDL	MW5	RDL	QC Batch	MW6S	RDL	QC Batch	MDL
Dissolved Cadmium (Cd)	ug/L	0.025	0.010	<0.010	0.010	4428740	0.088	0.010	4428740	N/A
Dissolved Calcium (Ca)	ug/L	5400	100	16000	100	4428740	39000	100	4428740	N/A
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	<1.0	1.0	4428740	1.9	1.0	4428740	N/A
Dissolved Cobalt (Co)	ug/L	12	0.40	1.0	0.40	4428740	11	0.40	4428740	N/A
Dissolved Copper (Cu)	ug/L	<2.0	2.0	<2.0	2.0	4428740	4.1	2.0	4428740	N/A
Dissolved Iron (Fe)	ug/L	930	50	100	50	4428740	40000	50	4428740	N/A
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50	0.50	4428740	0.55	0.50	4428740	N/A
Dissolved Magnesium (Mg)	ug/L	2200	100	5400	100	4428740	17000	100	4428740	N/A
Dissolved Manganese (Mn)	ug/L	600	2.0	390	2.0	4428740	4600	2.0	4428740	N/A
Dissolved Molybdenum (Mo)	ug/L	<2.0	2.0	<2.0	2.0	4428740	<2.0	2.0	4428740	N/A
Dissolved Nickel (Ni)	ug/L	6.5	2.0	<2.0	2.0	4428740	11	2.0	4428740	N/A
Dissolved Phosphorus (P)	ug/L	<100	100	<100	100	4428740	<100	100	4428740	N/A
Dissolved Potassium (K)	ug/L	1000	100	5600	100	4428740	6300	100	4428740	N/A
Dissolved Selenium (Se)	ug/L	<1.0	1.0	<1.0	1.0	4428740	<1.0	1.0	4428740	N/A
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	4428740	<0.10	0.10	4428740	N/A
Dissolved Sodium (Na)	ug/L	5600	100	14000	100	4428740	24000	100	4428740	N/A
Dissolved Strontium (Sr)	ug/L	40	2.0	82	2.0	4428740	250	2.0	4428740	N/A
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	4428740	<0.10	0.10	4428740	N/A
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	4428740	<2.0	2.0	4428740	N/A
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	<2.0	2.0	4428740	4.2	2.0	4428740	N/A
Dissolved Uranium (U)	ug/L	<0.10	0.10	<0.10	0.10	4428740	0.71	0.10	4428740	N/A
Dissolved Vanadium (V)	ug/L	<2.0	2.0	<2.0	2.0	4428740	<2.0	2.0	4428740	N/A
Dissolved Zinc (Zn)	ug/L	11	5.0	<5.0	5.0	4428740	8.7	5.0	4428740	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC742			CBC745		CBC746			
Sampling Date		2016/03/20			2016/03/20		2016/03/20			
COC Number		552097-02-01			552097-02-01		552097-02-01			
	UNITS	MW6D	RDL	QC Batch	MW9	RDL	MW10	RDL	QC Batch	MDL
Calculated Parameters										
Anion Sum	me/L	2.05	N/A	4425427	2.03	N/A	11.0	N/A	4425427	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	51	1.0	4425433	50	1.0	380	1.0	4425433	0.20
Calculated TDS	mg/L	130	1.0	4425432	130	1.0	610	1.0	4425432	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	4425433	<1.0	1.0	<1.0	1.0	4425433	0.20
Cation Sum	me/L	1.94	N/A	4425427	1.91	N/A	10.5	N/A	4425427	N/A
Hardness (CaCO3)	mg/L	49	1.0	4425435	59	1.0	280	1.0	4425435	1.0
Ion Balance (% Difference)	%	2.76	N/A	4425436	3.05	N/A	2.51	N/A	4425436	N/A
Langelier Index (@ 20C)	N/A	-1.24		4425430	-1.83		0.0970		4425430	
Langelier Index (@ 4C)	N/A	-1.49		4425431	-2.08		-0.150		4425431	
Nitrate (N)	mg/L	0.43	0.050	4425428	0.25	0.050	<0.050	0.050	4425428	N/A
Saturation pH (@ 20C)	N/A	8.51		4425430	8.59		7.05		4425430	
Saturation pH (@ 4C)	N/A	8.76		4425431	8.84		7.30		4425431	
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	51	5.0	4433560	50	5.0	380	25	4433560	N/A
Dissolved Chloride (Cl)	mg/L	26	1.0	4433574	22	1.0	110	1.0	4433574	N/A
Colour	TCU	<5.0	5.0	4433625	<5.0	5.0	78	25	4433625	N/A
Nitrate + Nitrite (N)	mg/L	0.43	0.050	4433638	0.25	0.050	<0.050	0.050	4433638	N/A
Nitrite (N)	mg/L	<0.010	0.010	4433647	<0.010	0.010	<0.010	0.010	4433647	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.13	0.050	4429631	<0.050	0.050	3.3	0.25	4429673	N/A
Total Organic Carbon (C)	mg/L	<25 (1)	25	4430928	<50 (1)	50	52 (1)	5.0	4431000	N/A
Orthophosphate (P)	mg/L	0.013	0.010	4433626	<0.010	0.010	0.015	0.010	4433626	N/A
pH	pH	7.27	N/A	4430663	6.76	N/A	7.15	N/A	4430663	N/A
Reactive Silica (SiO2)	mg/L	21	0.50	4433568	14	0.50	18	0.50	4433568	N/A
Dissolved Sulphate (SO4)	mg/L	13	2.0	4433623	18	2.0	22	2.0	4433623	N/A
Turbidity	NTU	250	1.0	4433248	>1000	1.0	580	1.0	4433250	0.10
Conductivity	uS/cm	190	1.0	4430660	190	1.0	990	1.0	4430660	N/A
Metals										
Dissolved Aluminum (Al)	ug/L	5.4	5.0	4428740	8.3	5.0	75	5.0	4428740	N/A
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Arsenic (As)	ug/L	1.6	1.0	4428740	<1.0	1.0	5.0	1.0	4428740	N/A
Dissolved Barium (Ba)	ug/L	8.6	1.0	4428740	16	1.0	91	1.0	4428740	N/A
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	4428740	<2.0	2.0	<2.0	2.0	4428740	N/A
Dissolved Boron (B)	ug/L	<50	50	4428740	<50	50	95	50	4428740	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC742			CBC745		CBC746			
Sampling Date		2016/03/20			2016/03/20		2016/03/20			
COC Number		552097-02-01			552097-02-01		552097-02-01			
	UNITS	MW6D	RDL	QC Batch	MW9	RDL	MW10	RDL	QC Batch	MDL
Dissolved Cadmium (Cd)	ug/L	<0.010	0.010	4428740	0.058	0.010	<0.010	0.010	4428740	N/A
Dissolved Calcium (Ca)	ug/L	14000	100	4428740	12000	100	73000	100	4428740	N/A
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Cobalt (Co)	ug/L	0.74	0.40	4428740	53	0.40	19	0.40	4428740	N/A
Dissolved Copper (Cu)	ug/L	<2.0	2.0	4428740	<2.0	2.0	4.4	2.0	4428740	N/A
Dissolved Iron (Fe)	ug/L	300	50	4428740	<50	50	290	50	4428740	N/A
Dissolved Lead (Pb)	ug/L	<0.50	0.50	4428740	0.94	0.50	<0.50	0.50	4428740	N/A
Dissolved Magnesium (Mg)	ug/L	3600	100	4428740	7100	100	25000	100	4428740	N/A
Dissolved Manganese (Mn)	ug/L	110	2.0	4428740	2000	2.0	5200	2.0	4428740	N/A
Dissolved Molybdenum (Mo)	ug/L	2.1	2.0	4428740	<2.0	2.0	2.4	2.0	4428740	N/A
Dissolved Nickel (Ni)	ug/L	<2.0	2.0	4428740	21	2.0	12	2.0	4428740	N/A
Dissolved Phosphorus (P)	ug/L	<100	100	4428740	<100	100	<100	100	4428740	N/A
Dissolved Potassium (K)	ug/L	1200	100	4428740	3500	100	48000	100	4428740	N/A
Dissolved Selenium (Se)	ug/L	<1.0	1.0	4428740	<1.0	1.0	<1.0	1.0	4428740	N/A
Dissolved Silver (Ag)	ug/L	<0.10	0.10	4428740	<0.10	0.10	<0.10	0.10	4428740	N/A
Dissolved Sodium (Na)	ug/L	21000	100	4428740	15000	100	77000	100	4428740	N/A
Dissolved Strontium (Sr)	ug/L	62	2.0	4428740	89	2.0	350	2.0	4428740	N/A
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	4428740	<0.10	0.10	<0.10	0.10	4428740	N/A
Dissolved Tin (Sn)	ug/L	<2.0	2.0	4428740	<2.0	2.0	<2.0	2.0	4428740	N/A
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	4428740	<2.0	2.0	2.5	2.0	4428740	N/A
Dissolved Uranium (U)	ug/L	0.20	0.10	4428740	<0.10	0.10	1.8	0.10	4428740	N/A
Dissolved Vanadium (V)	ug/L	<2.0	2.0	4428740	<2.0	2.0	<2.0	2.0	4428740	N/A
Dissolved Zinc (Zn)	ug/L	11	5.0	4428740	5.9	5.0	8.3	5.0	4428740	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC747	CBC747			CBC748	CBC748			
Sampling Date		2016/03/20	2016/03/20			2016/03/20	2016/03/20			
COC Number		552097-02-01	552097-02-01			552097-02-01	552097-02-01			
	UNITS	MW11	MW11 Lab-Dup	RDL	QC Batch	MW12	MW12 Lab-Dup	RDL	QC Batch	MDL
Calculated Parameters										
Anion Sum	me/L	1.67		N/A	4425427	2.02		N/A	4425427	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	50		1.0	4425433	22		1.0	4425433	0.20
Calculated TDS	mg/L	100		1.0	4425432	150		1.0	4425432	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0		1.0	4425433	<1.0		1.0	4425433	0.20
Cation Sum	me/L	1.58		N/A	4425427	2.82		N/A	4425427	N/A
Hardness (CaCO3)	mg/L	59		1.0	4425435	19		1.0	4425435	1.0
Ion Balance (% Difference)	%	2.77		N/A	4425436	16.5		N/A	4425436	N/A
Langelier Index (@ 20C)	N/A	-2.38			4425430	-3.48			4425430	
Langelier Index (@ 4C)	N/A	-2.63			4425431	-3.73			4425431	
Nitrate (N)	mg/L	2.1		0.050	4425428	<0.050		0.050	4426199	N/A
Saturation pH (@ 20C)	N/A	8.43			4425430	9.31			4425430	
Saturation pH (@ 4C)	N/A	8.68			4425431	9.56			4425431	
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	50		5.0	4433560	22		5.0	4433560	N/A
Dissolved Chloride (Cl)	mg/L	11		1.0	4433574	53		1.0	4433574	N/A
Colour	TCU	5.2		5.0	4433625	130		25	4433625	N/A
Nitrate + Nitrite (N)	mg/L	2.1		0.050	4433638	<0.050		0.050	4433638	N/A
Nitrite (N)	mg/L	<0.010		0.010	4433647	<0.010		0.010	4433647	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.074		0.050	4429673	1.8		0.050	4429673	N/A
Total Organic Carbon (C)	mg/L	<50 (1)		50	4431000	25 (1)		5.0	4431000	N/A
Orthophosphate (P)	mg/L	0.064		0.010	4433626	<0.010		0.010	4433626	N/A
pH	pH	6.05		N/A	4430869	5.83	5.89	N/A	4430869	N/A
Reactive Silica (SiO2)	mg/L	8.2		0.50	4433568	7.3		0.50	4433568	N/A
Dissolved Sulphate (SO4)	mg/L	9.3		2.0	4433623	4.0		2.0	4433623	N/A
Turbidity	NTU	>1000		1.0	4433250	490		1.0	4433250	0.10
Conductivity	uS/cm	170	170	1.0	4433399	210		1.0	4433399	N/A
Metals										
Dissolved Aluminum (Al)	ug/L	140		5.0	4428740	140	150	5.0	4428740	N/A
Dissolved Antimony (Sb)	ug/L	<1.0		1.0	4428740	<1.0	<1.0	1.0	4428740	N/A
Dissolved Arsenic (As)	ug/L	<1.0		1.0	4428740	6.5	6.4	1.0	4428740	N/A
Dissolved Barium (Ba)	ug/L	32		1.0	4428740	32	32	1.0	4428740	N/A
Dissolved Beryllium (Be)	ug/L	<1.0		1.0	4428740	<1.0	<1.0	1.0	4428740	N/A
Dissolved Bismuth (Bi)	ug/L	<2.0		2.0	4428740	<2.0	<2.0	2.0	4428740	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC747	CBC747			CBC748	CBC748			
Sampling Date		2016/03/20	2016/03/20			2016/03/20	2016/03/20			
COC Number		552097-02-01	552097-02-01			552097-02-01	552097-02-01			
	UNITS	MW11	MW11 Lab-Dup	RDL	QC Batch	MW12	MW12 Lab-Dup	RDL	QC Batch	MDL
Dissolved Boron (B)	ug/L	<50		50	4428740	<50	<50	50	4428740	N/A
Dissolved Cadmium (Cd)	ug/L	0.087		0.010	4428740	0.056	0.061	0.010	4428740	N/A
Dissolved Calcium (Ca)	ug/L	16000		100	4428740	5200	5200	100	4428740	N/A
Dissolved Chromium (Cr)	ug/L	<1.0		1.0	4428740	2.0	1.9	1.0	4428740	N/A
Dissolved Cobalt (Co)	ug/L	1.3		0.40	4428740	13	13	0.40	4428740	N/A
Dissolved Copper (Cu)	ug/L	3.2		2.0	4428740	5.6	5.7	2.0	4428740	N/A
Dissolved Iron (Fe)	ug/L	<50		50	4428740	46000	45000	50	4428740	N/A
Dissolved Lead (Pb)	ug/L	<0.50		0.50	4428740	0.58	<0.50	0.50	4428740	N/A
Dissolved Magnesium (Mg)	ug/L	4400		100	4428740	1600	1600	100	4428740	N/A
Dissolved Manganese (Mn)	ug/L	3900		2.0	4428740	880	870	2.0	4428740	N/A
Dissolved Molybdenum (Mo)	ug/L	<2.0		2.0	4428740	<2.0	<2.0	2.0	4428740	N/A
Dissolved Nickel (Ni)	ug/L	<2.0		2.0	4428740	3.4	3.1	2.0	4428740	N/A
Dissolved Phosphorus (P)	ug/L	270		100	4428740	<100	<100	100	4428740	N/A
Dissolved Potassium (K)	ug/L	1100		100	4428740	2500	2600	100	4428740	N/A
Dissolved Selenium (Se)	ug/L	<1.0		1.0	4428740	<1.0	<1.0	1.0	4428740	N/A
Dissolved Silver (Ag)	ug/L	<0.10		0.10	4428740	<0.10	<0.10	0.10	4428740	N/A
Dissolved Sodium (Na)	ug/L	8500		100	4428740	14000	13000	100	4428740	N/A
Dissolved Strontium (Sr)	ug/L	57		2.0	4428740	46	45	2.0	4428740	N/A
Dissolved Thallium (Tl)	ug/L	<0.10		0.10	4428740	<0.10	<0.10	0.10	4428740	N/A
Dissolved Tin (Sn)	ug/L	<2.0		2.0	4428740	<2.0	<2.0	2.0	4428740	N/A
Dissolved Titanium (Ti)	ug/L	<2.0		2.0	4428740	<2.0	<2.0	2.0	4428740	N/A
Dissolved Uranium (U)	ug/L	<0.10		0.10	4428740	0.21	0.21	0.10	4428740	N/A
Dissolved Vanadium (V)	ug/L	<2.0		2.0	4428740	<2.0	<2.0	2.0	4428740	N/A
Dissolved Zinc (Zn)	ug/L	20		5.0	4428740	38	36	5.0	4428740	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC749	CBC749			
Sampling Date		2016/03/20	2016/03/20			
COC Number		552097-02-01	552097-02-01			
	UNITS	MWDUP	MWDUP Lab-Dup	RDL	QC Batch	MDL
Calculated Parameters						
Anion Sum	me/L	11.1		N/A	4425427	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	380		1.0	4425433	0.20
Calculated TDS	mg/L	610		1.0	4425432	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0		1.0	4425433	0.20
Cation Sum	me/L	10.5		N/A	4425427	N/A
Hardness (CaCO3)	mg/L	280		1.0	4425435	1.0
Ion Balance (% Difference)	%	2.77		N/A	4425436	N/A
Langelier Index (@ 20C)	N/A	0.139			4425430	
Langelier Index (@ 4C)	N/A	-0.108			4425431	
Nitrate (N)	mg/L	<0.050		0.050	4426199	N/A
Saturation pH (@ 20C)	N/A	7.04			4425430	
Saturation pH (@ 4C)	N/A	7.29			4425431	
Inorganics						
Total Alkalinity (Total as CaCO3)	mg/L	380		25	4433652	N/A
Dissolved Chloride (Cl)	mg/L	110		1.0	4433654	N/A
Colour	TCU	90		25	4433725	N/A
Nitrate + Nitrite (N)	mg/L	<0.050		0.050	4433728	N/A
Nitrite (N)	mg/L	<0.010		0.010	4433731	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	3.1	3.2	0.25	4429673	N/A
Total Organic Carbon (C)	mg/L	49 (1)		5.0	4431000	N/A
Orthophosphate (P)	mg/L	0.015		0.010	4433727	N/A
pH	pH	7.18		N/A	4430663	N/A
Reactive Silica (SiO2)	mg/L	18		0.50	4433719	N/A
Dissolved Sulphate (SO4)	mg/L	22		2.0	4433716	N/A
Turbidity	NTU	930		1.0	4433250	0.10
Conductivity	uS/cm	990		1.0	4430660	N/A
Metals						
Dissolved Aluminum (Al)	ug/L	55		5.0	4428740	N/A
Dissolved Antimony (Sb)	ug/L	<1.0		1.0	4428740	N/A
Dissolved Arsenic (As)	ug/L	4.8		1.0	4428740	N/A
Dissolved Barium (Ba)	ug/L	88		1.0	4428740	N/A
Dissolved Beryllium (Be)	ug/L	<1.0		1.0	4428740	N/A
Dissolved Bismuth (Bi)	ug/L	<2.0		2.0	4428740	N/A

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N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATL. RCAP-MS DISSOLVED (LABFILT) IN W

Maxxam ID		CBC749	CBC749			
Sampling Date		2016/03/20	2016/03/20			
COC Number		552097-02-01	552097-02-01			
	UNITS	MWDUP	MWDUP Lab-Dup	RDL	QC Batch	MDL
Dissolved Boron (B)	ug/L	95		50	4428740	N/A
Dissolved Cadmium (Cd)	ug/L	0.017		0.010	4428740	N/A
Dissolved Calcium (Ca)	ug/L	73000		100	4428740	N/A
Dissolved Chromium (Cr)	ug/L	<1.0		1.0	4428740	N/A
Dissolved Cobalt (Co)	ug/L	19		0.40	4428740	N/A
Dissolved Copper (Cu)	ug/L	4.3		2.0	4428740	N/A
Dissolved Iron (Fe)	ug/L	190		50	4428740	N/A
Dissolved Lead (Pb)	ug/L	<0.50		0.50	4428740	N/A
Dissolved Magnesium (Mg)	ug/L	25000		100	4428740	N/A
Dissolved Manganese (Mn)	ug/L	5200		2.0	4428740	N/A
Dissolved Molybdenum (Mo)	ug/L	2.4		2.0	4428740	N/A
Dissolved Nickel (Ni)	ug/L	12		2.0	4428740	N/A
Dissolved Phosphorus (P)	ug/L	<100		100	4428740	N/A
Dissolved Potassium (K)	ug/L	48000		100	4428740	N/A
Dissolved Selenium (Se)	ug/L	<1.0		1.0	4428740	N/A
Dissolved Silver (Ag)	ug/L	<0.10		0.10	4428740	N/A
Dissolved Sodium (Na)	ug/L	78000		100	4428740	N/A
Dissolved Strontium (Sr)	ug/L	350		2.0	4428740	N/A
Dissolved Thallium (Tl)	ug/L	<0.10		0.10	4428740	N/A
Dissolved Tin (Sn)	ug/L	<2.0		2.0	4428740	N/A
Dissolved Titanium (Ti)	ug/L	2.5		2.0	4428740	N/A
Dissolved Uranium (U)	ug/L	2.1		0.10	4428740	N/A
Dissolved Vanadium (V)	ug/L	<2.0		2.0	4428740	N/A
Dissolved Zinc (Zn)	ug/L	7.5		5.0	4428740	N/A

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

AT. RCAP-MS DISSOLVED (FIELDFILT) IN W

Maxxam ID		CBC682		CBC684		CBC685		CBC686			
Sampling Date		2016/03/20		2016/03/20		2016/03/20		2016/03/20			
COC Number		552097-01-01		552097-01-01		552097-01-01		552097-01-01			
	UNITS	MW1D	RDL	MW2D	RDL	MW3S	RDL	MW3D	RDL	QC Batch	MDL
Calculated Parameters											
Anion Sum	me/L	9.15	N/A	2.61	N/A	7.17	N/A	3.36	N/A	4425427	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	420	1.0	100	1.0	330	1.0	130	1.0	4425433	0.20
Calculated TDS	mg/L	470	1.0	150	1.0	370	1.0	200	1.0	4425432	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	1.1	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	4425433	0.20
Cation Sum	me/L	8.88	N/A	2.56	N/A	6.64	N/A	3.27	N/A	4425427	N/A
Hardness (CaCO3)	mg/L	370	1.0	95	1.0	290	1.0	110	1.0	4425435	1.0
Ion Balance (% Difference)	%	1.50	N/A	0.970	N/A	3.84	N/A	1.36	N/A	4425436	N/A
Langelier Index (@ 20C)	N/A	0.574		-0.0910		-0.221		-1.01		4425430	
Langelier Index (@ 4C)	N/A	0.325		-0.341		-0.470		-1.26		4425431	
Nitrate (N)	mg/L	0.14	0.050	0.17	0.050	<0.050	0.050	0.11	0.050	4425428	N/A
Saturation pH (@ 20C)	N/A	6.85		8.01		7.12		7.85		4425430	
Saturation pH (@ 4C)	N/A	7.10		8.26		7.37		8.10		4425431	
Inorganics											
Total Alkalinity (Total as CaCO3)	mg/L	420	25	100	10	330	25	130	25	4433560	N/A
Dissolved Chloride (Cl)	mg/L	19	1.0	13	1.0	16	1.0	21	1.0	4433574	N/A
Colour	TCU	<5.0	5.0	<5.0	5.0	<5.0	5.0	7.5	5.0	4433625	N/A
Nitrate + Nitrite (N)	mg/L	0.14	0.050	0.19	0.050	<0.050	0.050	0.11	0.050	4433638	N/A
Nitrite (N)	mg/L	<0.010	0.010	0.021	0.010	<0.010	0.010	<0.010	0.010	4433647	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.13	0.050	0.13	0.050	0.29	0.050	0.10	0.050	4429631	N/A
Total Organic Carbon (C)	mg/L	<5.0 (1)	5.0	0.74	0.50	<25 (1)	25	<5.0 (1)	5.0	4430928	N/A
Orthophosphate (P)	mg/L	0.021	0.010	0.046	0.010	0.017	0.010	0.017	0.010	4433626	N/A
pH	pH	7.43	N/A	7.92	N/A	6.90	N/A	6.84	N/A	4430663	N/A
Reactive Silica (SiO2)	mg/L	24	0.50	18	0.50	21	0.50	26	1.0	4433568	N/A
Dissolved Sulphate (SO4)	mg/L	8.3	2.0	11	2.0	4.2	2.0	8.9	2.0	4433623	N/A
Turbidity	NTU	440	1.0	230	1.0	>1000	1.0	150	1.0	4433248	0.10
Conductivity	uS/cm	760	1.0	230	1.0	600	1.0	310	1.0	4430660	N/A
Metals											
Dissolved Aluminum (Al)	ug/L	6.4	5.0	19	5.0	7.0	5.0	9.5	5.0	4428741	N/A
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	4428741	N/A
Dissolved Arsenic (As)	ug/L	2.7	1.0	14	1.0	1.4	1.0	4.1	1.0	4428741	N/A
Dissolved Barium (Ba)	ug/L	260	1.0	24	1.0	21	1.0	18	1.0	4428741	N/A
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	4428741	N/A
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	4428741	N/A
Dissolved Boron (B)	ug/L	<50	50	850	50	<50	50	<50	50	4428741	N/A

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

AT. RCAP-MS DISSOLVED (FIELDFILT) IN W

Maxxam ID		CBC682		CBC684		CBC685		CBC686			
Sampling Date		2016/03/20		2016/03/20		2016/03/20		2016/03/20			
COC Number		552097-01-01		552097-01-01		552097-01-01		552097-01-01			
	UNITS	MW1D	RDL	MW2D	RDL	MW3S	RDL	MW3D	RDL	QC Batch	MDL
Dissolved Cadmium (Cd)	ug/L	0.029	0.010	<0.010	0.010	0.084	0.010	0.014	0.010	4428741	N/A
Dissolved Calcium (Ca)	ug/L	97000	100	23000	100	63000	100	26000	100	4428741	N/A
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	4428741	N/A
Dissolved Cobalt (Co)	ug/L	2.0	0.40	<0.40	0.40	12	0.40	4.6	0.40	4428741	N/A
Dissolved Copper (Cu)	ug/L	<2.0	2.0	<2.0	2.0	2.4	2.0	<2.0	2.0	4428741	N/A
Dissolved Iron (Fe)	ug/L	<50	50	<50	50	<50	50	310	50	4428741	N/A
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50	0.50	<0.50	0.50	<0.50	0.50	4428741	N/A
Dissolved Magnesium (Mg)	ug/L	32000	100	9200	100	32000	100	11000	100	4428741	N/A
Dissolved Manganese (Mn)	ug/L	420	2.0	12	2.0	8000	2.0	250	2.0	4428741	N/A
Dissolved Molybdenum (Mo)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	4428741	N/A
Dissolved Nickel (Ni)	ug/L	7.2	2.0	2.4	2.0	11	2.0	7.4	2.0	4428741	N/A
Dissolved Phosphorus (P)	ug/L	<100	100	<100	100	<100	100	<100	100	4428741	N/A
Dissolved Potassium (K)	ug/L	11000	100	3700	100	7900	100	3800	100	4428741	N/A
Dissolved Selenium (Se)	ug/L	<1.0	1.0	<1.0	1.0	<1.0	1.0	<1.0	1.0	4428741	N/A
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	0.10	<0.10	0.10	4428741	N/A
Dissolved Sodium (Na)	ug/L	26000	100	13000	100	16000	100	21000	100	4428741	N/A
Dissolved Strontium (Sr)	ug/L	370	2.0	130	2.0	410	2.0	150	2.0	4428741	N/A
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	<0.10	0.10	<0.10	0.10	<0.10	0.10	4428741	N/A
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	4428741	N/A
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	4428741	N/A
Dissolved Uranium (U)	ug/L	3.1	0.10	0.37	0.10	0.61	0.10	0.14	0.10	4428741	N/A
Dissolved Vanadium (V)	ug/L	<2.0	2.0	<2.0	2.0	<2.0	2.0	<2.0	2.0	4428741	N/A
Dissolved Zinc (Zn)	ug/L	250	5.0	<5.0	5.0	6.1	5.0	91	5.0	4428741	N/A

RDL = Reportable Detection Limit
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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

AT. RCAP-MS DISSOLVED (FIELDFILT) IN W

Maxxam ID		CBC686		CBC743	CBC743			CBC744			
Sampling Date		2016/03/20		2016/03/20	2016/03/20			2016/03/20			
COC Number		552097-01-01		552097-02-01	552097-02-01			552097-02-01			
	UNITS	MW3D Lab-Dup	RDL	MW7	MW7 Lab-Dup	RDL	QC Batch	MW8	RDL	QC Batch	MDL
Calculated Parameters											
Anion Sum	me/L		N/A	2.61		N/A	4425427	4.06	N/A	4425427	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L		1.0	99		1.0	4425433	120	1.0	4425433	0.20
Calculated TDS	mg/L		1.0	150		1.0	4425432	250	1.0	4425432	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L		1.0	<1.0		1.0	4425433	<1.0	1.0	4425433	0.20
Cation Sum	me/L		N/A	2.49		N/A	4425427	4.17	N/A	4425427	N/A
Hardness (CaCO3)	mg/L		1.0	91		1.0	4425435	120	1.0	4425435	1.0
Ion Balance (% Difference)	%		N/A	2.35		N/A	4425436	1.34	N/A	4425436	N/A
Langelier Index (@ 20C)	N/A			-0.966			4425430	-0.943		4425430	
Langelier Index (@ 4C)	N/A			-1.22			4425431	-1.19		4425431	
Nitrate (N)	mg/L		0.050	0.13		0.050	4425428	<0.050	0.050	4425428	N/A
Saturation pH (@ 20C)	N/A			8.04			4425430	7.81		4425430	
Saturation pH (@ 4C)	N/A			8.29			4425431	8.06		4425431	
Inorganics											
Total Alkalinity (Total as CaCO3)	mg/L	130	25	99		5.0	4433560	120	25	4433560	N/A
Dissolved Chloride (Cl)	mg/L	21	1.0	17		1.0	4433574	49	1.0	4433574	N/A
Colour	TCU	10	5.0	<5.0		5.0	4433625	<5.0	5.0	4433625	N/A
Nitrate + Nitrite (N)	mg/L	0.12	0.050	0.13		0.050	4433638	<0.050	0.050	4433638	N/A
Nitrite (N)	mg/L	<0.010	0.010	<0.010		0.010	4433647	<0.010	0.010	4433647	N/A
Nitrogen (Ammonia Nitrogen)	mg/L		0.050	0.076	0.097	0.050	4429631	0.052	0.050	4429673	N/A
Total Organic Carbon (C)	mg/L		5.0	<5.0 (1)		5.0	4430928	4.2 (1)	1.0	4431000	N/A
Orthophosphate (P)	mg/L	0.019	0.010	0.026		0.010	4433626	0.022	0.010	4433626	N/A
pH	pH		N/A	7.07		N/A	4430663	6.86	N/A	4430663	N/A
Reactive Silica (SiO2)	mg/L	26	1.0	23		0.50	4433568	26	1.0	4433568	N/A
Dissolved Sulphate (SO4)	mg/L	9.3	2.0	6.3		2.0	4433623	13	2.0	4433623	N/A
Turbidity	NTU		1.0	130		1.0	4433248	210	1.0	4433250	0.10
Conductivity	uS/cm		1.0	230		1.0	4430660	390	1.0	4430660	N/A
Metals											
Dissolved Aluminum (Al)	ug/L	10	5.0	7.1		5.0	4428741	7.1	5.0	4428741	N/A
Dissolved Antimony (Sb)	ug/L	<1.0	1.0	<1.0		1.0	4428741	<1.0	1.0	4428741	N/A
Dissolved Arsenic (As)	ug/L	4.1	1.0	1.2		1.0	4428741	<1.0	1.0	4428741	N/A
Dissolved Barium (Ba)	ug/L	18	1.0	13		1.0	4428741	32	1.0	4428741	N/A
Dissolved Beryllium (Be)	ug/L	<1.0	1.0	<1.0		1.0	4428741	<1.0	1.0	4428741	N/A
Dissolved Bismuth (Bi)	ug/L	<2.0	2.0	<2.0		2.0	4428741	<2.0	2.0	4428741	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

AT. RCAP-MS DISSOLVED (FIELDFILT) IN W

Maxxam ID		CBC686		CBC743	CBC743			CBC744			
Sampling Date		2016/03/20		2016/03/20	2016/03/20			2016/03/20			
COC Number		552097-01-01		552097-02-01	552097-02-01			552097-02-01			
	UNITS	MW3D Lab-Dup	RDL	MW7	MW7 Lab-Dup	RDL	QC Batch	MW8	RDL	QC Batch	MDL
Dissolved Boron (B)	ug/L	<50	50	<50		50	4428741	<50	50	4428741	N/A
Dissolved Cadmium (Cd)	ug/L	0.014	0.010	0.020		0.010	4428741	0.076	0.010	4428741	N/A
Dissolved Calcium (Ca)	ug/L	26000	100	21000		100	4428741	33000	100	4428741	N/A
Dissolved Chromium (Cr)	ug/L	<1.0	1.0	<1.0		1.0	4428741	<1.0	1.0	4428741	N/A
Dissolved Cobalt (Co)	ug/L	4.6	0.40	0.61		0.40	4428741	6.4	0.40	4428741	N/A
Dissolved Copper (Cu)	ug/L	<2.0	2.0	<2.0		2.0	4428741	<2.0	2.0	4428741	N/A
Dissolved Iron (Fe)	ug/L	310	50	<50		50	4428741	<50	50	4428741	N/A
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50		0.50	4428741	<0.50	0.50	4428741	N/A
Dissolved Magnesium (Mg)	ug/L	11000	100	9000		100	4428741	10000	100	4428741	N/A
Dissolved Manganese (Mn)	ug/L	250	2.0	100		2.0	4428741	890	2.0	4428741	N/A
Dissolved Molybdenum (Mo)	ug/L	<2.0	2.0	<2.0		2.0	4428741	<2.0	2.0	4428741	N/A
Dissolved Nickel (Ni)	ug/L	7.8	2.0	<2.0		2.0	4428741	6.4	2.0	4428741	N/A
Dissolved Phosphorus (P)	ug/L	<100	100	<100		100	4428741	<100	100	4428741	N/A
Dissolved Potassium (K)	ug/L	3700	100	2700		100	4428741	6800	100	4428741	N/A
Dissolved Selenium (Se)	ug/L	<1.0	1.0	<1.0		1.0	4428741	<1.0	1.0	4428741	N/A
Dissolved Silver (Ag)	ug/L	<0.10	0.10	<0.10		0.10	4428741	<0.10	0.10	4428741	N/A
Dissolved Sodium (Na)	ug/L	21000	100	14000		100	4428741	35000	100	4428741	N/A
Dissolved Strontium (Sr)	ug/L	150	2.0	84		2.0	4428741	180	2.0	4428741	N/A
Dissolved Thallium (Tl)	ug/L	<0.10	0.10	<0.10		0.10	4428741	<0.10	0.10	4428741	N/A
Dissolved Tin (Sn)	ug/L	<2.0	2.0	<2.0		2.0	4428741	<2.0	2.0	4428741	N/A
Dissolved Titanium (Ti)	ug/L	<2.0	2.0	<2.0		2.0	4428741	<2.0	2.0	4428741	N/A
Dissolved Uranium (U)	ug/L	0.12	0.10	0.23		0.10	4428741	0.14	0.10	4428741	N/A
Dissolved Vanadium (V)	ug/L	<2.0	2.0	<2.0		2.0	4428741	<2.0	2.0	4428741	N/A
Dissolved Zinc (Zn)	ug/L	90	5.0	6.5		5.0	4428741	13	5.0	4428741	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		CBC681	CBC682	CBC683	CBC684	CBC685	CBC686			
Sampling Date		2016/03/20	2016/03/20	2016/03/20	2016/03/20	2016/03/20	2016/03/20			
COC Number		552097-01-01	552097-01-01	552097-01-01	552097-01-01	552097-01-01	552097-01-01			
	UNITS	MW1S	MW1D	MW2S	MW2D	MW3S	MW3D	RDL	QC Batch	MDL
Metals										
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	4429367	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		CBC687	CBC688	CBC689	CBC690	CBC742	CBC743			
Sampling Date		2016/03/20	2016/03/20	2016/03/20	2016/03/20	2016/03/20	2016/03/20			
COC Number		552097-01-01	552097-01-01	552097-01-01	552097-01-01	552097-02-01	552097-02-01			
	UNITS	MW4S	MW4D	MW5	MW6S	MW6D	MW7	RDL	QC Batch	MDL
Metals										
Total Mercury (Hg)	ug/L	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.013	4429367	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		CBC744	CBC745	CBC746		CBC747	CBC748			
Sampling Date		2016/03/20	2016/03/20	2016/03/20		2016/03/20	2016/03/20			
COC Number		552097-02-01	552097-02-01	552097-02-01		552097-02-01	552097-02-01			
	UNITS	MW8	MW9	MW10	QC Batch	MW11	MW12	RDL	QC Batch	MDL
Metals										
Total Mercury (Hg)	ug/L	<0.013	0.055	<0.013	4429367	0.75	<0.013	0.013	4431135	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		CBC749			
Sampling Date		2016/03/20			
COC Number		552097-02-01			
	UNITS	MWDUP	RDL	QC Batch	MDL
Metals					
Total Mercury (Hg)	ug/L	<0.013	0.013	4431135	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ELEMENTS BY ICP/MS (WATER)

Maxxam ID		CBC681	CBC682	CBC683	CBC684	CBC685	CBC686			
Sampling Date		2016/03/20	2016/03/20	2016/03/20	2016/03/20	2016/03/20	2016/03/20			
COC Number		552097-01-01	552097-01-01	552097-01-01	552097-01-01	552097-01-01	552097-01-01			
	UNITS	MW1S	MW1D	MW2S	MW2D	MW3S	MW3D	RDL	QC Batch	MDL
Metals										
Total Lead (Pb)	ug/L	27	3.4	7.2	1.2	2.1	1.0	0.50	4427540	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		CBC687	CBC688	CBC689	CBC690	CBC742	CBC743			
Sampling Date		2016/03/20	2016/03/20	2016/03/20	2016/03/20	2016/03/20	2016/03/20			
COC Number		552097-01-01	552097-01-01	552097-01-01	552097-01-01	552097-02-01	552097-02-01			
	UNITS	MW4S	MW4D	MW5	MW6S	MW6D	MW7	RDL	QC Batch	MDL
Metals										
Total Lead (Pb)	ug/L	22	5.9	9.8	20	5.9	1.4	0.50	4427540	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		CBC744			CBC745		CBC746	CBC747			
Sampling Date		2016/03/20			2016/03/20		2016/03/20	2016/03/20			
COC Number		552097-02-01			552097-02-01		552097-02-01	552097-02-01			
	UNITS	MW8	RDL	QC Batch	MW9	RDL	MW10	MW11	RDL	QC Batch	MDL
Metals											
Total Lead (Pb)	ug/L	0.93	0.50	4427540	79	5.0	2.8	70	0.50	4429359	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam ID		CBC748	CBC749			
Sampling Date		2016/03/20	2016/03/20			
COC Number		552097-02-01	552097-02-01			
	UNITS	MW12	MWDUP	RDL	QC Batch	MDL
Metals						
Total Lead (Pb)	ug/L	2.2	3.9	0.50	4429359	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC681		CBC682		CBC683		CBC684	CBC687			
Sampling Date		2016/03/20		2016/03/20		2016/03/20		2016/03/20	2016/03/20			
COC Number		552097-01-01		552097-01-01		552097-01-01		552097-01-01	552097-01-01			
	UNITS	MW1S	RDL	MW1D	RDL	MW2S	RDL	MW2D	MW4S	RDL	QC Batch	MDL
Polyaromatic Hydrocarbons												
1-Methylnaphthalene	ug/L								<0.050	0.050	4428759	N/A
2-Methylnaphthalene	ug/L								<0.050	0.050	4428759	N/A
Acenaphthene	ug/L								<0.010	0.010	4428759	N/A
Acenaphthylene	ug/L								<0.010	0.010	4428759	N/A
Anthracene	ug/L								<0.010	0.010	4428759	N/A
Benzo(a)anthracene	ug/L								<0.010	0.010	4428759	N/A
Benzo(a)pyrene	ug/L								<0.010	0.010	4428759	N/A
Benzo(b)fluoranthene	ug/L								<0.010	0.010	4428759	N/A
Benzo(g,h,i)perylene	ug/L								<0.010	0.010	4428759	N/A
Benzo(j)fluoranthene	ug/L								<0.010	0.010	4428759	N/A
Benzo(k)fluoranthene	ug/L								<0.010	0.010	4428759	N/A
Chrysene	ug/L								<0.010	0.010	4428759	N/A
Dibenz(a,h)anthracene	ug/L								<0.010	0.010	4428759	N/A
Fluoranthene	ug/L								<0.010	0.010	4428759	N/A
Fluorene	ug/L								<0.010	0.010	4428759	N/A
Indeno(1,2,3-cd)pyrene	ug/L								<0.010	0.010	4428759	N/A
Naphthalene	ug/L								<0.20	0.20	4428759	N/A
Perylene	ug/L								<0.010	0.010	4428759	N/A
Phenanthrene	ug/L								<0.010	0.010	4428759	N/A
Pyrene	ug/L								<0.010	0.010	4428759	N/A
Phenolics												
2-Chlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,3,4,6-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,3,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,4-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,4-Dimethylphenol	ug/L	<1	1	<1	1	<1	1	<1		1	4432656	0.05
2,4,6-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,6-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
4-Chloro-3-Methylphenol	ug/L	<0.1	0.1	<0.2 (1)	0.2	<0.1	0.1	<0.1		0.1	4432656	0.05
4-Nitrophenol	ug/L	<1	1	<1	1	<1	1	<1		1	4432656	0.05
m/p-Cresol	ug/L	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5		0.5	4432656	0.05
o-Cresol	ug/L	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5		0.5	4432656	0.05
Pentachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	1.0		0.1	4432656	0.05
Phenol	ug/L	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5		0.5	4432656	0.05

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Detection Limit was raised due to matrix interferences.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
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Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC681		CBC682		CBC683		CBC684	CBC687			
Sampling Date		2016/03/20		2016/03/20		2016/03/20		2016/03/20	2016/03/20			
COC Number		552097-01-01		552097-01-01		552097-01-01		552097-01-01	552097-01-01			
	UNITS	MW1S	RDL	MW1D	RDL	MW2S	RDL	MW2D	MW4S	RDL	QC Batch	MDL
2,3,4,5-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,3,5,6-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,3,4-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,3,6-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,4,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
3,4,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,4-Dinitrophenol	ug/L	<1	1	<1	1	<1	1	<1		1	4432656	0.2
2,3-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
2,5-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
3,4-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
3,5-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1		0.1	4432656	0.05
4,6-Dinitro-2-methylphenol	ug/L	<1	1	<1	1	<1	1	<1		1	4432656	0.05
3 & 4-Chlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.2 (1)		0.2	4432656	0.05
2-Nitrophenol	ug/L	<1	1	<1	1	<1	1	<1		1	4432656	0.05
Surrogate Recovery (%)												
2,4,6-Tribromophenol	%	100		92		90		88			4432656	
2-Fluorophenol	%	60		63		37 (2)		52			4432656	
D5-Phenol	%	64		59		59		60			4432656	
D10-Anthracene	%								93		4428759	
D14-Terphenyl	%								103		4428759	
D8-Acenaphthylene	%								95		4428759	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.
(2) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC687	CBC688		CBC689	CBC689	CBC690			
Sampling Date		2016/03/20	2016/03/20		2016/03/20	2016/03/20	2016/03/20			
COC Number		552097-01-01	552097-01-01		552097-01-01	552097-01-01	552097-01-01			
	UNITS	MW4S Lab-Dup	MW4D	RDL	MW5	MW5 Lab-Dup	MW6S	RDL	QC Batch	MDL
Polyaromatic Hydrocarbons										
1-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	<0.050			0.050	4428759	N/A
2-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	<0.050			0.050	4428759	N/A
Acenaphthene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Acenaphthylene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Anthracene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Benzo(a)anthracene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Benzo(a)pyrene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Benzo(b)fluoranthene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Benzo(g,h,i)perylene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Benzo(j)fluoranthene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Benzo(k)fluoranthene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Chrysene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Fluoranthene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Fluorene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Naphthalene	ug/L	<0.20	<0.20	0.20	<0.20			0.20	4428759	N/A
Perylene	ug/L	<0.010	<0.010	0.010	0.019			0.010	4428759	N/A
Phenanthrene	ug/L	<0.010	<0.010	0.010	<0.010			0.010	4428759	N/A
Pyrene	ug/L	<0.010	<0.010	0.010	0.22			0.010	4428759	N/A
Phenolics										
2-Chlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,3,4,6-Tetrachlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,3,5-Trichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,4-Dichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,4-Dimethylphenol	ug/L			1	<1	<1	<1	1	4432656	0.05
2,4,6-Trichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,6-Dichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
4-Chloro-3-Methylphenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
4-Nitrophenol	ug/L			1	<1	<1	<1	1	4432656	0.05
m/p-Cresol	ug/L			0.5	<0.5	<0.5	<0.5	0.5	4432656	0.05
o-Cresol	ug/L			0.5	<0.5	<0.5	<0.5	0.5	4432656	0.05
Pentachlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
Phenol	ug/L			0.5	<0.5	<0.5	<0.5	0.5	4432656	0.05
2,3,4,5-Tetrachlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05

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

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC687	CBC688		CBC689	CBC689	CBC690			
Sampling Date		2016/03/20	2016/03/20		2016/03/20	2016/03/20	2016/03/20			
COC Number		552097-01-01	552097-01-01		552097-01-01	552097-01-01	552097-01-01			
	UNITS	MW4S Lab-Dup	MW4D	RDL	MW5	MW5 Lab-Dup	MW6S	RDL	QC Batch	MDL
2,3,5,6-Tetrachlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,3,4-Trichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,3,6-Trichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,4,5-Trichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
3,4,5-Trichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,4-Dinitrophenol	ug/L			1	<1	<1	<1	1	4432656	0.2
2,3-Dichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
2,5-Dichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
3,4-Dichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
3,5-Dichlorophenol	ug/L			0.1	<0.1	<0.1	<0.1	0.1	4432656	0.05
4,6-Dinitro-2-methylphenol	ug/L			1	<1	<1	<1	1	4432656	0.05
3 & 4-Chlorophenol	ug/L			0.2	<0.1	<0.1	<0.1	0.1	4432656	0.05
2-Nitrophenol	ug/L			1	<1	<1	<1	1	4432656	0.05
Surrogate Recovery (%)										
2,4,6-Tribromophenol	%				97	97	83		4432656	
2-Fluorophenol	%				72	74	35 (1)		4432656	
D5-Phenol	%				73	74	73		4432656	
D10-Anthracene	%	94	102		82				4428759	
D14-Terphenyl	%	97	106		99				4428759	
D8-Acenaphthylene	%	96	94		79				4428759	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC742		CBC744		CBC745		CBC746			
Sampling Date		2016/03/20		2016/03/20		2016/03/20		2016/03/20			
COC Number		552097-02-01		552097-02-01		552097-02-01		552097-02-01			
	UNITS	MW6D	RDL	MW8	RDL	MW9	RDL	MW10	RDL	QC Batch	MDL
Polyaromatic Hydrocarbons											
1-Methylnaphthalene	ug/L		0.050		0.050	<0.050	0.050		0.050	4428759	N/A
2-Methylnaphthalene	ug/L		0.050		0.050	<0.050	0.050		0.050	4428759	N/A
Acenaphthene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Acenaphthylene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Anthracene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Benzo(a)anthracene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Benzo(a)pyrene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Benzo(b)fluoranthene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Benzo(g,h,i)perylene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Benzo(j)fluoranthene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Benzo(k)fluoranthene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Chrysene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Dibenz(a,h)anthracene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Fluoranthene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Fluorene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Indeno(1,2,3-cd)pyrene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Naphthalene	ug/L		0.20		0.20	<0.20	0.20		0.20	4428759	N/A
Perylene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Phenanthrene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Pyrene	ug/L		0.010		0.010	<0.010	0.010		0.010	4428759	N/A
Phenolics											
2-Chlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,3,4,6-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,3,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,4-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,4-Dimethylphenol	ug/L	<1	1	<1	1	<1	1	<5	5	4432656	0.05
2,4,6-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,6-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
4-Chloro-3-Methylphenol	ug/L	<0.1	0.1	<0.3 (1)	0.3	<0.1	0.1	<0.5	0.5	4432656	0.05
4-Nitrophenol	ug/L	<1	1	<1	1	<1	1	<5	5	4432656	0.05
m/p-Cresol	ug/L	<0.5	0.5	<0.5	0.5	<0.5	0.5	18	2.5	4432656	0.05
o-Cresol	ug/L	<0.5	0.5	<0.5	0.5	<0.5	0.5	<2.5	2.5	4432656	0.05
Pentachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
Phenol	ug/L	<0.5	0.5	<0.5	0.5	<0.5	0.5	6.1	2.5	4432656	0.05
2,3,4,5-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC742		CBC744		CBC745		CBC746			
Sampling Date		2016/03/20		2016/03/20		2016/03/20		2016/03/20			
COC Number		552097-02-01		552097-02-01		552097-02-01		552097-02-01			
	UNITS	MW6D	RDL	MW8	RDL	MW9	RDL	MW10	RDL	QC Batch	MDL
2,3,5,6-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,3,4-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,3,6-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,4,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
3,4,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,4-Dinitrophenol	ug/L	<1	1	<1	1	<1	1	<5	5	4432656	0.2
2,3-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2,5-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
3,4-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
3,5-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
4,6-Dinitro-2-methylphenol	ug/L	<1	1	<1	1	<1	1	<5	5	4432656	0.05
3 & 4-Chlorophenol	ug/L	<0.2 (1)	0.2	<0.1	0.1	<0.1	0.1	<0.5	0.5	4432656	0.05
2-Nitrophenol	ug/L	<1	1	<1	1	<1	1	<5	5	4432656	0.05
Surrogate Recovery (%)											
2,4,6-Tribromophenol	%	87		97		87		99		4432656	
2-Fluorophenol	%	39 (2)		73		60		18 (2)		4432656	
D5-Phenol	%	77		88		85		67		4432656	
D10-Anthracene	%					87				4428759	
D14-Terphenyl	%					98				4428759	
D8-Acenaphthylene	%					91				4428759	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection Limit was raised due to matrix interferences.
(2) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC747		CBC749			
Sampling Date		2016/03/20		2016/03/20			
COC Number		552097-02-01		552097-02-01			
	UNITS	MW11	RDL	MWDUP	RDL	QC Batch	MDL
Polyaromatic Hydrocarbons							
1-Methylnaphthalene	ug/L	<0.050	0.050		0.050	4428759	N/A
2-Methylnaphthalene	ug/L	<0.050	0.050		0.050	4428759	N/A
Acenaphthene	ug/L	<0.010	0.010		0.010	4428759	N/A
Acenaphthylene	ug/L	<0.010	0.010		0.010	4428759	N/A
Anthracene	ug/L	<0.010	0.010		0.010	4428759	N/A
Benzo(a)anthracene	ug/L	<0.010	0.010		0.010	4428759	N/A
Benzo(a)pyrene	ug/L	<0.010	0.010		0.010	4428759	N/A
Benzo(b)fluoranthene	ug/L	<0.010	0.010		0.010	4428759	N/A
Benzo(g,h,i)perylene	ug/L	<0.010	0.010		0.010	4428759	N/A
Benzo(j)fluoranthene	ug/L	<0.010	0.010		0.010	4428759	N/A
Benzo(k)fluoranthene	ug/L	<0.010	0.010		0.010	4428759	N/A
Chrysene	ug/L	<0.010	0.010		0.010	4428759	N/A
Dibenz(a,h)anthracene	ug/L	<0.010	0.010		0.010	4428759	N/A
Fluoranthene	ug/L	<0.010	0.010		0.010	4428759	N/A
Fluorene	ug/L	<0.010	0.010		0.010	4428759	N/A
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010		0.010	4428759	N/A
Naphthalene	ug/L	<0.20	0.20		0.20	4428759	N/A
Perylene	ug/L	<0.010	0.010		0.010	4428759	N/A
Phenanthrene	ug/L	<0.010	0.010		0.010	4428759	N/A
Pyrene	ug/L	<0.010	0.010		0.010	4428759	N/A
Phenolics							
2-Chlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,3,4,6-Tetrachlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,3,5-Trichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,4-Dichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,4-Dimethylphenol	ug/L	<1	1	<5	5	4432656	0.05
2,4,6-Trichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,6-Dichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
4-Chloro-3-Methylphenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
4-Nitrophenol	ug/L	<1	1	<5	5	4432656	0.05
m/p-Cresol	ug/L	<0.5	0.5	17	2.5	4432656	0.05
o-Cresol	ug/L	<0.5	0.5	<2.5	2.5	4432656	0.05
Pentachlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
Phenol	ug/L	<0.5	0.5	6.2	2.5	4432656	0.05
2,3,4,5-Tetrachlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,3,5,6-Tetrachlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC747		CBC749			
Sampling Date		2016/03/20		2016/03/20			
COC Number		552097-02-01		552097-02-01			
	UNITS	MW11	RDL	MWDUP	RDL	QC Batch	MDL
2,3,4-Trichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,3,6-Trichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,4,5-Trichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
3,4,5-Trichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,4-Dinitrophenol	ug/L	<1	1	<5	5	4432656	0.2
2,3-Dichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2,5-Dichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
3,4-Dichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
3,5-Dichlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
4,6-Dinitro-2-methylphenol	ug/L	<1	1	<5	5	4432656	0.05
3 & 4-Chlorophenol	ug/L	<0.1	0.1	<0.5	0.5	4432656	0.05
2-Nitrophenol	ug/L	<1	1	<5	5	4432656	0.05
Surrogate Recovery (%)							
2,4,6-Tribromophenol	%	91		94		4432656	
2-Fluorophenol	%	36 (1)		15 (1)		4432656	
D5-Phenol	%	88		67		4432656	
D10-Anthracene	%	78				4428759	
D14-Terphenyl	%	81				4428759	
D8-Acenaphthylene	%	76				4428759	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC681
Sample ID: MW1S
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/28	May Yin Mak
Conductance - water	AT	4433399	N/A	2016/03/28	Tammy Peters
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/24	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430869	N/A	2016/03/24	Tammy Peters
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC682
Sample ID: MW1D
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/28	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS (as rec'd)	CICP/MS	4428741	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC682
Sample ID: MW1D
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC683
Sample ID: MW2S
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/28	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC684
Sample ID: MW2D
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/28	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS (as rec'd)	CICP/MS	4428741	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC685
Sample ID: MW3S
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS (as rec'd)	CICP/MS	4428741	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC685
Sample ID: MW3S
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC686
Sample ID: MW3D
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS (as rec'd)	CICP/MS	4428741	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC686 Dup
Sample ID: MW3D
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Metals Water Diss. MS (as rec'd)	CICP/MS	4428741	N/A	2016/03/23	Bryon Angevine
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey

Maxxam ID: CBC687
Sample ID: MW4S
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
PAH in Water by GC/MS (SIM)	GC/MS	4428759	2016/03/23	2016/03/25	Kate Barrett
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC687 Dup
Sample ID: MW4S
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH in Water by GC/MS (SIM)	GC/MS	4428759	2016/03/23	2016/03/25	Kate Barrett

Maxxam ID: CBC688
Sample ID: MW4D
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
PAH in Water by GC/MS (SIM)	GC/MS	4428759	2016/03/23	2016/03/25	Kate Barrett
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC689
Sample ID: MW5
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/28	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC689
Sample ID: MW5
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
PAH in Water by GC/MS (SIM)	GC/MS	4428759	2016/03/23	2016/03/25	Kate Barrett
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC689 Dup
Sample ID: MW5
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/28	May Yin Mak

Maxxam ID: CBC690
Sample ID: MW6S
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/28	May Yin Mak
Conductance - water	AT	4433399	N/A	2016/03/28	Tammy Peters
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/24	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC690
Sample ID: MW6S
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430869	N/A	2016/03/24	Tammy Peters
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC742
Sample ID: MW6D
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/28	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC743
Sample ID: MW7
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS (as rec'd)	CICP/MS	4428741	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4430928	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433248	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC743 Dup
Sample ID: MW7
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen Ammonia - water	KONE	4429631	N/A	2016/03/23	Mary Clancey

Maxxam ID: CBC744
Sample ID: MW8
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/29	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC744
Sample ID: MW8
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Water Diss. MS (as rec'd)	CICP/MS	4428741	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4427540	2016/03/23	2016/03/23	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC745
Sample ID: MW9
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/29	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4429359	2016/03/23	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
PAH in Water by GC/MS (SIM)	GC/MS	4428759	2016/03/23	2016/03/25	Kate Barrett
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC745
Sample ID: MW9
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC746
Sample ID: MW10
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/30	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4429367	2016/03/23	2016/03/24	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/24	Bryon Angevine
Metals Water Total MS	CICP/MS	4429359	2016/03/23	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC747
Sample ID: MW11
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC747
Sample ID: MW11
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/29	May Yin Mak
Conductance - water	AT	4433399	N/A	2016/03/28	Tammy Peters
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4429359	2016/03/23	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4425428	N/A	2016/03/30	Automated Statchk
PAH in Water by GC/MS (SIM)	GC/MS	4428759	2016/03/23	2016/03/25	Kate Barrett
pH	AT	4430869	N/A	2016/03/24	Tammy Peters
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC747 Dup
Sample ID: MW11
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT	4433399	N/A	2016/03/28	Tammy Peters

Maxxam ID: CBC748
Sample ID: MW12
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433560	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433574	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433625	N/A	2016/03/29	Mary Clancey
Conductance - water	AT	4433399	N/A	2016/03/28	Tammy Peters
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
Metals Water Total MS	CICP/MS	4429359	2016/03/23	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC748
Sample ID: MW12
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433638	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433647	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4426199	N/A	2016/03/30	Automated Statchk
pH	AT	4430869	N/A	2016/03/24	Tammy Peters
Phosphorus - ortho	KONE	4433626	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433568	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433623	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC748 Dup
Sample ID: MW12
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/23	Bryon Angevine
pH	AT	4430869	N/A	2016/03/24	Tammy Peters

Maxxam ID: CBC749
Sample ID: MWDUP
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4425433	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433652	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433654	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433725	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/30	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4425435	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Diss. MS	CICP/MS	4428740	N/A	2016/03/24	Bryon Angevine
Metals Water Total MS	CICP/MS	4429359	2016/03/23	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4425436	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4425427	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433728	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433731	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4426199	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash

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Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC749
Sample ID: MWDUP
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus - ortho	KONE	4433727	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4425430	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4425431	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433719	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433716	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4425432	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC749 Dup
Sample ID: MWDUP
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey

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GENERAL COMMENTS

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

Package 1	5.0°C
Package 2	2.3°C
Package 3	0.7°C
Package 4	1.3°C
Package 5	-0.7°C

Sample CBC681-01 : Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter.

Sample CBC687-01 : Poor RCAp Ion Balance due to sample matrix. Cation sum does not include contribution from Mn.

Sample CBC690-01 : Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter.

Sample CBC745-01 : Elevated reporting limits for trace metals due to sample matrix.

Sample CBC746-01 : CPH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Sample CBC748-01 : Poor RCAp Ion Balance due to sample matrix. Possibly due to fine particulate matter.

Sample CBC749-01 : CPH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4427540	BAN	Matrix Spike	Total Lead (Pb)	2016/03/23		94	%	80 - 120
4427540	BAN	Spiked Blank	Total Lead (Pb)	2016/03/23		95	%	80 - 120
4427540	BAN	Method Blank	Total Lead (Pb)	2016/03/23	<0.50		ug/L	
4428740	BAN	Matrix Spike(CBC748)	Dissolved Aluminum (Al)	2016/03/23		103	%	80 - 120
			Dissolved Antimony (Sb)	2016/03/23		100	%	80 - 120
			Dissolved Arsenic (As)	2016/03/23		97	%	80 - 120
			Dissolved Barium (Ba)	2016/03/23		96	%	80 - 120
			Dissolved Beryllium (Be)	2016/03/23		99	%	80 - 120
			Dissolved Bismuth (Bi)	2016/03/23		100	%	80 - 120
			Dissolved Boron (B)	2016/03/23		97	%	80 - 120
			Dissolved Cadmium (Cd)	2016/03/23		101	%	80 - 120
			Dissolved Calcium (Ca)	2016/03/23		102	%	80 - 120
			Dissolved Chromium (Cr)	2016/03/23		97	%	80 - 120
			Dissolved Cobalt (Co)	2016/03/23		98	%	80 - 120
			Dissolved Copper (Cu)	2016/03/23		97	%	80 - 120
			Dissolved Iron (Fe)	2016/03/23		NC	%	80 - 120
			Dissolved Lead (Pb)	2016/03/23		97	%	80 - 120
			Dissolved Magnesium (Mg)	2016/03/23		104	%	80 - 120
			Dissolved Manganese (Mn)	2016/03/23		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/03/23		100	%	80 - 120
			Dissolved Nickel (Ni)	2016/03/23		97	%	80 - 120
			Dissolved Phosphorus (P)	2016/03/23		105	%	80 - 120
			Dissolved Potassium (K)	2016/03/23		104	%	80 - 120
			Dissolved Selenium (Se)	2016/03/23		101	%	80 - 120
			Dissolved Silver (Ag)	2016/03/23		71 (1)	%	80 - 120
			Dissolved Sodium (Na)	2016/03/23		NC	%	80 - 120
			Dissolved Strontium (Sr)	2016/03/23		98	%	80 - 120
			Dissolved Thallium (Tl)	2016/03/23		100	%	80 - 120
			Dissolved Tin (Sn)	2016/03/23		101	%	80 - 120
			Dissolved Titanium (Ti)	2016/03/23		102	%	80 - 120
			Dissolved Uranium (U)	2016/03/23		106	%	80 - 120
			Dissolved Vanadium (V)	2016/03/23		97	%	80 - 120
			Dissolved Zinc (Zn)	2016/03/23		99	%	80 - 120
4428740	BAN	Spiked Blank	Dissolved Aluminum (Al)	2016/03/23		106	%	80 - 120
			Dissolved Antimony (Sb)	2016/03/23		99	%	80 - 120
			Dissolved Arsenic (As)	2016/03/23		96	%	80 - 120
			Dissolved Barium (Ba)	2016/03/23		98	%	80 - 120
			Dissolved Beryllium (Be)	2016/03/23		100	%	80 - 120
			Dissolved Bismuth (Bi)	2016/03/23		104	%	80 - 120
			Dissolved Boron (B)	2016/03/23		100	%	80 - 120
			Dissolved Cadmium (Cd)	2016/03/23		102	%	80 - 120
			Dissolved Calcium (Ca)	2016/03/23		102	%	80 - 120
			Dissolved Chromium (Cr)	2016/03/23		98	%	80 - 120
			Dissolved Cobalt (Co)	2016/03/23		99	%	80 - 120
			Dissolved Copper (Cu)	2016/03/23		98	%	80 - 120
			Dissolved Iron (Fe)	2016/03/23		103	%	80 - 120
			Dissolved Lead (Pb)	2016/03/23		100	%	80 - 120
			Dissolved Magnesium (Mg)	2016/03/23		104	%	80 - 120
			Dissolved Manganese (Mn)	2016/03/23		101	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/03/23		101	%	80 - 120
			Dissolved Nickel (Ni)	2016/03/23		101	%	80 - 120
			Dissolved Phosphorus (P)	2016/03/23		107	%	80 - 120
			Dissolved Potassium (K)	2016/03/23		106	%	80 - 120

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Report Date: 2016/03/31

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Client Project #: 21347
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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Dissolved Selenium (Se)	2016/03/23		99	%	80 - 120
			Dissolved Silver (Ag)	2016/03/23		98	%	80 - 120
			Dissolved Sodium (Na)	2016/03/23		105	%	80 - 120
			Dissolved Strontium (Sr)	2016/03/23		102	%	80 - 120
			Dissolved Thallium (Tl)	2016/03/23		101	%	80 - 120
			Dissolved Tin (Sn)	2016/03/23		100	%	80 - 120
			Dissolved Titanium (Ti)	2016/03/23		104	%	80 - 120
			Dissolved Uranium (U)	2016/03/23		107	%	80 - 120
			Dissolved Vanadium (V)	2016/03/23		98	%	80 - 120
			Dissolved Zinc (Zn)	2016/03/23		101	%	80 - 120
4428740	BAN	Method Blank	Dissolved Aluminum (Al)	2016/03/23	<5.0		ug/L	
			Dissolved Antimony (Sb)	2016/03/23	<1.0		ug/L	
			Dissolved Arsenic (As)	2016/03/23	<1.0		ug/L	
			Dissolved Barium (Ba)	2016/03/23	<1.0		ug/L	
			Dissolved Beryllium (Be)	2016/03/23	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2016/03/23	<2.0		ug/L	
			Dissolved Boron (B)	2016/03/23	<50		ug/L	
			Dissolved Cadmium (Cd)	2016/03/23	<0.010		ug/L	
			Dissolved Calcium (Ca)	2016/03/23	<100		ug/L	
			Dissolved Chromium (Cr)	2016/03/23	<1.0		ug/L	
			Dissolved Cobalt (Co)	2016/03/23	<0.40		ug/L	
			Dissolved Copper (Cu)	2016/03/23	<2.0		ug/L	
			Dissolved Iron (Fe)	2016/03/23	<50		ug/L	
			Dissolved Lead (Pb)	2016/03/23	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2016/03/23	<100		ug/L	
			Dissolved Manganese (Mn)	2016/03/23	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2016/03/23	<2.0		ug/L	
			Dissolved Nickel (Ni)	2016/03/23	<2.0		ug/L	
			Dissolved Phosphorus (P)	2016/03/23	<100		ug/L	
			Dissolved Potassium (K)	2016/03/23	<100		ug/L	
			Dissolved Selenium (Se)	2016/03/23	<1.0		ug/L	
			Dissolved Silver (Ag)	2016/03/23	<0.10		ug/L	
			Dissolved Sodium (Na)	2016/03/23	<100		ug/L	
			Dissolved Strontium (Sr)	2016/03/23	<2.0		ug/L	
			Dissolved Thallium (Tl)	2016/03/23	<0.10		ug/L	
			Dissolved Tin (Sn)	2016/03/23	<2.0		ug/L	
			Dissolved Titanium (Ti)	2016/03/23	<2.0		ug/L	
			Dissolved Uranium (U)	2016/03/23	<0.10		ug/L	
			Dissolved Vanadium (V)	2016/03/23	<2.0		ug/L	
			Dissolved Zinc (Zn)	2016/03/23	<5.0		ug/L	
4428740	BAN	RPD - Sample/Sample Dup	Dissolved Aluminum (Al)	2016/03/23	6.4		%	20
			Dissolved Antimony (Sb)	2016/03/23	NC		%	20
			Dissolved Arsenic (As)	2016/03/23	1.4		%	20
			Dissolved Barium (Ba)	2016/03/23	1.3		%	20
			Dissolved Beryllium (Be)	2016/03/23	NC		%	20
			Dissolved Bismuth (Bi)	2016/03/23	NC		%	20
			Dissolved Boron (B)	2016/03/23	NC		%	20
			Dissolved Cadmium (Cd)	2016/03/23	7.9		%	20
			Dissolved Calcium (Ca)	2016/03/23	0.28		%	20
			Dissolved Chromium (Cr)	2016/03/23	NC		%	20
			Dissolved Cobalt (Co)	2016/03/23	0.052		%	20
			Dissolved Copper (Cu)	2016/03/23	NC		%	20
			Dissolved Iron (Fe)	2016/03/23	1.4		%	20

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Dissolved Lead (Pb)	2016/03/23	NC		%	20
			Dissolved Magnesium (Mg)	2016/03/23	0.51		%	20
			Dissolved Manganese (Mn)	2016/03/23	0.76		%	20
			Dissolved Molybdenum (Mo)	2016/03/23	NC		%	20
			Dissolved Nickel (Ni)	2016/03/23	NC		%	20
			Dissolved Phosphorus (P)	2016/03/23	NC		%	20
			Dissolved Potassium (K)	2016/03/23	0.91		%	20
			Dissolved Selenium (Se)	2016/03/23	NC		%	20
			Dissolved Silver (Ag)	2016/03/23	NC		%	20
			Dissolved Sodium (Na)	2016/03/23	1.5		%	20
			Dissolved Strontium (Sr)	2016/03/23	2.1		%	20
			Dissolved Thallium (Tl)	2016/03/23	NC		%	20
			Dissolved Tin (Sn)	2016/03/23	NC		%	20
			Dissolved Titanium (Ti)	2016/03/23	NC		%	20
			Dissolved Uranium (U)	2016/03/23	NC		%	20
			Dissolved Vanadium (V)	2016/03/23	NC		%	20
			Dissolved Zinc (Zn)	2016/03/23	4.8		%	20
4428741	BAN	Matrix Spike(CBC686)	Dissolved Aluminum (Al)	2016/03/23		104	%	80 - 120
			Dissolved Antimony (Sb)	2016/03/23		102	%	80 - 120
			Dissolved Arsenic (As)	2016/03/23		97	%	80 - 120
			Dissolved Barium (Ba)	2016/03/23		96	%	80 - 120
			Dissolved Beryllium (Be)	2016/03/23		100	%	80 - 120
			Dissolved Bismuth (Bi)	2016/03/23		102	%	80 - 120
			Dissolved Boron (B)	2016/03/23		98	%	80 - 120
			Dissolved Cadmium (Cd)	2016/03/23		102	%	80 - 120
			Dissolved Calcium (Ca)	2016/03/23		NC	%	80 - 120
			Dissolved Chromium (Cr)	2016/03/23		96	%	80 - 120
			Dissolved Cobalt (Co)	2016/03/23		97	%	80 - 120
			Dissolved Copper (Cu)	2016/03/23		96	%	80 - 120
			Dissolved Iron (Fe)	2016/03/23		100	%	80 - 120
			Dissolved Lead (Pb)	2016/03/23		99	%	80 - 120
			Dissolved Magnesium (Mg)	2016/03/23		NC	%	80 - 120
			Dissolved Manganese (Mn)	2016/03/23		NC	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/03/23		103	%	80 - 120
			Dissolved Nickel (Ni)	2016/03/23		96	%	80 - 120
			Dissolved Phosphorus (P)	2016/03/23		105	%	80 - 120
			Dissolved Potassium (K)	2016/03/23		103	%	80 - 120
			Dissolved Selenium (Se)	2016/03/23		99	%	80 - 120
			Dissolved Silver (Ag)	2016/03/23		78 (1)	%	80 - 120
			Dissolved Sodium (Na)	2016/03/23		NC	%	80 - 120
			Dissolved Strontium (Sr)	2016/03/23		NC	%	80 - 120
			Dissolved Thallium (Tl)	2016/03/23		101	%	80 - 120
			Dissolved Tin (Sn)	2016/03/23		103	%	80 - 120
			Dissolved Titanium (Ti)	2016/03/23		102	%	80 - 120
			Dissolved Uranium (U)	2016/03/23		108	%	80 - 120
			Dissolved Vanadium (V)	2016/03/23		97	%	80 - 120
			Dissolved Zinc (Zn)	2016/03/23		97	%	80 - 120
4428741	BAN	Spiked Blank	Dissolved Aluminum (Al)	2016/03/23		106	%	80 - 120
			Dissolved Antimony (Sb)	2016/03/23		100	%	80 - 120
			Dissolved Arsenic (As)	2016/03/23		96	%	80 - 120
			Dissolved Barium (Ba)	2016/03/23		97	%	80 - 120
			Dissolved Beryllium (Be)	2016/03/23		100	%	80 - 120
			Dissolved Bismuth (Bi)	2016/03/23		103	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Dissolved Boron (B)	2016/03/23		98	%	80 - 120
			Dissolved Cadmium (Cd)	2016/03/23		101	%	80 - 120
			Dissolved Calcium (Ca)	2016/03/23		103	%	80 - 120
			Dissolved Chromium (Cr)	2016/03/23		97	%	80 - 120
			Dissolved Cobalt (Co)	2016/03/23		98	%	80 - 120
			Dissolved Copper (Cu)	2016/03/23		97	%	80 - 120
			Dissolved Iron (Fe)	2016/03/23		102	%	80 - 120
			Dissolved Lead (Pb)	2016/03/23		99	%	80 - 120
			Dissolved Magnesium (Mg)	2016/03/23		105	%	80 - 120
			Dissolved Manganese (Mn)	2016/03/23		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2016/03/23		100	%	80 - 120
			Dissolved Nickel (Ni)	2016/03/23		99	%	80 - 120
			Dissolved Phosphorus (P)	2016/03/23		104	%	80 - 120
			Dissolved Potassium (K)	2016/03/23		104	%	80 - 120
			Dissolved Selenium (Se)	2016/03/23		98	%	80 - 120
			Dissolved Silver (Ag)	2016/03/23		96	%	80 - 120
			Dissolved Sodium (Na)	2016/03/23		103	%	80 - 120
			Dissolved Strontium (Sr)	2016/03/23		100	%	80 - 120
			Dissolved Thallium (Tl)	2016/03/23		101	%	80 - 120
			Dissolved Tin (Sn)	2016/03/23		99	%	80 - 120
			Dissolved Titanium (Ti)	2016/03/23		106	%	80 - 120
			Dissolved Uranium (U)	2016/03/23		107	%	80 - 120
			Dissolved Vanadium (V)	2016/03/23		97	%	80 - 120
			Dissolved Zinc (Zn)	2016/03/23		99	%	80 - 120
4428741	BAN	Method Blank	Dissolved Aluminum (Al)	2016/03/23	<5.0		ug/L	
			Dissolved Antimony (Sb)	2016/03/23	<1.0		ug/L	
			Dissolved Arsenic (As)	2016/03/23	<1.0		ug/L	
			Dissolved Barium (Ba)	2016/03/23	<1.0		ug/L	
			Dissolved Beryllium (Be)	2016/03/23	<1.0		ug/L	
			Dissolved Bismuth (Bi)	2016/03/23	<2.0		ug/L	
			Dissolved Boron (B)	2016/03/23	<50		ug/L	
			Dissolved Cadmium (Cd)	2016/03/23	<0.010		ug/L	
			Dissolved Calcium (Ca)	2016/03/23	<100		ug/L	
			Dissolved Chromium (Cr)	2016/03/23	<1.0		ug/L	
			Dissolved Cobalt (Co)	2016/03/23	<0.40		ug/L	
			Dissolved Copper (Cu)	2016/03/23	<2.0		ug/L	
			Dissolved Iron (Fe)	2016/03/23	<50		ug/L	
			Dissolved Lead (Pb)	2016/03/23	<0.50		ug/L	
			Dissolved Magnesium (Mg)	2016/03/23	<100		ug/L	
			Dissolved Manganese (Mn)	2016/03/23	<2.0		ug/L	
			Dissolved Molybdenum (Mo)	2016/03/23	<2.0		ug/L	
			Dissolved Nickel (Ni)	2016/03/23	<2.0		ug/L	
			Dissolved Phosphorus (P)	2016/03/23	<100		ug/L	
			Dissolved Potassium (K)	2016/03/23	<100		ug/L	
			Dissolved Selenium (Se)	2016/03/23	<1.0		ug/L	
			Dissolved Silver (Ag)	2016/03/23	<0.10		ug/L	
			Dissolved Sodium (Na)	2016/03/23	<100		ug/L	
			Dissolved Strontium (Sr)	2016/03/23	<2.0		ug/L	
			Dissolved Thallium (Tl)	2016/03/23	<0.10		ug/L	
			Dissolved Tin (Sn)	2016/03/23	<2.0		ug/L	
			Dissolved Titanium (Ti)	2016/03/23	<2.0		ug/L	
			Dissolved Uranium (U)	2016/03/23	<0.10		ug/L	
			Dissolved Vanadium (V)	2016/03/23	<2.0		ug/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Dissolved Zinc (Zn)	2016/03/23	<5.0		ug/L	
4428741	BAN	RPD - Sample/Sample Dup	Dissolved Aluminum (Al)	2016/03/23	NC		%	20
			Dissolved Antimony (Sb)	2016/03/23	NC		%	20
			Dissolved Arsenic (As)	2016/03/23	NC		%	20
			Dissolved Barium (Ba)	2016/03/23	0.90		%	20
			Dissolved Beryllium (Be)	2016/03/23	NC		%	20
			Dissolved Bismuth (Bi)	2016/03/23	NC		%	20
			Dissolved Boron (B)	2016/03/23	NC		%	20
			Dissolved Cadmium (Cd)	2016/03/23	NC		%	20
			Dissolved Calcium (Ca)	2016/03/23	0.73		%	20
			Dissolved Chromium (Cr)	2016/03/23	NC		%	20
			Dissolved Cobalt (Co)	2016/03/23	1.2		%	20
			Dissolved Copper (Cu)	2016/03/23	NC		%	20
			Dissolved Iron (Fe)	2016/03/23	0.53		%	20
			Dissolved Lead (Pb)	2016/03/23	NC		%	20
			Dissolved Magnesium (Mg)	2016/03/23	1.9		%	20
			Dissolved Manganese (Mn)	2016/03/23	0.45		%	20
			Dissolved Molybdenum (Mo)	2016/03/23	NC		%	20
			Dissolved Nickel (Ni)	2016/03/23	NC		%	20
			Dissolved Phosphorus (P)	2016/03/23	NC		%	20
			Dissolved Potassium (K)	2016/03/23	1.0		%	20
			Dissolved Selenium (Se)	2016/03/23	NC		%	20
			Dissolved Silver (Ag)	2016/03/23	NC		%	20
			Dissolved Sodium (Na)	2016/03/23	0.073		%	20
			Dissolved Strontium (Sr)	2016/03/23	0.44		%	20
			Dissolved Thallium (Tl)	2016/03/23	NC		%	20
			Dissolved Tin (Sn)	2016/03/23	NC		%	20
			Dissolved Titanium (Ti)	2016/03/23	NC		%	20
			Dissolved Uranium (U)	2016/03/23	NC		%	20
			Dissolved Vanadium (V)	2016/03/23	NC		%	20
			Dissolved Zinc (Zn)	2016/03/23	1.2		%	20
4428759	KBT	Matrix Spike	D10-Anthracene	2016/03/25		93	%	30 - 130
			D14-Terphenyl	2016/03/25		115	%	30 - 130
			D8-Acenaphthylene	2016/03/25		95	%	30 - 130
4428759	KBT	Matrix Spike(CBC688)	1-Methylnaphthalene	2016/03/25		113	%	30 - 130
			2-Methylnaphthalene	2016/03/25		99	%	30 - 130
			Acenaphthene	2016/03/25		115	%	30 - 130
			Acenaphthylene	2016/03/25		122	%	30 - 130
			Anthracene	2016/03/25		124	%	30 - 130
			Benzo(a)anthracene	2016/03/25		120	%	30 - 130
			Benzo(a)pyrene	2016/03/25		121	%	30 - 130
			Benzo(b)fluoranthene	2016/03/25		114	%	30 - 130
			Benzo(g,h,i)perylene	2016/03/25		117	%	30 - 130
			Benzo(j)fluoranthene	2016/03/25		119	%	30 - 130
			Benzo(k)fluoranthene	2016/03/25		120	%	30 - 130
			Chrysene	2016/03/25		128	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/25		111	%	30 - 130
			Fluoranthene	2016/03/25		128	%	30 - 130
			Fluorene	2016/03/25		118	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/25		111	%	30 - 130
			Naphthalene	2016/03/25		101	%	30 - 130
			Perylene	2016/03/25		113	%	30 - 130
			Phenanthrene	2016/03/25		126	%	30 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Pyrene	2016/03/25		125	%	30 - 130
4428759	KBT	Spiked Blank	D10-Anthracene	2016/03/25		98	%	30 - 130
			D14-Terphenyl	2016/03/25		112	%	30 - 130
			D8-Acenaphthylene	2016/03/25		95	%	30 - 130
			1-Methylnaphthalene	2016/03/25		102	%	30 - 130
			2-Methylnaphthalene	2016/03/25		96	%	30 - 130
			Acenaphthene	2016/03/25		117	%	30 - 130
			Acenaphthylene	2016/03/25		118	%	30 - 130
			Anthracene	2016/03/25		118	%	30 - 130
			Benzo(a)anthracene	2016/03/25		111	%	30 - 130
			Benzo(a)pyrene	2016/03/25		115	%	30 - 130
			Benzo(b)fluoranthene	2016/03/25		113	%	30 - 130
			Benzo(g,h,i)perylene	2016/03/25		118	%	30 - 130
			Benzo(j)fluoranthene	2016/03/25		112	%	30 - 130
			Benzo(k)fluoranthene	2016/03/25		125	%	30 - 130
			Chrysene	2016/03/25		125	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/25		107	%	30 - 130
			Fluoranthene	2016/03/25		121	%	30 - 130
			Fluorene	2016/03/25		123	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/25		112	%	30 - 130
			Naphthalene	2016/03/25		97	%	30 - 130
			Perylene	2016/03/25		115	%	30 - 130
			Phenanthrene	2016/03/25		125	%	30 - 130
			Pyrene	2016/03/25		123	%	30 - 130
4428759	KBT	Method Blank	D10-Anthracene	2016/03/25		100	%	30 - 130
			D14-Terphenyl	2016/03/25		100	%	30 - 130
			D8-Acenaphthylene	2016/03/25		98	%	30 - 130
			1-Methylnaphthalene	2016/03/25	<0.050		ug/L	
			2-Methylnaphthalene	2016/03/25	<0.050		ug/L	
			Acenaphthene	2016/03/25	<0.010		ug/L	
			Acenaphthylene	2016/03/25	<0.010		ug/L	
			Anthracene	2016/03/25	<0.010		ug/L	
			Benzo(a)anthracene	2016/03/25	<0.010		ug/L	
			Benzo(a)pyrene	2016/03/25	<0.010		ug/L	
			Benzo(b)fluoranthene	2016/03/25	<0.010		ug/L	
			Benzo(g,h,i)perylene	2016/03/25	<0.010		ug/L	
			Benzo(j)fluoranthene	2016/03/25	<0.010		ug/L	
			Benzo(k)fluoranthene	2016/03/25	<0.010		ug/L	
			Chrysene	2016/03/25	<0.010		ug/L	
			Dibenz(a,h)anthracene	2016/03/25	<0.010		ug/L	
			Fluoranthene	2016/03/25	<0.010		ug/L	
			Fluorene	2016/03/25	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2016/03/25	<0.010		ug/L	
			Naphthalene	2016/03/25	<0.20		ug/L	
			Perylene	2016/03/25	<0.010		ug/L	
			Phenanthrene	2016/03/25	<0.010		ug/L	
			Pyrene	2016/03/25	<0.010		ug/L	
4428759	KBT	RPD - Sample/Sample Dup	1-Methylnaphthalene	2016/03/25	NC		%	40
			2-Methylnaphthalene	2016/03/25	NC		%	40
			Acenaphthene	2016/03/25	NC		%	40
			Acenaphthylene	2016/03/25	NC		%	40
			Anthracene	2016/03/25	NC		%	40
			Benzo(a)anthracene	2016/03/25	NC		%	40

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			Benzo(a)pyrene	2016/03/25	NC		%	40
			Benzo(b)fluoranthene	2016/03/25	NC		%	40
			Benzo(g,h,i)perylene	2016/03/25	NC		%	40
			Benzo(j)fluoranthene	2016/03/25	NC		%	40
			Benzo(k)fluoranthene	2016/03/25	NC		%	40
			Chrysene	2016/03/25	NC		%	40
			Dibenz(a,h)anthracene	2016/03/25	NC		%	40
			Fluoranthene	2016/03/25	NC		%	40
			Fluorene	2016/03/25	NC		%	40
			Indeno(1,2,3-cd)pyrene	2016/03/25	NC		%	40
			Naphthalene	2016/03/25	NC		%	40
			Perylene	2016/03/25	NC		%	40
			Phenanthrene	2016/03/25	NC		%	40
			Pyrene	2016/03/25	NC		%	40
4429359	BAN	Matrix Spike	Total Lead (Pb)	2016/03/24		93	%	80 - 120
4429359	BAN	Spiked Blank	Total Lead (Pb)	2016/03/24		95	%	80 - 120
4429359	BAN	Method Blank	Total Lead (Pb)	2016/03/24	<0.50		ug/L	
4429367	ARS	Matrix Spike	Total Mercury (Hg)	2016/03/24		103	%	80 - 120
4429367	ARS	Spiked Blank	Total Mercury (Hg)	2016/03/24		99	%	80 - 120
4429367	ARS	Method Blank	Total Mercury (Hg)	2016/03/24	<0.013		ug/L	
4429367	ARS	RPD - Sample/Sample Dup	Total Mercury (Hg)	2016/03/24	NC		%	20
4429631	MCN	Matrix Spike(CBC743)	Nitrogen (Ammonia Nitrogen)	2016/03/23		95	%	80 - 120
4429631	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2016/03/23		99	%	80 - 120
4429631	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2016/03/23	<0.050		mg/L	
4429631	MCN	RPD - Sample/Sample Dup	Nitrogen (Ammonia Nitrogen)	2016/03/23	NC		%	20
4429673	MCN	Matrix Spike(CBC749)	Nitrogen (Ammonia Nitrogen)	2016/03/23		NC	%	80 - 120
4429673	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2016/03/23		101	%	80 - 120
4429673	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2016/03/23	0.080, RDL=0.050		mg/L	
4429673	MCN	RPD - Sample/Sample Dup	Nitrogen (Ammonia Nitrogen)	2016/03/23	3.1		%	20
4430660	TMO	Spiked Blank	Conductivity	2016/03/24		101	%	80 - 120
4430660	TMO	Method Blank	Conductivity	2016/03/24	<1.0		uS/cm	
4430660	TMO	RPD - Sample/Sample Dup	Conductivity	2016/03/24	0.14		%	25
4430663	TMO	QC Standard	pH	2016/03/24		100	%	97 - 103
4430663	TMO	RPD - Sample/Sample Dup	pH	2016/03/24	0.52		%	N/A
4430869	TPE	QC Standard	pH	2016/03/24		100	%	N/A
4430869	TPE	RPD - Sample/Sample Dup	pH	2016/03/24	1.0		%	N/A
4430928	SMT	Matrix Spike	Total Organic Carbon (C)	2016/03/24		110	%	80 - 120
4430928	SMT	Spiked Blank	Total Organic Carbon (C)	2016/03/24		111	%	80 - 120
4430928	SMT	Method Blank	Total Organic Carbon (C)	2016/03/24	<0.50		mg/L	
4430928	SMT	RPD - Sample/Sample Dup	Total Organic Carbon (C)	2016/03/24	9.2		%	20
4431000	SMT	Matrix Spike	Total Organic Carbon (C)	2016/03/24		114	%	80 - 120
4431000	SMT	Spiked Blank	Total Organic Carbon (C)	2016/03/24		109	%	80 - 120
4431000	SMT	Method Blank	Total Organic Carbon (C)	2016/03/24	<0.50		mg/L	
4431000	SMT	RPD - Sample/Sample Dup	Total Organic Carbon (C)	2016/03/24	NC		%	20
4431135	ARS	Matrix Spike	Total Mercury (Hg)	2016/03/28		97	%	80 - 120
4431135	ARS	Spiked Blank	Total Mercury (Hg)	2016/03/28		99	%	80 - 120
4431135	ARS	Method Blank	Total Mercury (Hg)	2016/03/28	<0.013		ug/L	
4431135	ARS	RPD - Sample/Sample Dup	Total Mercury (Hg)	2016/03/28	NC		%	20
4432656	MYI	Matrix Spike	2,4,6-Tribromophenol	2016/03/28		98	%	50 - 130
			2-Fluorophenol	2016/03/28		72	%	50 - 130
			D5-Phenol	2016/03/28		77	%	30 - 130
4432656	MYI	Matrix Spike(CBC682)	2-Chlorophenol	2016/03/28		88	%	50 - 130

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			2,3,4,6-Tetrachlorophenol	2016/03/28		84	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/28		96	%	10 - 130
			2,4-Dichlorophenol	2016/03/28		97	%	50 - 130
			2,4-Dimethylphenol	2016/03/28		97	%	30 - 130
			2,4,6-Trichlorophenol	2016/03/28		88	%	10 - 130
			2,6-Dichlorophenol	2016/03/28		106	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/28		102	%	10 - 130
			4-Nitrophenol	2016/03/28		86	%	10 - 130
			m/p-Cresol	2016/03/28		93	%	10 - 130
			o-Cresol	2016/03/28		124	%	10 - 130
			Pentachlorophenol	2016/03/28		94	%	50 - 130
			Phenol	2016/03/28		80	%	30 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/28		100	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/28		106	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/28		108	%	10 - 130
			2,3,6-Trichlorophenol	2016/03/28		96	%	30 - 130
			2,4,5-Trichlorophenol	2016/03/28		91	%	50 - 130
			3,4,5-Trichlorophenol	2016/03/28		84	%	10 - 130
			2,4-Dinitrophenol	2016/03/28		74	%	30 - 130
			2,3-Dichlorophenol	2016/03/28		102	%	10 - 130
			2,5-Dichlorophenol	2016/03/28		103	%	10 - 130
			3,4-Dichlorophenol	2016/03/28		106	%	10 - 130
			3,5-Dichlorophenol	2016/03/28		112	%	10 - 130
			4,6-Dinitro-2-methylphenol	2016/03/28		81	%	10 - 130
			3 & 4-Chlorophenol	2016/03/28		96	%	10 - 130
			2-Nitrophenol	2016/03/28		79	%	10 - 130
4432656	MYI	Spiked Blank	2,4,6-Tribromophenol	2016/03/28		84	%	50 - 130
			2-Fluorophenol	2016/03/28		75	%	50 - 130
			D5-Phenol	2016/03/28		64	%	30 - 130
			2-Chlorophenol	2016/03/28		90	%	50 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/28		73	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/28		85	%	10 - 130
			2,4-Dichlorophenol	2016/03/28		90	%	50 - 130
			2,4-Dimethylphenol	2016/03/28		90	%	30 - 130
			2,4,6-Trichlorophenol	2016/03/28		80	%	10 - 130
			2,6-Dichlorophenol	2016/03/28		99	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/28		81	%	10 - 130
			4-Nitrophenol	2016/03/28		79	%	10 - 130
			m/p-Cresol	2016/03/28		84	%	10 - 130
			o-Cresol	2016/03/28		115	%	10 - 130
			Pentachlorophenol	2016/03/28		92	%	50 - 130
			Phenol	2016/03/28		66	%	30 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/28		90	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/28		93	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/28		102	%	10 - 130
			2,3,6-Trichlorophenol	2016/03/28		87	%	30 - 130
			2,4,5-Trichlorophenol	2016/03/28		79	%	50 - 130
			3,4,5-Trichlorophenol	2016/03/28		75	%	10 - 130
			2,4-Dinitrophenol	2016/03/28		64	%	30 - 130
			2,3-Dichlorophenol	2016/03/28		95	%	10 - 130
			2,5-Dichlorophenol	2016/03/28		96	%	10 - 130
			3,4-Dichlorophenol	2016/03/28		105	%	10 - 130
			3,5-Dichlorophenol	2016/03/28		102	%	10 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			4,6-Dinitro-2-methylphenol	2016/03/28		66	%	10 - 130
			3 & 4-Chlorophenol	2016/03/28		87	%	10 - 130
			2-Nitrophenol	2016/03/28		74	%	10 - 130
4432656	MYI	Method Blank	2,4,6-Tribromophenol	2016/03/28		91	%	50 - 130
			2-Fluorophenol	2016/03/28		67	%	50 - 130
			D5-Phenol	2016/03/28		51	%	30 - 130
			2-Chlorophenol	2016/03/28	<0.1		ug/L	
			2,3,4,6-Tetrachlorophenol	2016/03/28	<0.1		ug/L	
			2,3,5-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,4-Dichlorophenol	2016/03/28	<0.1		ug/L	
			2,4-Dimethylphenol	2016/03/28	<1		ug/L	
			2,4,6-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,6-Dichlorophenol	2016/03/28	<0.1		ug/L	
			4-Chloro-3-Methylphenol	2016/03/28	<0.1		ug/L	
			4-Nitrophenol	2016/03/28	<1		ug/L	
			m/p-Cresol	2016/03/28	<0.5		ug/L	
			o-Cresol	2016/03/28	<0.5		ug/L	
			Pentachlorophenol	2016/03/28	<0.1		ug/L	
			Phenol	2016/03/28	<0.5		ug/L	
			2,3,4,5-Tetrachlorophenol	2016/03/28	<0.1		ug/L	
			2,3,5,6-Tetrachlorophenol	2016/03/28	<0.1		ug/L	
			2,3,4-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,3,6-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,4,5-Trichlorophenol	2016/03/28	<0.1		ug/L	
			3,4,5-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,4-Dinitrophenol	2016/03/28	<1		ug/L	
			2,3-Dichlorophenol	2016/03/28	<0.1		ug/L	
			2,5-Dichlorophenol	2016/03/28	<0.1		ug/L	
			3,4-Dichlorophenol	2016/03/28	<0.1		ug/L	
			3,5-Dichlorophenol	2016/03/28	<0.1		ug/L	
			4,6-Dinitro-2-methylphenol	2016/03/28	<1		ug/L	
			3 & 4-Chlorophenol	2016/03/28	<0.1		ug/L	
			2-Nitrophenol	2016/03/28	<1		ug/L	
4432656	MYI	RPD - Sample/Sample Dup	2-Chlorophenol	2016/03/28	NC		%	30
			2,3,4,6-Tetrachlorophenol	2016/03/28	NC		%	40
			2,3,5-Trichlorophenol	2016/03/28	NC		%	40
			2,4-Dichlorophenol	2016/03/28	NC		%	30
			2,4-Dimethylphenol	2016/03/28	NC		%	30
			2,4,6-Trichlorophenol	2016/03/28	NC		%	30
			2,6-Dichlorophenol	2016/03/28	NC		%	40
			4-Chloro-3-Methylphenol	2016/03/28	NC		%	40
			4-Nitrophenol	2016/03/28	NC		%	40
			m/p-Cresol	2016/03/28	NC		%	40
			o-Cresol	2016/03/28	NC		%	40
			Pentachlorophenol	2016/03/28	NC		%	30
			Phenol	2016/03/28	NC		%	30
			2,3,4,5-Tetrachlorophenol	2016/03/28	NC		%	40
			2,3,5,6-Tetrachlorophenol	2016/03/28	NC		%	40
			2,3,4-Trichlorophenol	2016/03/28	NC		%	40
			2,3,6-Trichlorophenol	2016/03/28	NC		%	40
			2,4,5-Trichlorophenol	2016/03/28	NC		%	30
			3,4,5-Trichlorophenol	2016/03/28	NC		%	40
			2,4-Dinitrophenol	2016/03/28	NC		%	30

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			2,3-Dichlorophenol	2016/03/28	NC		%	40
			2,5-Dichlorophenol	2016/03/28	NC		%	40
			3,4-Dichlorophenol	2016/03/28	NC		%	40
			3,5-Dichlorophenol	2016/03/28	NC		%	40
			4,6-Dinitro-2-methylphenol	2016/03/28	NC		%	40
			3 & 4-Chlorophenol	2016/03/28	NC		%	40
			2-Nitrophenol	2016/03/28	NC		%	40
4433248	TMO	QC Standard	Turbidity	2016/03/28		84	%	80 - 120
4433248	TMO	Method Blank	Turbidity	2016/03/28	<0.10		NTU	
4433248	TMO	RPD - Sample/Sample Dup	Turbidity	2016/03/28	NC		%	20
4433250	TMO	QC Standard	Turbidity	2016/03/28		92	%	80 - 120
4433250	TMO	Method Blank	Turbidity	2016/03/28	<0.10		NTU	
4433250	TMO	RPD - Sample/Sample Dup	Turbidity	2016/03/28	6.6		%	20
4433399	TPE	Spiked Blank	Conductivity	2016/03/28		100	%	80 - 120
4433399	TPE	Method Blank	Conductivity	2016/03/28	1.6, RDL=1.0		uS/cm	
4433399	TPE	RPD - Sample/Sample Dup	Conductivity	2016/03/28	0.059		%	25
4433560	MCN	Matrix Spike(CBC686)	Total Alkalinity (Total as CaCO3)	2016/03/28		NC	%	80 - 120
4433560	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/28		102	%	80 - 120
4433560	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/28	<5.0		mg/L	
4433560	MCN	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/28	1.2		%	25
4433568	MCN	Matrix Spike(CBC686)	Reactive Silica (SiO2)	2016/03/29		NC	%	80 - 120
4433568	MCN	Spiked Blank	Reactive Silica (SiO2)	2016/03/29		103	%	80 - 120
4433568	MCN	Method Blank	Reactive Silica (SiO2)	2016/03/29	<0.50		mg/L	
4433568	MCN	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/29	0.71		%	25
4433574	MCN	Matrix Spike(CBC686)	Dissolved Chloride (Cl)	2016/03/29		NC	%	80 - 120
4433574	MCN	QC Standard	Dissolved Chloride (Cl)	2016/03/29		107	%	80 - 120
4433574	MCN	Spiked Blank	Dissolved Chloride (Cl)	2016/03/29		100	%	80 - 120
4433574	MCN	Method Blank	Dissolved Chloride (Cl)	2016/03/29	<1.0		mg/L	
4433574	MCN	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/29	2.5		%	25
4433623	MCN	Matrix Spike(CBC686)	Dissolved Sulphate (SO4)	2016/03/30		108	%	80 - 120
4433623	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/30		104	%	80 - 120
4433623	MCN	Method Blank	Dissolved Sulphate (SO4)	2016/03/30	<2.0		mg/L	
4433623	MCN	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/30	NC		%	25
4433625	MCN	Spiked Blank	Colour	2016/03/29		102	%	80 - 120
4433625	MCN	Method Blank	Colour	2016/03/29	<5.0		TCU	
4433625	MCN	RPD - Sample/Sample Dup	Colour	2016/03/29	NC		%	20
4433626	MCN	Matrix Spike(CBC686)	Orthophosphate (P)	2016/03/29		91	%	80 - 120
4433626	MCN	Spiked Blank	Orthophosphate (P)	2016/03/29		94	%	80 - 120
4433626	MCN	Method Blank	Orthophosphate (P)	2016/03/29	<0.010		mg/L	
4433626	MCN	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/29	NC		%	25
4433638	MCN	Matrix Spike(CBC686)	Nitrate + Nitrite (N)	2016/03/30		106	%	80 - 120
4433638	MCN	Spiked Blank	Nitrate + Nitrite (N)	2016/03/30		106	%	80 - 120
4433638	MCN	Method Blank	Nitrate + Nitrite (N)	2016/03/30	<0.050		mg/L	
4433638	MCN	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/30	NC		%	25
4433647	MCN	Matrix Spike(CBC686)	Nitrite (N)	2016/03/30		96	%	80 - 120
4433647	MCN	Spiked Blank	Nitrite (N)	2016/03/30		92	%	80 - 120
4433647	MCN	Method Blank	Nitrite (N)	2016/03/30	<0.010		mg/L	
4433647	MCN	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/30	NC		%	25
4433652	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2016/03/29		NC	%	80 - 120
4433652	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/28		100	%	80 - 120
4433652	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/28	<5.0		mg/L	
4433652	MCN	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/28	0.56		%	25

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Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4433654	MCN	Matrix Spike	Dissolved Chloride (Cl)	2016/03/29		101	%	80 - 120
4433654	MCN	QC Standard	Dissolved Chloride (Cl)	2016/03/29		105	%	80 - 120
4433654	MCN	Spiked Blank	Dissolved Chloride (Cl)	2016/03/29		102	%	80 - 120
4433654	MCN	Method Blank	Dissolved Chloride (Cl)	2016/03/29	<1.0		mg/L	
4433654	MCN	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/29	1.6		%	25
4433716	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2016/03/30		NC	%	80 - 120
4433716	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/30		100	%	80 - 120
4433716	MCN	Method Blank	Dissolved Sulphate (SO4)	2016/03/30	<2.0		mg/L	
4433716	MCN	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/30	3.3		%	25
4433719	MCN	Matrix Spike	Reactive Silica (SiO2)	2016/03/29		NC	%	80 - 120
4433719	MCN	Spiked Blank	Reactive Silica (SiO2)	2016/03/29		103	%	80 - 120
4433719	MCN	Method Blank	Reactive Silica (SiO2)	2016/03/29	<0.50		mg/L	
4433719	MCN	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/29	7.5		%	25
4433725	MCN	Spiked Blank	Colour	2016/03/29		103	%	80 - 120
4433725	MCN	Method Blank	Colour	2016/03/29	<5.0		TCU	
4433725	MCN	RPD - Sample/Sample Dup	Colour	2016/03/29	NC		%	20
4433727	MCN	Matrix Spike	Orthophosphate (P)	2016/03/29		97	%	80 - 120
4433727	MCN	Spiked Blank	Orthophosphate (P)	2016/03/29		94	%	80 - 120
4433727	MCN	Method Blank	Orthophosphate (P)	2016/03/29	<0.010		mg/L	
4433727	MCN	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/29	NC		%	25
4433728	MCN	Matrix Spike	Nitrate + Nitrite (N)	2016/03/30		103	%	80 - 120
4433728	MCN	Spiked Blank	Nitrate + Nitrite (N)	2016/03/30		108	%	80 - 120
4433728	MCN	Method Blank	Nitrate + Nitrite (N)	2016/03/30	<0.050		mg/L	
4433728	MCN	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/30	NC		%	25
4433731	MCN	Matrix Spike	Nitrite (N)	2016/03/30		91	%	80 - 120
4433731	MCN	Spiked Blank	Nitrite (N)	2016/03/30		98	%	80 - 120
4433731	MCN	Method Blank	Nitrite (N)	2016/03/30	<0.010		mg/L	
4433731	MCN	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/30	NC		%	25

N/A = Not Applicable

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Low recovery due to sample matrix. < 10 % of compounds in multi-component analysis in violation.

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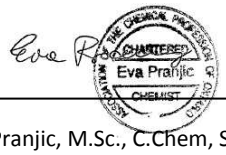
Maxxam Job #: B656142
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Rosemarie MacDonald, Scientific Specialist (Organics)

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp.	Company Name		Quotation #	B61795	Maxxam Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Lisa Ladouceur / Aven Cole	P.O. #		B656142	552097
Address	97 Troop Ave Dartmouth NS B3B 2A7	Address		Project #	21347	Chain Of Custody Record	Project Manager
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Project Name		C#552097-01-01	Avery Withrow
Email	Dartmouth.AP@englobecorp.com	Email	lisa.ladouceur@englobecorp.com	Site #			
				Sampled By	LL		

Regulatory Criteria:

Special Instructions

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

SAMPLES MUST BE KEPT COOL (< 10ºC) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RCAp-MS Dissolved (FieldFilt) in W	Mercury - Total (CVAA,LL)	Total Lead in Water	Chlorinated Phenols - Acid Extractables by GC/MS	~~RBCA Hydrocarbons in Water~~	PAH in Water by GC/MS (SIM)	# of Bottles	Comments / Hazards / Other Required Analysis
1		MW 1S	3/20/16		GW		X	X	X	X	X			7	LAB FILTER
2		MW 1D				X		X	X	X	X			7	
3		MW 2S					X	X	X	X	X			7	LAB FILTER
4		MW 2D				X		X	X	X	X			7	
5		MW 3S				X		X	X	X				5	
6		MW 3D				X		X	X	X				5	
7		MW 4S					X	X	X	X			X	7	LAB FILTER
8		MW 4D					X	X	X	X			X	7	LAB FILTER 2016 MAR 21 12:29
9		MW 5					X	X	X	X	X		X	9	LAB FILTER
10		MW 6S					X	X	X	X	X			7	LAB FILTER

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
	16/3/21	12h30	A Walters Maxxam Waters				☐	5,5,5 1,1,2 3,0,4 2,3,1 0,0,-2	☐ Yes ☐ No

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

White: Maxxam Yellow: Client

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Chain Of Custody Record Page 2 of 2

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp.	Company Name		Quotation #	B61795	Maxxam Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Lisa Ladouceur / Aven Cole	P.O. #		B656142	552097
Address	97 Troop Ave Dartmouth NS B3B 2A7	Address		Project #	21347	Chain Of Custody Record	Project Manager
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Project Name		C#552097-02-01	Avery Withrow
Email	Dartmouth.AP@englobecorp.com	Email	lisa.ladouceur@englobecorp.com	Site # / Sampled By	LL		

Regulatory Criteria:

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

Special Instructions

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

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

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

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

#	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RCAp-MS Dissolved (FieldFilt) in W	Mercury - Total (CVAA,LL)	Total Lead in Water	Chlorinated Phenols - Acid Extractables by GC/MS	~~RBCA Hydrocarbons in Water~~	PAH in Water by GC/MS (SIM)				# of Bottles	Comments / Hazards / Other Required Analysis
1		MW 6D	3/20/16		GW		X	X	X	X	X						7	LAB FILTER
2		MW 7	↓		↓	X		X	X	X							5	
3		MW 8				X		X	X	X	X						7	
4		MW 9				X		X	X	X	X		X				9	
5		MW 10					X	X	X	X	X						7	LAB FILTER
6		MW 11					X	X	X	X	X		X				9	LAB FILTER
7		MW 12					X	X	X	X							4	LAB FILTER
8		MW DUP	↓		↓		X	X	X	X	X						7	LAB FILTER
9		~~MW~~																
10		~~MW~~																2016 MAR 21 12:29

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[signature] Lisa Ladouceur	16/3/21	12h30	AWalters Axson Walters				☐	5,5,5 1,-1,2 3,0,4 2,3,-1 0,0,-2	☐ Yes ☐ No

Lab Use Only

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

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Your Project #: 21347
Your C.O.C. #: 553497-01-01

Attention:Lisa Ladouceur

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

Report Date: 2016/03/31
Report #: R3947330
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B656184
Received: 2016/03/21, 12:28

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Carbonate, Bicarbonate and Hydroxide	7	N/A	2016/03/24	N/A	SM 22 4500-CO2 D
Alkalinity	7	N/A	2016/03/28	ATL SOP 00013	EPA 310.2 R1974 m
Chloride	7	N/A	2016/03/29	ATL SOP 00014	SM 22 4500-Cl- E m
Colour	7	N/A	2016/03/29	ATL SOP 00020	SM 22 2120C m
Acid Extractables by GC/MS (1)	5	2016/03/26	2016/03/29	CAM SOP-00332	EPA 8270 m
Chromium (VI) in Water (1)	4	N/A	2016/03/30	CAM SOP-00436	EPA 7199 m
Conductance - water	1	N/A	2016/03/23	ATL SOP 00004	SM 22 2510B m
Conductance - water	6	N/A	2016/03/24	ATL SOP 00004	SM 22 2510B m
Hardness (calculated as CaCO3)	3	N/A	2016/03/24	ATL SOP 00048	SM 22 2340 B
Hardness (calculated as CaCO3)	2	N/A	2016/03/28	ATL SOP 00048	SM 22 2340 B
Hardness (calculated as CaCO3)	2	N/A	2016/03/29	ATL SOP 00048	SM 22 2340 B
Mercury - Total (CVAA,LL)	6	2016/03/24	2016/03/28	ATL SOP 00026	EPA 245.1 R3 m
Metals Water Total MS	3	2016/03/23	2016/03/24	ATL SOP 00058	EPA 6020A R1 m
Metals Water Total MS	2	2016/03/24	2016/03/24	ATL SOP 00058	EPA 6020A R1 m
Metals Water Total MS	2	2016/03/24	2016/03/28	ATL SOP 00058	EPA 6020A R1 m
Ion Balance (% Difference)	7	N/A	2016/03/30		Auto Calc.
Anion and Cation Sum	7	N/A	2016/03/29		Auto Calc.
Nitrogen Ammonia - water	7	N/A	2016/03/23	ATL SOP 00015	EPA 350.1 R2 m
Nitrogen - Nitrate + Nitrite	7	N/A	2016/03/30	ATL SOP 00016	USGS SOPINCF0452.2 m
Nitrogen - Nitrite	7	N/A	2016/03/30	ATL SOP 00017	SM 22 4500-NO2- B m
Nitrogen - Nitrate (as N)	7	N/A	2016/03/30	ATL SOP 00018	ASTM D3867
PAH (FWAL) in Water (A/Q) by GC/MS (SIM) (2)	2	2016/03/24	2016/03/30	ATL SOP 00103	EPA 8270D 2007 m
PAH (FWAL) in Water (A/Q) by GC/MS (SIM) (2)	4	2016/03/24	2016/03/31	ATL SOP 00103	EPA 8270D 2007 m
pH (3)	7	N/A	2016/03/24	ATL SOP 00003	SM 22 4500-H+ B m
Phosphorus - ortho	7	N/A	2016/03/29	ATL SOP 00021	EPA 365.2 m
Sat. pH and Langelier Index (@ 20C)	1	N/A	2016/03/29	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 20C)	6	N/A	2016/03/30	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	1	N/A	2016/03/29	ATL SOP 00049	Auto Calc.
Sat. pH and Langelier Index (@ 4C)	6	N/A	2016/03/30	ATL SOP 00049	Auto Calc.
Reactive Silica	7	N/A	2016/03/29	ATL SOP 00022	EPA 366.0 m

Your Project #: 21347
Your C.O.C. #: 553497-01-01

Attention:Lisa Ladouceur

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

Report Date: 2016/03/31
Report #: R3947330
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B656184
Received: 2016/03/21, 12:28

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Sulphate	7	N/A	2016/03/30	ATL SOP 00023	ASTMD516-11 m
Total Dissolved Solids (TDS calc)	7	N/A	2016/03/30		Auto Calc.
Organic carbon - Total (TOC) (4)	7	N/A	2016/03/24	ATL SOP 00037	SM 22 5310C m
Turbidity	7	N/A	2016/03/28	ATL SOP 00011	EPA 180.1 R2 m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Analytics Mississauga
(2) Acridine and Quinoline parameters are not accredited.
(3) The APHA Standard Method require pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the APHA Standard Method holding time.
(4) TOC / DOC present in the sample should be considered as non-purgeable TOC / DOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Avery Withrow, Project Manager
Email: AWithrow@maxxam.ca
Phone# (902)420-0203 Ext:233

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This report has been generated and distributed using a secure automated process.
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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CBC932			CBC933	CBC933			
Sampling Date		2016/03/19			2016/03/19	2016/03/19			
COC Number		553497-01-01			553497-01-01	553497-01-01			
	UNITS	P1A	RDL	QC Batch	P1B	P1B Lab-Dup	RDL	QC Batch	MDL
Calculated Parameters									
Anion Sum	me/L	1.07	N/A	4426999	0.380		N/A	4426999	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	25	1.0	4426995	<1.0		1.0	4426995	0.20
Calculated TDS	mg/L	110	1.0	4427004	45		1.0	4427004	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	4426995	<1.0		1.0	4426995	0.20
Cation Sum	me/L	2.82	N/A	4426999	1.31		N/A	4426999	N/A
Hardness (CaCO3)	mg/L	40	1.0	4426997	36		1.0	4426997	1.0
Ion Balance (% Difference)	%	45.0	N/A	4426998	55.0		N/A	4426998	N/A
Langelier Index (@ 20C)	N/A	-2.48		4427002	NC			4427002	
Langelier Index (@ 4C)	N/A	-2.73		4427003	NC			4427003	
Nitrate (N)	mg/L	<0.050	0.050	4427000	<0.050		0.050	4427000	N/A
Saturation pH (@ 20C)	N/A	8.91		4427002	NC			4427002	
Saturation pH (@ 4C)	N/A	9.16		4427003	NC			4427003	
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	25	5.0	4433652	<5.0		5.0	4433652	N/A
Dissolved Chloride (Cl)	mg/L	17	1.0	4433654	14		1.0	4433654	N/A
Colour	TCU	470	100	4433725	120		25	4433725	N/A
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	4433728	<0.050		0.050	4433728	N/A
Nitrite (N)	mg/L	<0.010	0.010	4433731	<0.010		0.010	4433731	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.22	0.050	4429673	0.40		0.050	4429673	N/A
Total Organic Carbon (C)	mg/L	<50 (1)	50	4431000	<50 (1)		50	4431000	N/A
Orthophosphate (P)	mg/L	0.025	0.010	4433727	<0.010		0.010	4433727	N/A
pH	pH	6.43	N/A	4430663	5.26		N/A	4430869	N/A
Reactive Silica (SiO2)	mg/L	5.6	0.50	4433719	4.1		0.50	4433719	N/A
Dissolved Sulphate (SO4)	mg/L	3.7	2.0	4433716	<2.0		2.0	4433716	N/A
Turbidity	NTU	330	1.0	4433250	>1000		1.0	4433250	0.10
Conductivity	uS/cm	110	1.0	4430660	60	60	1.0	4429181	N/A
Metals									
Total Aluminum (Al)	ug/L	4400	5.0	4429359	10000		5.0	4429359	N/A
Total Antimony (Sb)	ug/L	<1.0	1.0	4429359	<1.0		1.0	4429359	N/A
Total Arsenic (As)	ug/L	10	1.0	4429359	2.4		1.0	4429359	N/A
Total Barium (Ba)	ug/L	78	1.0	4429359	110		1.0	4429359	N/A
Total Beryllium (Be)	ug/L	<1.0	1.0	4429359	<1.0		1.0	4429359	N/A
Total Bismuth (Bi)	ug/L	<2.0	2.0	4429359	<2.0		2.0	4429359	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CBC932			CBC933	CBC933			
Sampling Date		2016/03/19			2016/03/19	2016/03/19			
COC Number		553497-01-01			553497-01-01	553497-01-01			
	UNITS	P1A	RDL	QC Batch	P1B	P1B Lab-Dup	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	50	4429359	<50		50	4429359	N/A
Total Cadmium (Cd)	ug/L	0.28	0.010	4429359	0.46		0.010	4429359	N/A
Total Calcium (Ca)	ug/L	11000	100	4429359	8200		100	4429359	N/A
Total Chromium (Cr)	ug/L	7.2	1.0	4429359	4.6		1.0	4429359	N/A
Total Cobalt (Co)	ug/L	4.9	0.40	4429359	5.2		0.40	4429359	N/A
Total Copper (Cu)	ug/L	17	2.0	4429359	18		2.0	4429359	N/A
Total Iron (Fe)	ug/L	32000	50	4429359	5800		50	4429359	N/A
Total Lead (Pb)	ug/L	16	0.50	4429359	43		0.50	4429359	N/A
Total Magnesium (Mg)	ug/L	2900	100	4429359	3800		100	4429359	N/A
Total Manganese (Mn)	ug/L	630	2.0	4429359	110		2.0	4429359	N/A
Total Molybdenum (Mo)	ug/L	<2.0	2.0	4429359	2.1		2.0	4429359	N/A
Total Nickel (Ni)	ug/L	11	2.0	4429359	13		2.0	4429359	N/A
Total Phosphorus (P)	ug/L	1500	100	4429359	2500		100	4429359	N/A
Total Potassium (K)	ug/L	11000	100	4429359	1600		100	4429359	N/A
Total Selenium (Se)	ug/L	<1.0	1.0	4429359	1.5		1.0	4429359	N/A
Total Silver (Ag)	ug/L	0.10	0.10	4429359	0.15		0.10	4429359	N/A
Total Sodium (Na)	ug/L	14000	100	4429359	7000		100	4429359	N/A
Total Strontium (Sr)	ug/L	62	2.0	4429359	86		2.0	4429359	N/A
Total Thallium (Tl)	ug/L	<0.10	0.10	4429359	<0.10		0.10	4429359	N/A
Total Tin (Sn)	ug/L	<2.0	2.0	4429359	<2.0		2.0	4429359	N/A
Total Titanium (Ti)	ug/L	100	2.0	4429359	100		2.0	4429359	N/A
Total Uranium (U)	ug/L	0.55	0.10	4429359	0.77		0.10	4429359	N/A
Total Vanadium (V)	ug/L	9.9	2.0	4429359	10		2.0	4429359	N/A
Total Zinc (Zn)	ug/L	87	5.0	4429359	29		5.0	4429359	N/A

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

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CBC934		CBC935			CBC936			
Sampling Date		2016/03/19		2016/03/19			2016/03/19			
COC Number		553497-01-01		553497-01-01			553497-01-01			
	UNITS	P2A	QC Batch	P2B	RDL	QC Batch	P3	RDL	QC Batch	MDL
Calculated Parameters										
Anion Sum	me/L	1.36	4426999	0.790	N/A	4426999	1.34	N/A	4426999	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	46	4426995	15	1.0	4426995	37	1.0	4426995	0.20
Calculated TDS	mg/L	84	4427004	63	1.0	4427004	88	1.0	4427004	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	4426995	<1.0	1.0	4426995	<1.0	1.0	4426995	0.20
Cation Sum	me/L	1.52	4426999	1.29	N/A	4426999	1.56	N/A	4426999	N/A
Hardness (CaCO3)	mg/L	30	4426997	19	1.0	4426997	18	1.0	4426997	1.0
Ion Balance (% Difference)	%	5.56	4426998	24.0	N/A	4426998	7.59	N/A	4426998	N/A
Langelier Index (@ 20C)	N/A	-1.54	4427002	-3.03		4427002	-2.19		4427002	
Langelier Index (@ 4C)	N/A	-1.79	4427003	-3.29		4427003	-2.44		4427003	
Nitrate (N)	mg/L	<0.050	4427000	<0.050	0.050	4427000	<0.050	0.050	4427000	N/A
Saturation pH (@ 20C)	N/A	8.75	4427002	9.46		4427002	9.12		4427002	
Saturation pH (@ 4C)	N/A	9.00	4427003	9.71		4427003	9.37		4427003	
Inorganics										
Total Alkalinity (Total as CaCO3)	mg/L	46	4433652	15	5.0	4433652	37	5.0	4433652	N/A
Dissolved Chloride (Cl)	mg/L	13	4433654	16	1.0	4433654	18	1.0	4433654	N/A
Colour	TCU	250	4433725	330	50	4433725	560	100	4433725	N/A
Nitrate + Nitrite (N)	mg/L	<0.050	4433728	<0.050	0.050	4433728	<0.050	0.050	4433728	N/A
Nitrite (N)	mg/L	<0.010	4433731	<0.010	0.010	4433731	<0.010	0.010	4433731	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	0.052	4429673	0.072	0.050	4429673	0.081	0.050	4429673	N/A
Total Organic Carbon (C)	mg/L	15 (1)	4431000	19 (1)	5.0	4431000	24 (1)	5.0	4431000	N/A
Orthophosphate (P)	mg/L	0.091	4433727	0.045	0.010	4433727	0.13	0.010	4433727	N/A
pH	pH	7.21	4430663	6.42	N/A	4430663	6.93	N/A	4430667	N/A
Reactive Silica (SiO2)	mg/L	2.4	4433719	3.4	0.50	4433719	2.2	0.50	4433719	N/A
Dissolved Sulphate (SO4)	mg/L	2.9	4433716	2.0	2.0	4433716	4.7	2.0	4433716	N/A
Turbidity	NTU	20	4433250	54	0.10	4433250	40	0.10	4433250	0.10
Conductivity	uS/cm	130	4430660	80	1.0	4430660	140	1.0	4430666	N/A
Metals										
Total Aluminum (Al)	ug/L	620	4429359	1100	5.0	4430672	850	5.0	4430672	N/A
Total Antimony (Sb)	ug/L	<1.0	4429359	<1.0	1.0	4430672	<1.0	1.0	4430672	N/A
Total Arsenic (As)	ug/L	1.5	4429359	2.4	1.0	4430672	1.8	1.0	4430672	N/A
Total Barium (Ba)	ug/L	6.4	4429359	19	1.0	4430672	11	1.0	4430672	N/A
Total Beryllium (Be)	ug/L	<1.0	4429359	<1.0	1.0	4430672	<1.0	1.0	4430672	N/A
Total Bismuth (Bi)	ug/L	<2.0	4429359	<2.0	2.0	4430672	<2.0	2.0	4430672	N/A
Total Boron (B)	ug/L	<50	4429359	<50	50	4430672	<50	50	4430672	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CBC934		CBC935			CBC936			
Sampling Date		2016/03/19		2016/03/19			2016/03/19			
COC Number		553497-01-01		553497-01-01			553497-01-01			
	UNITS	P2A	QC Batch	P2B	RDL	QC Batch	P3	RDL	QC Batch	MDL
Total Cadmium (Cd)	ug/L	0.050	4429359	0.13	0.010	4430672	0.16	0.010	4430672	N/A
Total Calcium (Ca)	ug/L	8200	4429359	4800	100	4430672	4500	100	4430672	N/A
Total Chromium (Cr)	ug/L	1.5	4429359	2.2	1.0	4430672	1.6	1.0	4430672	N/A
Total Cobalt (Co)	ug/L	0.71	4429359	2.6	0.40	4430672	1.2	0.40	4430672	N/A
Total Copper (Cu)	ug/L	6.5	4429359	13	2.0	4430672	11	2.0	4430672	N/A
Total Iron (Fe)	ug/L	1600	4429359	3500	50	4430672	1300	50	4430672	N/A
Total Lead (Pb)	ug/L	2.1	4429359	7.0	0.50	4430672	6.5	0.50	4430672	N/A
Total Magnesium (Mg)	ug/L	2300	4429359	1700	100	4430672	1700	100	4430672	N/A
Total Manganese (Mn)	ug/L	40	4429359	290	2.0	4430672	33	2.0	4430672	N/A
Total Molybdenum (Mo)	ug/L	2.4	4429359	<2.0	2.0	4430672	<2.0	2.0	4430672	N/A
Total Nickel (Ni)	ug/L	2.4	4429359	5.1	2.0	4430672	5.0	2.0	4430672	N/A
Total Phosphorus (P)	ug/L	350	4429359	800	100	4430672	660	100	4430672	N/A
Total Potassium (K)	ug/L	13000	4429359	11000	100	4430672	18000	100	4430672	N/A
Total Selenium (Se)	ug/L	<1.0	4429359	<1.0	1.0	4430672	<1.0	1.0	4430672	N/A
Total Silver (Ag)	ug/L	<0.10	4429359	<0.10	0.10	4430672	<0.10	0.10	4430672	N/A
Total Sodium (Na)	ug/L	12000	4429359	12000	100	4430672	16000	100	4430672	N/A
Total Strontium (Sr)	ug/L	35	4429359	31	2.0	4430672	23	2.0	4430672	N/A
Total Thallium (Tl)	ug/L	<0.10	4429359	<0.10	0.10	4430672	<0.10	0.10	4430672	N/A
Total Tin (Sn)	ug/L	<2.0	4429359	<2.0	2.0	4430672	<2.0	2.0	4430672	N/A
Total Titanium (Ti)	ug/L	18	4429359	38	2.0	4430672	16	2.0	4430672	N/A
Total Uranium (U)	ug/L	<0.10	4429359	0.13	0.10	4430672	0.11	0.10	4430672	N/A
Total Vanadium (V)	ug/L	<2.0	4429359	3.4	2.0	4430672	<2.0	2.0	4430672	N/A
Total Zinc (Zn)	ug/L	12	4429359	23	5.0	4430672	21	5.0	4430672	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CBC937			CBC938	CBC938			
Sampling Date		2016/03/20			2016/03/20	2016/03/20			
COC Number		553497-01-01			553497-01-01	553497-01-01			
	UNITS	SPRING	RDL	QC Batch	PW2A	PW2A Lab-Dup	RDL	QC Batch	MDL
Calculated Parameters									
Anion Sum	me/L	2.06	N/A	4426999	1.35		N/A	4426999	N/A
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	73	1.0	4426995	27		1.0	4426995	0.20
Calculated TDS	mg/L	130	1.0	4427004	110		1.0	4427004	0.20
Carb. Alkalinity (calc. as CaCO3)	mg/L	<1.0	1.0	4426995	<1.0		1.0	4426995	0.20
Cation Sum	me/L	2.28	N/A	4426999	1.50		N/A	4426999	N/A
Hardness (CaCO3)	mg/L	38	1.0	4426997	37		1.0	4426997	1.0
Ion Balance (% Difference)	%	5.07	N/A	4426998	5.26		N/A	4426998	N/A
Langelier Index (@ 20C)	N/A	-1.18		4427002	-2.05			4427002	
Langelier Index (@ 4C)	N/A	-1.43		4427003	-2.30			4427003	
Nitrate (N)	mg/L	<0.050	0.050	4427000	<0.050		0.050	4427000	N/A
Saturation pH (@ 20C)	N/A	8.48		4427002	8.94			4427002	
Saturation pH (@ 4C)	N/A	8.73		4427003	9.19			4427003	
Inorganics									
Total Alkalinity (Total as CaCO3)	mg/L	74	5.0	4433652	27		5.0	4433652	N/A
Dissolved Chloride (Cl)	mg/L	18	1.0	4433654	14		1.0	4433654	N/A
Colour	TCU	510	100	4433725	<5.0		5.0	4433725	N/A
Nitrate + Nitrite (N)	mg/L	<0.050	0.050	4433728	<0.050		0.050	4433728	N/A
Nitrite (N)	mg/L	<0.010	0.010	4433731	<0.010		0.010	4433731	N/A
Nitrogen (Ammonia Nitrogen)	mg/L	1.3	0.050	4429673	0.11		0.050	4429673	N/A
Total Organic Carbon (C)	mg/L	22 (1)	5.0	4431000	0.58	0.60	0.50	4431000	N/A
Orthophosphate (P)	mg/L	0.27	0.010	4433727	0.013		0.010	4433727	N/A
pH	pH	7.30	N/A	4430663	6.89		N/A	4430667	N/A
Reactive Silica (SiO2)	mg/L	2.7	0.50	4433719	22		0.50	4433719	N/A
Dissolved Sulphate (SO4)	mg/L	3.4	2.0	4433716	20		2.0	4433716	N/A
Turbidity	NTU	23	0.10	4433250	52		0.10	4433250	0.10
Conductivity	uS/cm	190	1.0	4430660	120		1.0	4430666	N/A
Metals									
Total Aluminum (Al)	ug/L	550	5.0	4430672	24		5.0	4430672	N/A
Total Antimony (Sb)	ug/L	<1.0	1.0	4430672	<1.0		1.0	4430672	N/A
Total Arsenic (As)	ug/L	2.3	1.0	4430672	23		1.0	4430672	N/A
Total Barium (Ba)	ug/L	9.6	1.0	4430672	3.5		1.0	4430672	N/A
Total Beryllium (Be)	ug/L	<1.0	1.0	4430672	<1.0		1.0	4430672	N/A
Total Bismuth (Bi)	ug/L	<2.0	2.0	4430672	<2.0		2.0	4430672	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Reporting limit was increased due to turbidity.

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ATLANTIC RCAP-MS TOTAL METALS IN WATER (WATER)

Maxxam ID		CBC937			CBC938	CBC938			
Sampling Date		2016/03/20			2016/03/20	2016/03/20			
COC Number		553497-01-01			553497-01-01	553497-01-01			
	UNITS	SPRING	RDL	QC Batch	PW2A	PW2A Lab-Dup	RDL	QC Batch	MDL
Total Boron (B)	ug/L	<50	50	4430672	<50		50	4430672	N/A
Total Cadmium (Cd)	ug/L	0.12	0.010	4430672	0.067		0.010	4430672	N/A
Total Calcium (Ca)	ug/L	10000	100	4430672	9400		100	4430672	N/A
Total Chromium (Cr)	ug/L	1.5	1.0	4430672	3.5		1.0	4430672	N/A
Total Cobalt (Co)	ug/L	1.1	0.40	4430672	0.70		0.40	4430672	N/A
Total Copper (Cu)	ug/L	11	2.0	4430672	67		2.0	4430672	N/A
Total Iron (Fe)	ug/L	1600	50	4430672	8300		50	4430672	N/A
Total Lead (Pb)	ug/L	3.9	0.50	4430672	7.2		0.50	4430672	N/A
Total Magnesium (Mg)	ug/L	2900	100	4430672	3200		100	4430672	N/A
Total Manganese (Mn)	ug/L	38	2.0	4430672	480		2.0	4430672	N/A
Total Molybdenum (Mo)	ug/L	3.3	2.0	4430672	<2.0		2.0	4430672	N/A
Total Nickel (Ni)	ug/L	3.8	2.0	4430672	9.3		2.0	4430672	N/A
Total Phosphorus (P)	ug/L	640	100	4430672	140		100	4430672	N/A
Total Potassium (K)	ug/L	23000	100	4430672	870		100	4430672	N/A
Total Selenium (Se)	ug/L	<1.0	1.0	4430672	<1.0		1.0	4430672	N/A
Total Silver (Ag)	ug/L	<0.10	0.10	4430672	<0.10		0.10	4430672	N/A
Total Sodium (Na)	ug/L	18000	100	4430672	10000		100	4430672	N/A
Total Strontium (Sr)	ug/L	45	2.0	4430672	38		2.0	4430672	N/A
Total Thallium (Tl)	ug/L	<0.10	0.10	4430672	<0.10		0.10	4430672	N/A
Total Tin (Sn)	ug/L	<2.0	2.0	4430672	<2.0		2.0	4430672	N/A
Total Titanium (Ti)	ug/L	19	2.0	4430672	<2.0		2.0	4430672	N/A
Total Uranium (U)	ug/L	0.11	0.10	4430672	0.12		0.10	4430672	N/A
Total Vanadium (V)	ug/L	<2.0	2.0	4430672	<2.0		2.0	4430672	N/A
Total Zinc (Zn)	ug/L	18	5.0	4430672	380		5.0	4430672	N/A

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

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

MERCURY BY COLD VAPOUR AA (WATER)

Maxxam ID		CBC932	CBC933	CBC934	CBC935	CBC936	CBC937			
Sampling Date		2016/03/19	2016/03/19	2016/03/19	2016/03/19	2016/03/19	2016/03/20			
COC Number		553497-01-01	553497-01-01	553497-01-01	553497-01-01	553497-01-01	553497-01-01			
	UNITS	P1A	P1B	P2A	P2B	P3	SPRING	RDL	QC Batch	MDL
Metals										
Total Mercury (Hg)	ug/L	0.19	0.24	<0.013	0.017	0.025	0.013	0.013	4431135	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		CBC931	CBC932	CBC933	CBC934			
Sampling Date		2016/03/19	2016/03/19	2016/03/19	2016/03/19			
COC Number		553497-01-01	553497-01-01	553497-01-01	553497-01-01			
	UNITS	SW10	P1A	P1B	P2A	RDL	QC Batch	MDL
Metals								
Chromium (VI)	ug/L	<5.0	<5.0	<5.0	<5.0	5.0	4431324	0.30

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2016/03/31

Englobe Corp.
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Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC929	CBC929	CBC930	CBC932		CBC933			
Sampling Date		2016/03/19	2016/03/19	2016/03/19	2016/03/19		2016/03/19			
COC Number		553497-01-01	553497-01-01	553497-01-01	553497-01-01		553497-01-01			
	UNITS	SW1	SW1 Lab-Dup	SW3	P1A	RDL	P1B	RDL	QC Batch	MDL
Polyaromatic Hydrocarbons										
1-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	<0.060	0.060	4434550	N/A
2-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	<0.060	0.060	4434550	N/A
Acenaphthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Acenaphthylene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Acridine	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	<0.060	0.060	4434550	N/A
Anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Benzo(a)anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Benzo(a)pyrene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Benzo(b)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Benzo(g,h,i)perylene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Benzo(j)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Benzo(k)fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Chrysene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Dibenz(a,h)anthracene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Fluoranthene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Fluorene	ug/L	0.012	<0.010	0.018	0.025	0.010	0.023	0.020	4434550	N/A
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Naphthalene	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	<0.30	0.30	4434550	N/A
Perylene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Phenanthrene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Pyrene	ug/L	<0.010	<0.010	<0.010	<0.010	0.010	<0.020	0.020	4434550	N/A
Quinoline	ug/L	<0.050	<0.050	<0.050	<0.050	0.050	<0.060	0.060	4434550	N/A
Phenolics										
2-Chlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,3,4,6-Tetrachlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,3,5-Trichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,4-Dichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,4-Dimethylphenol	ug/L				<1	1	<1	1	4432656	0.05
2,4,6-Trichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,6-Dichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
4-Chloro-3-Methylphenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
4-Nitrophenol	ug/L				<1	1	<1	1	4432656	0.05
m/p-Cresol	ug/L				<0.5	0.5	<0.5	0.5	4432656	0.05
o-Cresol	ug/L				<0.5	0.5	<0.5	0.5	4432656	0.05

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC929	CBC929	CBC930	CBC932		CBC933			
Sampling Date		2016/03/19	2016/03/19	2016/03/19	2016/03/19		2016/03/19			
COC Number		553497-01-01	553497-01-01	553497-01-01	553497-01-01		553497-01-01			
	UNITS	SW1	SW1 Lab-Dup	SW3	P1A	RDL	P1B	RDL	QC Batch	MDL
Pentachlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
Phenol	ug/L				<0.5	0.5	<0.5	0.5	4432656	0.05
2,3,4,5-Tetrachlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,3,5,6-Tetrachlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,3,4-Trichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,3,6-Trichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,4,5-Trichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
3,4,5-Trichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,4-Dinitrophenol	ug/L				<1	1	<1	1	4432656	0.2
2,3-Dichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2,5-Dichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
3,4-Dichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
3,5-Dichlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
4,6-Dinitro-2-methylphenol	ug/L				<1	1	<1	1	4432656	0.05
3 & 4-Chlorophenol	ug/L				<0.1	0.1	<0.1	0.1	4432656	0.05
2-Nitrophenol	ug/L				<1	1	<1	1	4432656	0.05
Surrogate Recovery (%)										
2,4,6-Tribromophenol	%				86		83		4432656	
2-Fluorophenol	%				56		53		4432656	
D5-Phenol	%				72		77		4432656	
D10-Anthracene	%	72	62	73	57		63		4434550	
D14-Terphenyl	%	68	66	78	51		74 (1)		4434550	
D8-Acenaphthylene	%	66	69	80	54		70		4434550	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
(1) Elevated PAH RDL(s) due to limited sample. PAH sample decanted due to sediment.

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC934		CBC935			CBC936			
Sampling Date		2016/03/19		2016/03/19			2016/03/19			
COC Number		553497-01-01		553497-01-01			553497-01-01			
	UNITS	P2A	RDL	P2B	RDL	QC Batch	P3	RDL	QC Batch	MDL
Polyaromatic Hydrocarbons										
1-Methylnaphthalene	ug/L	<0.050	0.050		0.050	4434550	<0.050	0.050	4438284	N/A
2-Methylnaphthalene	ug/L	<0.050	0.050		0.050	4434550	<0.050	0.050	4438284	N/A
Acenaphthene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Acenaphthylene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Acridine	ug/L	<0.050	0.050		0.050	4434550	<0.050	0.050	4438284	N/A
Anthracene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Benzo(a)anthracene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Benzo(a)pyrene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Benzo(b)fluoranthene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Benzo(g,h,i)perylene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Benzo(j)fluoranthene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Benzo(k)fluoranthene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Chrysene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Dibenz(a,h)anthracene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Fluoranthene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Fluorene	ug/L	0.019	0.010		0.010	4434550	<0.030 (1)	0.030	4438284	N/A
Indeno(1,2,3-cd)pyrene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Naphthalene	ug/L	<0.20	0.20		0.20	4434550	<0.20	0.20	4438284	N/A
Perylene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Phenanthrene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Pyrene	ug/L	<0.010	0.010		0.010	4434550	<0.010	0.010	4438284	N/A
Quinoline	ug/L	<0.050	0.050		0.050	4434550	<0.050	0.050	4438284	N/A
Phenolics										
2-Chlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,3,4,6-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,3,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,4-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,4-Dimethylphenol	ug/L	<1	1	<1	1	4432656	<1	1	4432656	0.05
2,4,6-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,6-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
4-Chloro-3-Methylphenol	ug/L	<0.1	0.1	<0.7 (2)	0.7	4432656	<0.1	0.1	4432656	0.05
4-Nitrophenol	ug/L	<1	1	<1	1	4432656	<1	1	4432656	0.05
m/p-Cresol	ug/L	<0.5	0.5	<0.5	0.5	4432656	<0.5	0.5	4432656	0.05

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated RDL(s) due to detected levels in the method blank.
(2) Detection Limit was raised due to matrix interferences.

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

SEMI-VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		CBC934		CBC935			CBC936			
Sampling Date		2016/03/19		2016/03/19			2016/03/19			
COC Number		553497-01-01		553497-01-01			553497-01-01			
	UNITS	P2A	RDL	P2B	RDL	QC Batch	P3	RDL	QC Batch	MDL
o-Cresol	ug/L	<0.5	0.5	<0.5	0.5	4432656	<0.5	0.5	4432656	0.05
Pentachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
Phenol	ug/L	<0.5	0.5	<0.5	0.5	4432656	<0.5	0.5	4432656	0.05
2,3,4,5-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,3,5,6-Tetrachlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,3,4-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,3,6-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,4,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
3,4,5-Trichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,4-Dinitrophenol	ug/L	<1	1	<1	1	4432656	<1	1	4432656	0.2
2,3-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2,5-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
3,4-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
3,5-Dichlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
4,6-Dinitro-2-methylphenol	ug/L	<1	1	<1	1	4432656	<1	1	4432656	0.05
3 & 4-Chlorophenol	ug/L	<0.1	0.1	<0.1	0.1	4432656	<0.1	0.1	4432656	0.05
2-Nitrophenol	ug/L	<1	1	<1	1	4432656	<1	1	4432656	0.05
Surrogate Recovery (%)										
2,4,6-Tribromophenol	%	93		93		4432656	94		4432656	
2-Fluorophenol	%	59		45 (1)		4432656	32 (1)		4432656	
D5-Phenol	%	73		71		4432656	73		4432656	
D10-Anthracene	%	67				4434550	73		4438284	
D14-Terphenyl	%	61				4434550	60		4438284	
D8-Acenaphthylene	%	75				4434550	73		4438284	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a low bias in some results.

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC929 **Collected:** 2016/03/19
Sample ID: SW1 **Shipped:**
Matrix: Water **Received:** 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	GC/MS	4434550	2016/03/24	2016/03/30	Gina Thompson

Maxxam ID: CBC929 Dup **Collected:** 2016/03/19
Sample ID: SW1 **Shipped:**
Matrix: Water **Received:** 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	GC/MS	4434550	2016/03/24	2016/03/30	Gina Thompson

Maxxam ID: CBC930 **Collected:** 2016/03/19
Sample ID: SW3 **Shipped:**
Matrix: Water **Received:** 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	GC/MS	4434550	2016/03/24	2016/03/30	Gina Thompson

Maxxam ID: CBC931 **Collected:** 2016/03/19
Sample ID: SW10 **Shipped:**
Matrix: Water **Received:** 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chromium (VI) in Water	IC	4431324	N/A	2016/03/30	Sally Coughlin

Maxxam ID: CBC932 **Collected:** 2016/03/19
Sample ID: P1A **Shipped:**
Matrix: Water **Received:** 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4426995	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433652	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433654	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433725	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/29	May Yin Mak
Chromium (VI) in Water	IC	4431324	N/A	2016/03/30	Sally Coughlin
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4426997	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Total MS	CICP/MS	4429359	2016/03/23	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4426998	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4426999	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433728	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433731	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4427000	N/A	2016/03/30	Automated Statchk
PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	GC/MS	4434550	2016/03/24	2016/03/31	Gina Thompson
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC932
Sample ID: P1A
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus - ortho	KONE	4433727	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4427002	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4427003	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433719	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433716	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4427004	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC933
Sample ID: P1B
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4426995	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433652	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433654	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433725	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/29	May Yin Mak
Chromium (VI) in Water	IC	4431324	N/A	2016/03/30	Sally Coughlin
Conductance - water	AT	4429181	N/A	2016/03/23	Tammy Peters
Hardness (calculated as CaCO3)		4426997	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Total MS	CICP/MS	4429359	2016/03/23	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4426998	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4426999	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433728	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433731	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4427000	N/A	2016/03/30	Automated Statchk
PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	GC/MS	4434550	2016/03/24	2016/03/31	Gina Thompson
pH	AT	4430869	N/A	2016/03/24	Tammy Peters
Phosphorus - ortho	KONE	4433727	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4427002	N/A	2016/03/29	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4427003	N/A	2016/03/29	Automated Statchk
Reactive Silica	KONE	4433719	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433716	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4427004	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC933 Dup
Sample ID: P1B
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT	4429181	N/A	2016/03/23	Tammy Peters

Maxxam ID: CBC934
Sample ID: P2A
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4426995	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433652	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433654	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433725	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/29	May Yin Mak
Chromium (VI) in Water	IC	4431324	N/A	2016/03/30	Sally Coughlin
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4426997	N/A	2016/03/24	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Total MS	CICP/MS	4429359	2016/03/23	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4426998	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4426999	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433728	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433731	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4427000	N/A	2016/03/30	Automated Statchk
PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	GC/MS	4434550	2016/03/24	2016/03/31	Gina Thompson
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433727	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4427002	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4427003	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433719	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433716	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4427004	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC935
Sample ID: P2B
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4426995	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433652	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433654	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433725	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/29	May Yin Mak
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC935
Sample ID: P2B
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)		4426997	N/A	2016/03/29	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Total MS	CICP/MS	4430672	2016/03/24	2016/03/28	Bryon Angevine
Ion Balance (% Difference)	CALC	4426998	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4426999	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433728	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433731	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4427000	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433727	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4427002	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4427003	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433719	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433716	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4427004	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC936
Sample ID: P3
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4426995	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433652	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433654	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433725	N/A	2016/03/29	Mary Clancey
Acid Extractables by GC/MS	GC/MS	4432656	2016/03/26	2016/03/29	May Yin Mak
Conductance - water	AT	4430666	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4426997	N/A	2016/03/28	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Total MS	CICP/MS	4430672	2016/03/24	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4426998	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4426999	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433728	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433731	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4427000	N/A	2016/03/30	Automated Statchk
PAH (FWAL) in Water (A/Q) by GC/MS (SIM)	GC/MS	4438284	2016/03/24	2016/03/31	Gina Thompson
pH	AT	4430667	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433727	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4427002	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4427003	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433719	N/A	2016/03/29	Mary Clancey

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC936
Sample ID: P3
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate	KONE	4433716	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4427004	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC937
Sample ID: SPRING
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4426995	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433652	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433654	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433725	N/A	2016/03/29	Mary Clancey
Conductance - water	AT	4430660	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4426997	N/A	2016/03/28	Automated Statchk
Mercury - Total (CVAA,LL)	CV/AA	4431135	2016/03/24	2016/03/28	Arlene Rossiter
Metals Water Total MS	CICP/MS	4430672	2016/03/24	2016/03/24	Bryon Angevine
Ion Balance (% Difference)	CALC	4426998	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4426999	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433728	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433731	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4427000	N/A	2016/03/30	Automated Statchk
pH	AT	4430663	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433727	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4427002	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4427003	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433719	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433716	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4427004	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC938
Sample ID: PW2A
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbonate, Bicarbonate and Hydroxide	CALC	4426995	N/A	2016/03/24	Automated Statchk
Alkalinity	KONE	4433652	N/A	2016/03/28	Mary Clancey
Chloride	KONE	4433654	N/A	2016/03/29	Mary Clancey
Colour	KONE	4433725	N/A	2016/03/29	Mary Clancey
Conductance - water	AT	4430666	N/A	2016/03/24	Tiffany Morash
Hardness (calculated as CaCO3)		4426997	N/A	2016/03/29	Automated Statchk

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Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

TEST SUMMARY

Maxxam ID: CBC938
Sample ID: PW2A
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Water Total MS	CICP/MS	4430672	2016/03/24	2016/03/28	Bryon Angevine
Ion Balance (% Difference)	CALC	4426998	N/A	2016/03/30	Automated Statchk
Anion and Cation Sum	CALC	4426999	N/A	2016/03/29	Automated Statchk
Nitrogen Ammonia - water	KONE	4429673	N/A	2016/03/23	Mary Clancey
Nitrogen - Nitrate + Nitrite	KONE	4433728	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrite	KONE	4433731	N/A	2016/03/30	Mary Clancey
Nitrogen - Nitrate (as N)	CALC	4427000	N/A	2016/03/30	Automated Statchk
pH	AT	4430667	N/A	2016/03/24	Tiffany Morash
Phosphorus - ortho	KONE	4433727	N/A	2016/03/29	Mary Clancey
Sat. pH and Langelier Index (@ 20C)	CALC	4427002	N/A	2016/03/30	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	4427003	N/A	2016/03/30	Automated Statchk
Reactive Silica	KONE	4433719	N/A	2016/03/29	Mary Clancey
Sulphate	KONE	4433716	N/A	2016/03/30	Mary Clancey
Total Dissolved Solids (TDS calc)	CALC	4427004	N/A	2016/03/30	Automated Statchk
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant
Turbidity	TURB	4433250	N/A	2016/03/28	Tiffany Morash

Maxxam ID: CBC938 Dup
Sample ID: PW2A
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Organic carbon - Total (TOC)	TECH	4431000	N/A	2016/03/24	Soraya Merchant

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Maxxam Job #: B656184
Report Date: 2016/03/31

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GENERAL COMMENTS

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

Package 1	5.0°C
Package 2	2.3°C
Package 3	0.7°C
Package 4	1.3°C
Package 5	-0.7°C

Hexavalent Chromium: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Sample CBC932-01 : Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample CBC933-01 : Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample CBC934-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Sample CBC935-01 : Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample CBC936-01 : Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample CBC937-01 : Poor RCAp Ion Balance due to sample matrix. Excess cations due to presence of turbidity.

Sample CBC938-01 : RCAp Ion Balance acceptable. Anion/cation agreement within 0.2 meq/L.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4429181	TPE	Spiked Blank	Conductivity	2016/03/23		101	%	80 - 120
4429181	TPE	Method Blank	Conductivity	2016/03/23	1.2, RDL=1.0		uS/cm	
4429181	TPE	RPD - Sample/Sample Dup	Conductivity	2016/03/23	0.17		%	25
4429359	BAN	Matrix Spike	Total Aluminum (Al)	2016/03/24		95	%	80 - 120
			Total Antimony (Sb)	2016/03/24		95	%	80 - 120
			Total Arsenic (As)	2016/03/24		91	%	80 - 120
			Total Barium (Ba)	2016/03/24		93	%	80 - 120
			Total Beryllium (Be)	2016/03/24		98	%	80 - 120
			Total Bismuth (Bi)	2016/03/24		98	%	80 - 120
			Total Boron (B)	2016/03/24		100	%	80 - 120
			Total Cadmium (Cd)	2016/03/24		95	%	80 - 120
			Total Calcium (Ca)	2016/03/24		96	%	80 - 120
			Total Chromium (Cr)	2016/03/24		91	%	80 - 120
			Total Cobalt (Co)	2016/03/24		92	%	80 - 120
			Total Copper (Cu)	2016/03/24		91	%	80 - 120
			Total Iron (Fe)	2016/03/24		96	%	80 - 120
			Total Lead (Pb)	2016/03/24		93	%	80 - 120
			Total Magnesium (Mg)	2016/03/24		97	%	80 - 120
			Total Manganese (Mn)	2016/03/24		92	%	80 - 120
			Total Molybdenum (Mo)	2016/03/24		97	%	80 - 120
			Total Nickel (Ni)	2016/03/24		93	%	80 - 120
			Total Phosphorus (P)	2016/03/24		97	%	80 - 120
			Total Potassium (K)	2016/03/24		97	%	80 - 120
			Total Selenium (Se)	2016/03/24		90	%	80 - 120
			Total Silver (Ag)	2016/03/24		95	%	80 - 120
			Total Sodium (Na)	2016/03/24		NC	%	80 - 120
			Total Strontium (Sr)	2016/03/24		94	%	80 - 120
			Total Thallium (Tl)	2016/03/24		95	%	80 - 120
			Total Tin (Sn)	2016/03/24		92	%	80 - 120
			Total Titanium (Ti)	2016/03/24		96	%	80 - 120
			Total Uranium (U)	2016/03/24		102	%	80 - 120
			Total Vanadium (V)	2016/03/24		93	%	80 - 120
			Total Zinc (Zn)	2016/03/24		94	%	80 - 120
4429359	BAN	Spiked Blank	Total Aluminum (Al)	2016/03/24		98	%	80 - 120
			Total Antimony (Sb)	2016/03/24		94	%	80 - 120
			Total Arsenic (As)	2016/03/24		90	%	80 - 120
			Total Barium (Ba)	2016/03/24		94	%	80 - 120
			Total Beryllium (Be)	2016/03/24		97	%	80 - 120
			Total Bismuth (Bi)	2016/03/24		98	%	80 - 120
			Total Boron (B)	2016/03/24		96	%	80 - 120
			Total Cadmium (Cd)	2016/03/24		95	%	80 - 120
			Total Calcium (Ca)	2016/03/24		97	%	80 - 120
			Total Chromium (Cr)	2016/03/24		93	%	80 - 120
			Total Cobalt (Co)	2016/03/24		94	%	80 - 120
			Total Copper (Cu)	2016/03/24		93	%	80 - 120
			Total Iron (Fe)	2016/03/24		99	%	80 - 120
			Total Lead (Pb)	2016/03/24		95	%	80 - 120
			Total Magnesium (Mg)	2016/03/24		98	%	80 - 120
			Total Manganese (Mn)	2016/03/24		96	%	80 - 120
			Total Molybdenum (Mo)	2016/03/24		97	%	80 - 120
			Total Nickel (Ni)	2016/03/24		94	%	80 - 120
			Total Phosphorus (P)	2016/03/24		98	%	80 - 120

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			Total Potassium (K)	2016/03/24		101	%	80 - 120
			Total Selenium (Se)	2016/03/24		90	%	80 - 120
			Total Silver (Ag)	2016/03/24		96	%	80 - 120
			Total Sodium (Na)	2016/03/24		99	%	80 - 120
			Total Strontium (Sr)	2016/03/24		95	%	80 - 120
			Total Thallium (Tl)	2016/03/24		97	%	80 - 120
			Total Tin (Sn)	2016/03/24		98	%	80 - 120
			Total Titanium (Ti)	2016/03/24		99	%	80 - 120
			Total Uranium (U)	2016/03/24		103	%	80 - 120
			Total Vanadium (V)	2016/03/24		93	%	80 - 120
			Total Zinc (Zn)	2016/03/24		96	%	80 - 120
4429359	BAN	Method Blank	Total Aluminum (Al)	2016/03/24	5.4, RDL=5.0		ug/L	
			Total Antimony (Sb)	2016/03/24	<1.0		ug/L	
			Total Arsenic (As)	2016/03/24	<1.0		ug/L	
			Total Barium (Ba)	2016/03/24	<1.0		ug/L	
			Total Beryllium (Be)	2016/03/24	<1.0		ug/L	
			Total Bismuth (Bi)	2016/03/24	<2.0		ug/L	
			Total Boron (B)	2016/03/24	<50		ug/L	
			Total Cadmium (Cd)	2016/03/24	<0.010		ug/L	
			Total Calcium (Ca)	2016/03/24	<100		ug/L	
			Total Chromium (Cr)	2016/03/24	<1.0		ug/L	
			Total Cobalt (Co)	2016/03/24	<0.40		ug/L	
			Total Copper (Cu)	2016/03/24	<2.0		ug/L	
			Total Iron (Fe)	2016/03/24	<50		ug/L	
			Total Lead (Pb)	2016/03/24	<0.50		ug/L	
			Total Magnesium (Mg)	2016/03/24	<100		ug/L	
			Total Manganese (Mn)	2016/03/24	<2.0		ug/L	
			Total Molybdenum (Mo)	2016/03/24	<2.0		ug/L	
			Total Nickel (Ni)	2016/03/24	<2.0		ug/L	
			Total Phosphorus (P)	2016/03/24	<100		ug/L	
			Total Potassium (K)	2016/03/24	<100		ug/L	
			Total Selenium (Se)	2016/03/24	<1.0		ug/L	
			Total Silver (Ag)	2016/03/24	<0.10		ug/L	
			Total Sodium (Na)	2016/03/24	<100		ug/L	
			Total Strontium (Sr)	2016/03/24	<2.0		ug/L	
			Total Thallium (Tl)	2016/03/24	<0.10		ug/L	
			Total Tin (Sn)	2016/03/24	<2.0		ug/L	
			Total Titanium (Ti)	2016/03/24	<2.0		ug/L	
			Total Uranium (U)	2016/03/24	<0.10		ug/L	
			Total Vanadium (V)	2016/03/24	<2.0		ug/L	
			Total Zinc (Zn)	2016/03/24	<5.0		ug/L	
4429359	BAN	RPD - Sample/Sample Dup	Total Arsenic (As)	2016/03/24	NC		%	20
4429673	MCN	Matrix Spike	Nitrogen (Ammonia Nitrogen)	2016/03/23		NC	%	80 - 120
4429673	MCN	Spiked Blank	Nitrogen (Ammonia Nitrogen)	2016/03/23		101	%	80 - 120
4429673	MCN	Method Blank	Nitrogen (Ammonia Nitrogen)	2016/03/23	0.080, RDL=0.050		mg/L	
4429673	MCN	RPD - Sample/Sample Dup	Nitrogen (Ammonia Nitrogen)	2016/03/23	3.1		%	20
4430660	TMO	Spiked Blank	Conductivity	2016/03/24		101	%	80 - 120
4430660	TMO	Method Blank	Conductivity	2016/03/24	<1.0		uS/cm	
4430660	TMO	RPD - Sample/Sample Dup	Conductivity	2016/03/24	0.14		%	25
4430663	TMO	QC Standard	pH	2016/03/24		100	%	97 - 103
4430663	TMO	RPD - Sample/Sample Dup	pH	2016/03/24	0.52		%	N/A

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4430666	TMO	Spiked Blank	Conductivity	2016/03/24		100	%	80 - 120
4430666	TMO	Method Blank	Conductivity	2016/03/24	1.0, RDL=1.0		uS/cm	
4430666	TMO	RPD - Sample/Sample Dup	Conductivity	2016/03/24	0.60		%	25
4430667	TMO	QC Standard	pH	2016/03/24		100	%	97 - 103
4430667	TMO	RPD - Sample/Sample Dup	pH	2016/03/24	1.3		%	N/A
4430672	BAN	Matrix Spike	Total Aluminum (Al)	2016/03/24		98	%	80 - 120
			Total Antimony (Sb)	2016/03/24		102	%	80 - 120
			Total Arsenic (As)	2016/03/24		95	%	80 - 120
			Total Barium (Ba)	2016/03/24		NC	%	80 - 120
			Total Beryllium (Be)	2016/03/24		97	%	80 - 120
			Total Bismuth (Bi)	2016/03/24		99	%	80 - 120
			Total Boron (B)	2016/03/24		97	%	80 - 120
			Total Cadmium (Cd)	2016/03/24		98	%	80 - 120
			Total Calcium (Ca)	2016/03/24		NC	%	80 - 120
			Total Chromium (Cr)	2016/03/24		92	%	80 - 120
			Total Cobalt (Co)	2016/03/24		93	%	80 - 120
			Total Copper (Cu)	2016/03/24		93	%	80 - 120
			Total Iron (Fe)	2016/03/24		98	%	80 - 120
			Total Lead (Pb)	2016/03/24		96	%	80 - 120
			Total Magnesium (Mg)	2016/03/24		NC	%	80 - 120
			Total Manganese (Mn)	2016/03/24		NC	%	80 - 120
			Total Molybdenum (Mo)	2016/03/24		99	%	80 - 120
			Total Nickel (Ni)	2016/03/24		94	%	80 - 120
			Total Phosphorus (P)	2016/03/24		102	%	80 - 120
			Total Potassium (K)	2016/03/24		102	%	80 - 120
			Total Selenium (Se)	2016/03/24		95	%	80 - 120
			Total Silver (Ag)	2016/03/24		98	%	80 - 120
			Total Sodium (Na)	2016/03/24		NC	%	80 - 120
			Total Strontium (Sr)	2016/03/24		NC	%	80 - 120
			Total Thallium (Tl)	2016/03/24		98	%	80 - 120
			Total Tin (Sn)	2016/03/24		102	%	80 - 120
			Total Titanium (Ti)	2016/03/24		94	%	80 - 120
			Total Uranium (U)	2016/03/24		105	%	80 - 120
			Total Vanadium (V)	2016/03/24		94	%	80 - 120
			Total Zinc (Zn)	2016/03/24		97	%	80 - 120
4430672	BAN	Spiked Blank	Total Aluminum (Al)	2016/03/24		101	%	80 - 120
			Total Antimony (Sb)	2016/03/24		100	%	80 - 120
			Total Arsenic (As)	2016/03/24		94	%	80 - 120
			Total Barium (Ba)	2016/03/24		94	%	80 - 120
			Total Beryllium (Be)	2016/03/24		94	%	80 - 120
			Total Bismuth (Bi)	2016/03/24		100	%	80 - 120
			Total Boron (B)	2016/03/24		95	%	80 - 120
			Total Cadmium (Cd)	2016/03/24		97	%	80 - 120
			Total Calcium (Ca)	2016/03/24		99	%	80 - 120
			Total Chromium (Cr)	2016/03/24		94	%	80 - 120
			Total Cobalt (Co)	2016/03/24		93	%	80 - 120
			Total Copper (Cu)	2016/03/24		95	%	80 - 120
			Total Iron (Fe)	2016/03/24		101	%	80 - 120
			Total Lead (Pb)	2016/03/24		97	%	80 - 120
			Total Magnesium (Mg)	2016/03/24		101	%	80 - 120
			Total Manganese (Mn)	2016/03/24		96	%	80 - 120
			Total Molybdenum (Mo)	2016/03/24		97	%	80 - 120

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			Total Nickel (Ni)	2016/03/24		95	%	80 - 120
			Total Phosphorus (P)	2016/03/24		101	%	80 - 120
			Total Potassium (K)	2016/03/24		101	%	80 - 120
			Total Selenium (Se)	2016/03/24		94	%	80 - 120
			Total Silver (Ag)	2016/03/24		96	%	80 - 120
			Total Sodium (Na)	2016/03/24		98	%	80 - 120
			Total Strontium (Sr)	2016/03/24		97	%	80 - 120
			Total Thallium (Tl)	2016/03/24		100	%	80 - 120
			Total Tin (Sn)	2016/03/24		100	%	80 - 120
			Total Titanium (Ti)	2016/03/24		96	%	80 - 120
			Total Uranium (U)	2016/03/24		105	%	80 - 120
			Total Vanadium (V)	2016/03/24		93	%	80 - 120
			Total Zinc (Zn)	2016/03/24		97	%	80 - 120
4430672	BAN	Method Blank	Total Aluminum (Al)	2016/03/24	<5.0		ug/L	
			Total Antimony (Sb)	2016/03/24	<1.0		ug/L	
			Total Arsenic (As)	2016/03/24	<1.0		ug/L	
			Total Barium (Ba)	2016/03/24	<1.0		ug/L	
			Total Beryllium (Be)	2016/03/24	<1.0		ug/L	
			Total Bismuth (Bi)	2016/03/24	<2.0		ug/L	
			Total Boron (B)	2016/03/24	<50		ug/L	
			Total Cadmium (Cd)	2016/03/24	<0.010		ug/L	
			Total Calcium (Ca)	2016/03/24	<100		ug/L	
			Total Chromium (Cr)	2016/03/24	<1.0		ug/L	
			Total Cobalt (Co)	2016/03/24	<0.40		ug/L	
			Total Copper (Cu)	2016/03/24	<2.0		ug/L	
			Total Iron (Fe)	2016/03/24	<50		ug/L	
			Total Lead (Pb)	2016/03/24	<0.50		ug/L	
			Total Magnesium (Mg)	2016/03/24	<100		ug/L	
			Total Manganese (Mn)	2016/03/24	<2.0		ug/L	
			Total Molybdenum (Mo)	2016/03/24	<2.0		ug/L	
			Total Nickel (Ni)	2016/03/24	<2.0		ug/L	
			Total Phosphorus (P)	2016/03/24	<100		ug/L	
			Total Potassium (K)	2016/03/24	<100		ug/L	
			Total Selenium (Se)	2016/03/24	<1.0		ug/L	
			Total Silver (Ag)	2016/03/24	<0.10		ug/L	
			Total Sodium (Na)	2016/03/24	<100		ug/L	
			Total Strontium (Sr)	2016/03/24	<2.0		ug/L	
			Total Thallium (Tl)	2016/03/24	<0.10		ug/L	
			Total Tin (Sn)	2016/03/24	<2.0		ug/L	
			Total Titanium (Ti)	2016/03/24	<2.0		ug/L	
			Total Uranium (U)	2016/03/24	<0.10		ug/L	
			Total Vanadium (V)	2016/03/24	<2.0		ug/L	
			Total Zinc (Zn)	2016/03/24	<5.0		ug/L	
4430672	BAN	RPD - Sample/Sample Dup	Total Aluminum (Al)	2016/03/24	NC		%	20
			Total Antimony (Sb)	2016/03/24	NC		%	20
			Total Arsenic (As)	2016/03/24	NC		%	20
			Total Barium (Ba)	2016/03/24	4.0		%	20
			Total Boron (B)	2016/03/24	NC		%	20
			Total Cadmium (Cd)	2016/03/24	NC		%	20
			Total Calcium (Ca)	2016/03/24	5.1		%	20
			Total Chromium (Cr)	2016/03/24	NC		%	20
			Total Copper (Cu)	2016/03/24	NC		%	20
			Total Iron (Fe)	2016/03/24	NC		%	20

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			Total Lead (Pb)	2016/03/24	NC		%	20
			Total Magnesium (Mg)	2016/03/24	4.9		%	20
			Total Manganese (Mn)	2016/03/24	1.6		%	20
			Total Potassium (K)	2016/03/24	4.7		%	20
			Total Selenium (Se)	2016/03/24	NC		%	20
			Total Sodium (Na)	2016/03/24	3.5		%	20
			Total Uranium (U)	2016/03/24	NC		%	20
			Total Zinc (Zn)	2016/03/24	NC		%	20
4430869	TPE	QC Standard	pH	2016/03/24		100	%	N/A
4430869	TPE	RPD - Sample/Sample Dup	pH	2016/03/24	1.0		%	N/A
4431000	SMT	Matrix Spike(CBC938)	Total Organic Carbon (C)	2016/03/24		114	%	80 - 120
4431000	SMT	Spiked Blank	Total Organic Carbon (C)	2016/03/24		109	%	80 - 120
4431000	SMT	Method Blank	Total Organic Carbon (C)	2016/03/24	<0.50		mg/L	
4431000	SMT	RPD - Sample/Sample Dup	Total Organic Carbon (C)	2016/03/24	NC		%	20
4431135	ARS	Matrix Spike	Total Mercury (Hg)	2016/03/28		97	%	80 - 120
4431135	ARS	Spiked Blank	Total Mercury (Hg)	2016/03/28		99	%	80 - 120
4431135	ARS	Method Blank	Total Mercury (Hg)	2016/03/28	<0.013		ug/L	
4431135	ARS	RPD - Sample/Sample Dup	Total Mercury (Hg)	2016/03/28	NC		%	20
4431324	SAC	Matrix Spike	Chromium (VI)	2016/03/30		113	%	80 - 120
4431324	SAC	Spiked Blank	Chromium (VI)	2016/03/30		94	%	80 - 120
4431324	SAC	Method Blank	Chromium (VI)	2016/03/30	<0.50		ug/L	
4431324	SAC	RPD - Sample/Sample Dup	Chromium (VI)	2016/03/30	NC		%	20
4432656	MYI	Matrix Spike	2,4,6-Tribromophenol	2016/03/28		98	%	50 - 130
			2-Fluorophenol	2016/03/28		72	%	50 - 130
			D5-Phenol	2016/03/28		77	%	30 - 130
			2-Chlorophenol	2016/03/28		88	%	50 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/28		84	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/28		96	%	10 - 130
			2,4-Dichlorophenol	2016/03/28		97	%	50 - 130
			2,4-Dimethylphenol	2016/03/28		97	%	30 - 130
			2,4,6-Trichlorophenol	2016/03/28		88	%	10 - 130
			2,6-Dichlorophenol	2016/03/28		106	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/28		102	%	10 - 130
			4-Nitrophenol	2016/03/28		86	%	10 - 130
			m/p-Cresol	2016/03/28		93	%	10 - 130
			o-Cresol	2016/03/28		124	%	10 - 130
			Pentachlorophenol	2016/03/28		94	%	50 - 130
			Phenol	2016/03/28		80	%	30 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/28		100	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/28		106	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/28		108	%	10 - 130
			2,3,6-Trichlorophenol	2016/03/28		96	%	30 - 130
			2,4,5-Trichlorophenol	2016/03/28		91	%	50 - 130
			3,4,5-Trichlorophenol	2016/03/28		84	%	10 - 130
			2,4-Dinitrophenol	2016/03/28		74	%	30 - 130
			2,3-Dichlorophenol	2016/03/28		102	%	10 - 130
			2,5-Dichlorophenol	2016/03/28		103	%	10 - 130
			3,4-Dichlorophenol	2016/03/28		106	%	10 - 130
			3,5-Dichlorophenol	2016/03/28		112	%	10 - 130
			4,6-Dinitro-2-methylphenol	2016/03/28		81	%	10 - 130
			3 & 4-Chlorophenol	2016/03/28		96	%	10 - 130
			2-Nitrophenol	2016/03/28		79	%	10 - 130
4432656	MYI	Spiked Blank	2,4,6-Tribromophenol	2016/03/28		84	%	50 - 130

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			2-Fluorophenol	2016/03/28		75	%	50 - 130
			D5-Phenol	2016/03/28		64	%	30 - 130
			2-Chlorophenol	2016/03/28		90	%	50 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/28		73	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/28		85	%	10 - 130
			2,4-Dichlorophenol	2016/03/28		90	%	50 - 130
			2,4-Dimethylphenol	2016/03/28		90	%	30 - 130
			2,4,6-Trichlorophenol	2016/03/28		80	%	10 - 130
			2,6-Dichlorophenol	2016/03/28		99	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/28		81	%	10 - 130
			4-Nitrophenol	2016/03/28		79	%	10 - 130
			m/p-Cresol	2016/03/28		84	%	10 - 130
			o-Cresol	2016/03/28		115	%	10 - 130
			Pentachlorophenol	2016/03/28		92	%	50 - 130
			Phenol	2016/03/28		66	%	30 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/28		90	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/28		93	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/28		102	%	10 - 130
			2,3,6-Trichlorophenol	2016/03/28		87	%	30 - 130
			2,4,5-Trichlorophenol	2016/03/28		79	%	50 - 130
			3,4,5-Trichlorophenol	2016/03/28		75	%	10 - 130
			2,4-Dinitrophenol	2016/03/28		64	%	30 - 130
			2,3-Dichlorophenol	2016/03/28		95	%	10 - 130
			2,5-Dichlorophenol	2016/03/28		96	%	10 - 130
			3,4-Dichlorophenol	2016/03/28		105	%	10 - 130
			3,5-Dichlorophenol	2016/03/28		102	%	10 - 130
			4,6-Dinitro-2-methylphenol	2016/03/28		66	%	10 - 130
			3 & 4-Chlorophenol	2016/03/28		87	%	10 - 130
			2-Nitrophenol	2016/03/28		74	%	10 - 130
4432656	MYI	Method Blank	2,4,6-Tribromophenol	2016/03/28		91	%	50 - 130
			2-Fluorophenol	2016/03/28		67	%	50 - 130
			D5-Phenol	2016/03/28		51	%	30 - 130
			2-Chlorophenol	2016/03/28	<0.1		ug/L	
			2,3,4,6-Tetrachlorophenol	2016/03/28	<0.1		ug/L	
			2,3,5-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,4-Dichlorophenol	2016/03/28	<0.1		ug/L	
			2,4-Dimethylphenol	2016/03/28	<1		ug/L	
			2,4,6-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,6-Dichlorophenol	2016/03/28	<0.1		ug/L	
			4-Chloro-3-Methylphenol	2016/03/28	<0.1		ug/L	
			4-Nitrophenol	2016/03/28	<1		ug/L	
			m/p-Cresol	2016/03/28	<0.5		ug/L	
			o-Cresol	2016/03/28	<0.5		ug/L	
			Pentachlorophenol	2016/03/28	<0.1		ug/L	
			Phenol	2016/03/28	<0.5		ug/L	
			2,3,4,5-Tetrachlorophenol	2016/03/28	<0.1		ug/L	
			2,3,5,6-Tetrachlorophenol	2016/03/28	<0.1		ug/L	
			2,3,4-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,3,6-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,4,5-Trichlorophenol	2016/03/28	<0.1		ug/L	
			3,4,5-Trichlorophenol	2016/03/28	<0.1		ug/L	
			2,4-Dinitrophenol	2016/03/28	<1		ug/L	
			2,3-Dichlorophenol	2016/03/28	<0.1		ug/L	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			2,5-Dichlorophenol	2016/03/28	<0.1		ug/L	
			3,4-Dichlorophenol	2016/03/28	<0.1		ug/L	
			3,5-Dichlorophenol	2016/03/28	<0.1		ug/L	
			4,6-Dinitro-2-methylphenol	2016/03/28	<1		ug/L	
			3 & 4-Chlorophenol	2016/03/28	<0.1		ug/L	
			2-Nitrophenol	2016/03/28	<1		ug/L	
4432656	MYI	RPD - Sample/Sample Dup	2-Chlorophenol	2016/03/28	NC		%	30
			2,3,4,6-Tetrachlorophenol	2016/03/28	NC		%	40
			2,3,5-Trichlorophenol	2016/03/28	NC		%	40
			2,4-Dichlorophenol	2016/03/28	NC		%	30
			2,4-Dimethylphenol	2016/03/28	NC		%	30
			2,4,6-Trichlorophenol	2016/03/28	NC		%	30
			2,6-Dichlorophenol	2016/03/28	NC		%	40
			4-Chloro-3-Methylphenol	2016/03/28	NC		%	40
			4-Nitrophenol	2016/03/28	NC		%	40
			m/p-Cresol	2016/03/28	NC		%	40
			o-Cresol	2016/03/28	NC		%	40
			Pentachlorophenol	2016/03/28	NC		%	30
			Phenol	2016/03/28	NC		%	30
			2,3,4,5-Tetrachlorophenol	2016/03/28	NC		%	40
			2,3,5,6-Tetrachlorophenol	2016/03/28	NC		%	40
			2,3,4-Trichlorophenol	2016/03/28	NC		%	40
			2,3,6-Trichlorophenol	2016/03/28	NC		%	40
			2,4,5-Trichlorophenol	2016/03/28	NC		%	30
			3,4,5-Trichlorophenol	2016/03/28	NC		%	40
			2,4-Dinitrophenol	2016/03/28	NC		%	30
			2,3-Dichlorophenol	2016/03/28	NC		%	40
			2,5-Dichlorophenol	2016/03/28	NC		%	40
			3,4-Dichlorophenol	2016/03/28	NC		%	40
			3,5-Dichlorophenol	2016/03/28	NC		%	40
			4,6-Dinitro-2-methylphenol	2016/03/28	NC		%	40
			3 & 4-Chlorophenol	2016/03/28	NC		%	40
			2-Nitrophenol	2016/03/28	NC		%	40
4433250	TMO	QC Standard	Turbidity	2016/03/28		92	%	80 - 120
4433250	TMO	Method Blank	Turbidity	2016/03/28	<0.10		NTU	
4433250	TMO	RPD - Sample/Sample Dup	Turbidity	2016/03/28	6.6		%	20
4433652	MCN	Matrix Spike	Total Alkalinity (Total as CaCO3)	2016/03/29		NC	%	80 - 120
4433652	MCN	Spiked Blank	Total Alkalinity (Total as CaCO3)	2016/03/28		100	%	80 - 120
4433652	MCN	Method Blank	Total Alkalinity (Total as CaCO3)	2016/03/28	<5.0		mg/L	
4433652	MCN	RPD - Sample/Sample Dup	Total Alkalinity (Total as CaCO3)	2016/03/28	0.56		%	25
4433654	MCN	Matrix Spike	Dissolved Chloride (Cl)	2016/03/29		101	%	80 - 120
4433654	MCN	QC Standard	Dissolved Chloride (Cl)	2016/03/29		105	%	80 - 120
4433654	MCN	Spiked Blank	Dissolved Chloride (Cl)	2016/03/29		102	%	80 - 120
4433654	MCN	Method Blank	Dissolved Chloride (Cl)	2016/03/29	<1.0		mg/L	
4433654	MCN	RPD - Sample/Sample Dup	Dissolved Chloride (Cl)	2016/03/29	1.6		%	25
4433716	MCN	Matrix Spike	Dissolved Sulphate (SO4)	2016/03/30		NC	%	80 - 120
4433716	MCN	Spiked Blank	Dissolved Sulphate (SO4)	2016/03/30		100	%	80 - 120
4433716	MCN	Method Blank	Dissolved Sulphate (SO4)	2016/03/30	<2.0		mg/L	
4433716	MCN	RPD - Sample/Sample Dup	Dissolved Sulphate (SO4)	2016/03/30	3.3		%	25
4433719	MCN	Matrix Spike	Reactive Silica (SiO2)	2016/03/29		NC	%	80 - 120
4433719	MCN	Spiked Blank	Reactive Silica (SiO2)	2016/03/29		103	%	80 - 120
4433719	MCN	Method Blank	Reactive Silica (SiO2)	2016/03/29	<0.50		mg/L	
4433719	MCN	RPD - Sample/Sample Dup	Reactive Silica (SiO2)	2016/03/29	7.5		%	25

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4433725	MCN	Spiked Blank	Colour	2016/03/29		103	%	80 - 120
4433725	MCN	Method Blank	Colour	2016/03/29	<5.0		TCU	
4433725	MCN	RPD - Sample/Sample Dup	Colour	2016/03/29	NC		%	20
4433727	MCN	Matrix Spike	Orthophosphate (P)	2016/03/29		97	%	80 - 120
4433727	MCN	Spiked Blank	Orthophosphate (P)	2016/03/29		94	%	80 - 120
4433727	MCN	Method Blank	Orthophosphate (P)	2016/03/29	<0.010		mg/L	
4433727	MCN	RPD - Sample/Sample Dup	Orthophosphate (P)	2016/03/29	NC		%	25
4433728	MCN	Matrix Spike	Nitrate + Nitrite (N)	2016/03/30		103	%	80 - 120
4433728	MCN	Spiked Blank	Nitrate + Nitrite (N)	2016/03/30		108	%	80 - 120
4433728	MCN	Method Blank	Nitrate + Nitrite (N)	2016/03/30	<0.050		mg/L	
4433728	MCN	RPD - Sample/Sample Dup	Nitrate + Nitrite (N)	2016/03/30	NC		%	25
4433731	MCN	Matrix Spike	Nitrite (N)	2016/03/30		91	%	80 - 120
4433731	MCN	Spiked Blank	Nitrite (N)	2016/03/30		98	%	80 - 120
4433731	MCN	Method Blank	Nitrite (N)	2016/03/30	<0.010		mg/L	
4433731	MCN	RPD - Sample/Sample Dup	Nitrite (N)	2016/03/30	NC		%	25
4434550	GTH	Matrix Spike(CBC930)	Benzo(j)fluoranthene	2016/03/30		53	%	30 - 130
			1-Methylnaphthalene	2016/03/30		84	%	30 - 130
			2-Methylnaphthalene	2016/03/30		93	%	30 - 130
			Acenaphthene	2016/03/30		87	%	30 - 130
			Acenaphthylene	2016/03/30		103	%	30 - 130
			Acridine	2016/03/30		75	%	30 - 130
			Anthracene	2016/03/30		105	%	30 - 130
			Benzo(a)anthracene	2016/03/30		61	%	30 - 130
			Benzo(a)pyrene	2016/03/30		47 (1)	%	30 - 130
			Benzo(b)fluoranthene	2016/03/30		49 (1)	%	30 - 130
			Benzo(g,h,i)perylene	2016/03/30		30 (1)	%	30 - 130
			Benzo(k)fluoranthene	2016/03/30		48 (1)	%	30 - 130
			Chrysene	2016/03/30		62	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/30		23 (1)	%	30 - 130
			Fluoranthene	2016/03/30		98	%	30 - 130
			Fluorene	2016/03/30		100	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/30		26 (1)	%	30 - 130
			Naphthalene	2016/03/30		90	%	30 - 130
			Perylene	2016/03/30		46 (1)	%	30 - 130
			Phenanthrene	2016/03/30		100	%	30 - 130
			Pyrene	2016/03/30		100	%	30 - 130
			Quinoline	2016/03/30		72	%	30 - 130
4434550	GTH	Matrix Spike	D10-Anthracene	2016/03/30		69	%	30 - 130
			D14-Terphenyl	2016/03/30		65	%	30 - 130
			D8-Acenaphthylene	2016/03/30		73	%	30 - 130
4434550	GTH	Spiked Blank	Benzo(j)fluoranthene	2016/03/30		88	%	30 - 130
			D10-Anthracene	2016/03/30		75	%	30 - 130
			D14-Terphenyl	2016/03/30		89	%	30 - 130
			D8-Acenaphthylene	2016/03/30		87	%	30 - 130
			1-Methylnaphthalene	2016/03/30		91	%	30 - 130
			2-Methylnaphthalene	2016/03/30		98	%	30 - 130
			Acenaphthene	2016/03/30		94	%	30 - 130
			Acenaphthylene	2016/03/30		103	%	30 - 130
			Acridine	2016/03/30		70	%	30 - 130
			Anthracene	2016/03/30		100	%	30 - 130
			Benzo(a)anthracene	2016/03/30		91	%	30 - 130
			Benzo(a)pyrene	2016/03/30		97	%	30 - 130
			Benzo(b)fluoranthene	2016/03/30		82	%	30 - 130

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			Benzo(g,h,i)perylene	2016/03/30		92	%	30 - 130
			Benzo(k)fluoranthene	2016/03/30		97	%	30 - 130
			Chrysene	2016/03/30		94	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/30		81	%	30 - 130
			Fluoranthene	2016/03/30		107	%	30 - 130
			Fluorene	2016/03/30		108	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/30		85	%	30 - 130
			Naphthalene	2016/03/30		92	%	30 - 130
			Perylene	2016/03/30		92	%	30 - 130
			Phenanthrene	2016/03/30		107	%	30 - 130
			Pyrene	2016/03/30		108	%	30 - 130
			Quinoline	2016/03/30		59	%	30 - 130
4434550	GTH	Method Blank	Benzo(j)fluoranthene	2016/03/30	<0.010		ug/L	
			D10-Anthracene	2016/03/30		89	%	30 - 130
			D14-Terphenyl	2016/03/30		89	%	30 - 130
			D8-Acenaphthylene	2016/03/30		84	%	30 - 130
			1-Methylnaphthalene	2016/03/30	<0.050		ug/L	
			2-Methylnaphthalene	2016/03/30	<0.050		ug/L	
			Acenaphthene	2016/03/30	<0.010		ug/L	
			Acenaphthylene	2016/03/30	<0.010		ug/L	
			Acridine	2016/03/30	<0.050		ug/L	
			Anthracene	2016/03/30	<0.010		ug/L	
			Benzo(a)anthracene	2016/03/30	<0.010		ug/L	
			Benzo(a)pyrene	2016/03/30	<0.010		ug/L	
			Benzo(b)fluoranthene	2016/03/30	<0.010		ug/L	
			Benzo(g,h,i)perylene	2016/03/30	<0.010		ug/L	
			Benzo(k)fluoranthene	2016/03/30	<0.010		ug/L	
			Chrysene	2016/03/30	<0.010		ug/L	
			Dibenz(a,h)anthracene	2016/03/30	<0.010		ug/L	
			Fluoranthene	2016/03/30	<0.010		ug/L	
			Fluorene	2016/03/30	<0.010		ug/L	
			Indeno(1,2,3-cd)pyrene	2016/03/30	<0.010		ug/L	
			Naphthalene	2016/03/30	<0.20		ug/L	
			Perylene	2016/03/30	<0.010		ug/L	
			Phenanthrene	2016/03/30	<0.010		ug/L	
			Pyrene	2016/03/30	<0.010		ug/L	
			Quinoline	2016/03/30	<0.050		ug/L	
4434550	GTH	RPD - Sample/Sample Dup	Benzo(j)fluoranthene	2016/03/30	NC		%	40
			1-Methylnaphthalene	2016/03/30	NC		%	40
			2-Methylnaphthalene	2016/03/30	NC		%	40
			Acenaphthene	2016/03/30	NC		%	40
			Acenaphthylene	2016/03/30	NC		%	40
			Acridine	2016/03/30	NC		%	40
			Anthracene	2016/03/30	NC		%	40
			Benzo(a)anthracene	2016/03/30	NC		%	40
			Benzo(a)pyrene	2016/03/30	NC		%	40
			Benzo(b)fluoranthene	2016/03/30	NC		%	40
			Benzo(g,h,i)perylene	2016/03/30	NC		%	40
			Benzo(k)fluoranthene	2016/03/30	NC		%	40
			Chrysene	2016/03/30	NC		%	40
			Dibenz(a,h)anthracene	2016/03/30	NC		%	40
			Fluoranthene	2016/03/30	NC		%	40
			Fluorene	2016/03/30	NC		%	40

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			Indeno(1,2,3-cd)pyrene	2016/03/30	NC		%	40
			Naphthalene	2016/03/30	NC		%	40
			Perylene	2016/03/30	NC		%	40
			Phenanthrene	2016/03/30	NC		%	40
			Pyrene	2016/03/30	NC		%	40
			Quinoline	2016/03/30	NC		%	40
4438284	GTH	Spiked Blank	Benzo(j)fluoranthene	2016/03/31		95	%	30 - 130
			D10-Anthracene	2016/03/31		79	%	30 - 130
			D14-Terphenyl	2016/03/31		88	%	30 - 130
			D8-Acenaphthylene	2016/03/31		85	%	30 - 130
			1-Methylnaphthalene	2016/03/31		95	%	30 - 130
			2-Methylnaphthalene	2016/03/31		103	%	30 - 130
			Acenaphthene	2016/03/31		90	%	30 - 130
			Acenaphthylene	2016/03/31		102	%	30 - 130
			Acridine	2016/03/31		65	%	30 - 130
			Anthracene	2016/03/31		106	%	30 - 130
			Benzo(a)anthracene	2016/03/31		92	%	30 - 130
			Benzo(a)pyrene	2016/03/31		94	%	30 - 130
			Benzo(b)fluoranthene	2016/03/31		95	%	30 - 130
			Benzo(g,h,i)perylene	2016/03/31		94	%	30 - 130
			Benzo(k)fluoranthene	2016/03/31		96	%	30 - 130
			Chrysene	2016/03/31		97	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/31		78	%	30 - 130
			Fluoranthene	2016/03/31		104	%	30 - 130
			Fluorene	2016/03/31		106	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/31		85	%	30 - 130
			Naphthalene	2016/03/31		97	%	30 - 130
			Perylene	2016/03/31		90	%	30 - 130
			Phenanthrene	2016/03/31		108	%	30 - 130
			Pyrene	2016/03/31		107	%	30 - 130
			Quinoline	2016/03/31		67	%	30 - 130
4438284	GTH	Method Blank	Benzo(j)fluoranthene	2016/03/31	<0.010		ug/L	
			D10-Anthracene	2016/03/31		92	%	30 - 130
			D14-Terphenyl	2016/03/31		98	%	30 - 130
			D8-Acenaphthylene	2016/03/31		95	%	30 - 130
			1-Methylnaphthalene	2016/03/31	<0.050		ug/L	
			2-Methylnaphthalene	2016/03/31	<0.050		ug/L	
			Acenaphthene	2016/03/31	<0.010		ug/L	
			Acenaphthylene	2016/03/31	<0.010		ug/L	
			Acridine	2016/03/31	<0.050		ug/L	
			Anthracene	2016/03/31	<0.010		ug/L	
			Benzo(a)anthracene	2016/03/31	<0.010		ug/L	
			Benzo(a)pyrene	2016/03/31	<0.010		ug/L	
			Benzo(b)fluoranthene	2016/03/31	<0.010		ug/L	
			Benzo(g,h,i)perylene	2016/03/31	<0.010		ug/L	
			Benzo(k)fluoranthene	2016/03/31	<0.010		ug/L	
			Chrysene	2016/03/31	<0.010		ug/L	
			Dibenz(a,h)anthracene	2016/03/31	<0.010		ug/L	
			Fluoranthene	2016/03/31	<0.010		ug/L	
			Fluorene	2016/03/31	<0.030 (2)		ug/L	
			Indeno(1,2,3-cd)pyrene	2016/03/31	<0.010		ug/L	
			Naphthalene	2016/03/31	<0.20		ug/L	
			Perylene	2016/03/31	<0.010		ug/L	

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			Phenanthrene	2016/03/31	<0.010		ug/L	
			Pyrene	2016/03/31	<0.010		ug/L	
			Quinoline	2016/03/31	<0.050		ug/L	

N/A = Not Applicable

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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

(2) Elevated RDL(s) due to detected levels in the method blank.

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B656184
Report Date: 2016/03/31

Englobe Corp.
Client Project #: 21347
Sampler Initials: LL

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Mike MacGillivray, Scientific Specialist (Inorganics)

Phil Deveau

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Chain Of Custody Record

Page of

INVOICE TO:		Report Information		Project Information	
Company Name	#41009 Englobe Corp.	Company Name		Quotation #	B61795
Contact Name	Accounts Payable	Contact Name	Lisa Ladouceur / Aven Cole	P.O. #	
Address	97 Troop Ave	Address		Project #	21347
	Dartmouth NS B3B 2A7			Project Name	
Phone	(902) 468-6486 Fax (902) 468-4919	Phone	Fax	Site #	
Email	Dartmouth.AP@englobecorp.com	Email	lisa.ladouceur@englobecorp.com	Sampled By	LL

Laboratory Use Only

Maxxam Job #	Bottle Order #:
B656184	553497
Chain Of Custody Record	Project Manager
C#553497-01-01	Avery Withrow

Regulatory Criteria:

Special Instructions

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

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	RCAp-MS Dissolved (FieldFilt) in W	Total Lead in Water	Chromium (VI) in Water	Mercury - Total (CVAA,LL)	RCAp-MS Total Metals in Water	Chlorinated Phenols - Acid Extractables by GC/MS	PAH/Acridine Quinoline FWAL				# of Bottles	Comments / Hazards / Other Required Analysis
1		SW1	3/19/16		SW	X					X			X				2	
2		SW3	↓		↓	X					X			X				2	
3		SW10	↓		↓	X				X								1	
4		P1A	↓		↓	X				X	X	X	X	X				10	
5		P1B	↓		↓	X				X	X	X	X	X				10	
6		P2A	↓		↓	X				X	X	X	X	X				10	
7		P2B	↓		↓	X					X	X	X					7	
8		P3	↓		↓	X					X	X	X	X				9	
9		SPRING	3/20/16		SW	X					X	X						4	
10		PW2A	3/20/16		PW	X						X						3	

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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

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

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
[signature] Lisa Ladouceur	16/3/21	12h25	[signature] Ayson Walters			

Lab Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
[ ]	5,5,5 1,-1,2 3,0,4 2,3,-1 0,0,-2	2016 MAR 21 12:28 [ ] Yes [ ] No

White: Maxxam Yellow: Client

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

Maxxam Analytics International Corporation o/a Maxxam Analytics

Your Project #: 21347

Attention:Aven Cole

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

Your C.O.C. #: D07961, D07962, D07963, D07965, 552096-01-01

Report Date: 2016/04/04
Report #: R3950173
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B656770
Received: 2016/03/21, 16:23

Sample Matrix: Soil
Samples Received: 41

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
ABN Compounds in soil by GC/MS (1)	7	2016/03/28	2016/03/30	CAM SOP-00301	EPA 8270 m
ABN Compounds in soil by GC/MS (1)	6	2016/03/28	2016/03/31	CAM SOP-00301	EPA 8270 m
ABN Compounds in soil by GC/MS (1)	4	2016/03/28	2016/04/01	CAM SOP-00301	EPA 8270 m
Acid Extractables by GC/MS (1)	3	2016/03/29	2016/03/31	CAM SOP-00332	EPA 8270D m
Acid Extractables by GC/MS (1)	2	2016/03/29	2016/04/01	CAM SOP-00332	EPA 8270D m
Hexavalent Chromium in Soil by IC (1, 2)	20	2016/03/29	2016/03/31	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1, 2)	12	2016/03/30	2016/04/01	CAM SOP-00436	EPA 3060/7199 m
TEH in Soil (PIRI) (2)	1	2016/03/23	2016/03/23	ATL SOP 00111	Atl. RBCA v3 m
Metals Solids Acid Extr. ICPMS	31	2016/03/29	2016/03/29	ATL SOP 00058	EPA 6020A R1 m
Metals Solids Acid Extr. ICPMS	6	2016/03/30	2016/03/30	ATL SOP 00058	EPA 6020A R1 m
Moisture	1	N/A	2016/03/23	ATL SOP 00001	OMOE Handbook 1983 m
Moisture	4	N/A	2016/03/28	ATL SOP 00001	OMOE Handbook 1983 m
Moisture (1)	36	N/A	2016/03/30	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH in sediment by GC/MS (Low Level) (2)	4	2016/03/29	2016/03/31	ATL SOP 00102	EPA 8270D 2007 m
VPH in Soil (PIRI)	1	2016/03/22	2016/03/24	ATL SOP 00119	Atl. RBCA v3 m
ModTPH (T1) Calc. for Soil	1	N/A	2016/03/28	N/A	Atl. RBCA v3 m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Analytics Mississauga
(2) Soils are reported on a dry weight basis unless otherwise specified.

Your Project #: 21347

Attention:Aven Cole

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

Your C.O.C. #: D07961, D07962, D07963, D07965, 552096-01-01

Report Date: 2016/04/04
Report #: R3950173
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B656770
Received: 2016/03/21, 16:23

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Avery Withrow, Project Manager
Email: AWithrow@maxxam.ca
Phone# (902)420-0203 Ext:233

==========

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

RBCA HYDROCARBONS IN SOIL (SOIL)

Maxxam ID		CBF285	CBF285			
Sampling Date		2016/03/15	2016/03/15			
COC Number		D07962	D07962			
	UNITS	TP22/1	TP22/1 Lab-Dup	RDL	QC Batch	MDL
Inorganics						
Moisture	%	16		1.0	4426993	0.20
Petroleum Hydrocarbons						
Benzene	mg/kg	<0.025	<0.025	0.025	4430910	N/A
Toluene	mg/kg	<0.025	<0.025	0.025	4430910	N/A
Ethylbenzene	mg/kg	<0.025	<0.025	0.025	4430910	0.025
Total Xylenes	mg/kg	<0.050	<0.050	0.050	4430910	N/A
C6 - C10 (less BTEX)	mg/kg	8.1	9.3	2.5	4430910	N/A
>C10-C16 Hydrocarbons	mg/kg	32		10	4428766	N/A
>C16-C21 Hydrocarbons	mg/kg	60		10	4428766	N/A
>C21-<C32 Hydrocarbons	mg/kg	50		15	4428766	N/A
Modified TPH (Tier1)	mg/kg	150		15	4427487	N/A
Reached Baseline at C32	mg/kg	Yes		N/A	4428766	N/A
Hydrocarbon Resemblance	mg/kg	COMMENT (1)		N/A	4428766	N/A
Surrogate Recovery (%)						
Isobutylbenzene - Extractable	%	95			4428766	
n-Dotriacontane - Extractable	%	88			4428766	
Isobutylbenzene - Volatile	%	84	93		4430910	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Weathered fuel oil fraction. Unidentified compound(s) in fuel / lube range.

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

RESULTS OF ANALYSES OF SOIL

Maxxam ID		CBF262	CBF263		CBF264	CBF265	CBF266			
Sampling Date		2016/03/14	2016/03/14		2016/03/14	2016/03/14	2016/03/14			
COC Number		D07961	D07961		D07961	D07961	D07961			
	UNITS	TP1/1	TP3/1	QC Batch	TP5/1	TP5/2	TP6/1	RDL	QC Batch	MDL
Inorganics										
Moisture	%	15	13	4436311	11	16	36	1.0	4436997	0.50

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		CBF267	CBF268	CBF269	CBF269	CBF270	CBF271	CBF278			
Sampling Date		2016/03/14	2016/03/14	2016/03/14	2016/03/14	2016/03/14	2016/03/14	2016/03/14			
COC Number		D07961	D07961	D07961	D07961	D07961	D07961	D07962			
	UNITS	TP6/2	TP6/3	TP7/2	TP7/2 Lab-Dup	TP9/2	TP9A/1	TP12/1	RDL	QC Batch	MDL
Inorganics											
Moisture	%	12	16	14	14	13	14	18	1.0	4436311	0.50

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

Maxxam ID		CBF279		CBF280		CBF281		CBF282			
Sampling Date		2016/03/14		2016/03/14		2016/03/14		2016/03/14			
COC Number		D07962		D07962		D07962		D07962			
	UNITS	TP15/1	QC Batch	TP15/2	QC Batch	TP16/1	QC Batch	TP17/2	RDL	QC Batch	MDL
Inorganics											
Moisture	%	25	4436311	79	4436375	45	4436997	21	1.0	4436375	0.50

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		CBF283		CBF284	CBF286		CBF287			
Sampling Date		2016/03/15		2016/03/15	2016/03/15		2016/03/14			
COC Number		D07962		D07962	D07962		D07962			
	UNITS	TP19/1	QC Batch	TP20/2	TP24/1	QC Batch	TP2/1	RDL	QC Batch	MDL
Inorganics										
Moisture	%	41	4436311	14	58	4436375	14	1.0	4436997	0.50

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		CBF317	CBF318	CBF319		CBF320	CBF321	CBF322			
Sampling Date		2016/03/15	2016/03/15	2016/03/15		2016/03/15	2016/03/15	2016/03/15			
COC Number		D07963	D07963	D07963		D07963	D07963	D07963			
	UNITS	TP25/1	TP25/2	TP26/1	QC Batch	TP27/1	TP28/2	TP31/1	RDL	QC Batch	MDL
Inorganics											
Moisture	%	13	28	16	4436311	16	16	34	1.0	4436997	0.50

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

RESULTS OF ANALYSES OF SOIL

Maxxam ID		CBF323	CBF323		CBF324	CBF325		CBF326			
Sampling Date		2016/03/15	2016/03/15		2016/03/15	2016/03/15		2016/03/14			
COC Number		D07963	D07963		D07963	D07963		D07963			
	UNITS	TP31/2	TP31/2 Lab-Dup	QC Batch	TP35/2	TP37/2	QC Batch	TP16/2	RDL	QC Batch	MDL
Inorganics											
Moisture	%	12	12	4436997	11	29	4436311	42	1.0	4436375	0.50

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

Maxxam ID		CBF337		CBF338		CBF339	CBF340	CBF341			
Sampling Date		2016/03/15		2016/03/15		2016/03/15	2016/03/14	2016/03/14			
COC Number		D07965		D07965		D07965	D07965	D07965			
	UNITS	TP19/2	QC Batch	TP22/2	QC Batch	PIPE	DUP 1	POND	RDL	QC Batch	MDL
Inorganics											
Moisture	%	65	4436311	33	4436375	30	9.9	37	1.0	4436311	0.50

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		CBF342	CBF361	CBF362	CBF363		CBF364			
Sampling Date		2016/03/16	2016/03/15	2016/03/15	2016/03/15		2016/03/20			
COC Number		D07965	552096-01-01	552096-01-01	552096-01-01		552096-01-01			
	UNITS	MW4/1B	P1A	P1B	P2A	QC Batch	P2B	RDL	QC Batch	MDL
Inorganics										
Moisture	%	13				4436997	61	1.0	4436311	0.50
Moisture	%		89	89	70	4432518		1.0	4432518	0.20

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam ID		CBF365			
Sampling Date		2016/03/15			
COC Number		552096-01-01			
	UNITS	P3	RDL	QC Batch	MDL
Inorganics					
Moisture	%	86	1.0	4432518	0.20

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF262	CBF263		CBF264	CBF264	CBF265			
Sampling Date		2016/03/14	2016/03/14		2016/03/14	2016/03/14	2016/03/14			
COC Number		D07961	D07961		D07961	D07961	D07961			
	UNITS	TP1/1	TP3/1	QC Batch	TP5/1	TP5/1 Lab-Dup	TP5/2	RDL	QC Batch	MDL
Inorganics										
Chromium (VI)	ug/g	<0.2	<0.2	4434934	<0.2		<0.2	0.2	4436636	0.05
Metals										
Acid Extractable Aluminum (Al)	mg/kg	11000	14000	4433970	11000	13000	11000	10	4433970	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	4433970	<2.0	<2.0	<2.0	2.0	4433970	N/A
Acid Extractable Arsenic (As)	mg/kg	3.8	5.9	4433970	10	11	6.6	2.0	4433970	N/A
Acid Extractable Barium (Ba)	mg/kg	19	22	4433970	18	22	16	5.0	4433970	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	4433970	<2.0	<2.0	<2.0	2.0	4433970	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	4433970	<2.0	<2.0	<2.0	2.0	4433970	N/A
Acid Extractable Boron (B)	mg/kg	<50	<50	4433970	<50	<50	<50	50	4433970	N/A
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	4433970	<0.30	<0.30	<0.30	0.30	4433970	N/A
Acid Extractable Chromium (Cr)	mg/kg	21	29	4433970	27	30	24	2.0	4433970	N/A
Acid Extractable Cobalt (Co)	mg/kg	9.6	12	4433970	11	13	10	1.0	4433970	N/A
Acid Extractable Copper (Cu)	mg/kg	26	25	4433970	28	30	23	2.0	4433970	N/A
Acid Extractable Iron (Fe)	mg/kg	22000	26000	4433970	28000	29000	24000	50	4433970	N/A
Acid Extractable Lead (Pb)	mg/kg	3.3	4.0	4433970	4.1	4.8	3.5	0.50	4433970	N/A
Acid Extractable Lithium (Li)	mg/kg	21	30	4433970	24	27	24	2.0	4433970	N/A
Acid Extractable Manganese (Mn)	mg/kg	380	470	4433970	440	510	390	2.0	4433970	N/A
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	4433970	<0.10	<0.10	<0.10	0.10	4433970	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	4433970	<2.0	<2.0	<2.0	2.0	4433970	N/A
Acid Extractable Nickel (Ni)	mg/kg	22	30	4433970	25	28	22	2.0	4433970	N/A
Acid Extractable Rubidium (Rb)	mg/kg	8.7	11	4433970	8.0	10	8.7	2.0	4433970	N/A
Acid Extractable Selenium (Se)	mg/kg	<1.0	<1.0	4433970	<1.0	<1.0	<1.0	1.0	4433970	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	4433970	<0.50	<0.50	<0.50	0.50	4433970	N/A
Acid Extractable Strontium (Sr)	mg/kg	5.9	11	4433970	9.0	10	8.9	5.0	4433970	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	4433970	<0.10	<0.10	<0.10	0.10	4433970	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0	<2.0	4433970	<2.0	<2.0	<2.0	2.0	4433970	N/A
Acid Extractable Uranium (U)	mg/kg	0.59	0.68	4433970	0.96	1.1	0.78	0.10	4433970	N/A
Acid Extractable Vanadium (V)	mg/kg	23	26	4433970	26	30	22	2.0	4433970	N/A
Acid Extractable Zinc (Zn)	mg/kg	40	53	4433970	46	50	44	5.0	4433970	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF266	CBF266		CBF267		CBF268			
Sampling Date		2016/03/14	2016/03/14		2016/03/14		2016/03/14			
COC Number		D07961	D07961		D07961		D07961			
	UNITS	TP6/1	TP6/1 Lab-Dup	QC Batch	TP6/2	QC Batch	TP6/3	RDL	QC Batch	MDL
Inorganics										
Chromium (VI)	ug/g	<0.2	<0.2	4436636	<0.2	4434934	<0.2	0.2	4436636	0.05
Metals										
Acid Extractable Aluminum (Al)	mg/kg	11000		4433970	18000	4433970	18000	10	4433970	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0		4433970	<2.0	4433970	<2.0	2.0	4433970	N/A
Acid Extractable Arsenic (As)	mg/kg	5.3		4433970	30	4433970	19	2.0	4433970	N/A
Acid Extractable Barium (Ba)	mg/kg	23		4433970	43	4433970	27	5.0	4433970	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0		4433970	<2.0	4433970	<2.0	2.0	4433970	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0		4433970	<2.0	4433970	<2.0	2.0	4433970	N/A
Acid Extractable Boron (B)	mg/kg	<50		4433970	<50	4433970	<50	50	4433970	N/A
Acid Extractable Cadmium (Cd)	mg/kg	<0.30		4433970	<0.30	4433970	<0.30	0.30	4433970	N/A
Acid Extractable Chromium (Cr)	mg/kg	19		4433970	47	4433970	36	2.0	4433970	N/A
Acid Extractable Cobalt (Co)	mg/kg	4.1		4433970	12	4433970	12	1.0	4433970	N/A
Acid Extractable Copper (Cu)	mg/kg	14		4433970	44	4433970	37	2.0	4433970	N/A
Acid Extractable Iron (Fe)	mg/kg	19000		4433970	45000	4433970	38000	50	4433970	N/A
Acid Extractable Lead (Pb)	mg/kg	18		4433970	9.6	4433970	5.6	0.50	4433970	N/A
Acid Extractable Lithium (Li)	mg/kg	15		4433970	39	4433970	39	2.0	4433970	N/A
Acid Extractable Manganese (Mn)	mg/kg	210		4433970	500	4433970	510	2.0	4433970	N/A
Acid Extractable Mercury (Hg)	mg/kg	<0.10		4433970	<0.10	4433970	<0.10	0.10	4433970	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0		4433970	4.3	4433970	<2.0	2.0	4433970	N/A
Acid Extractable Nickel (Ni)	mg/kg	12		4433970	31	4433970	31	2.0	4433970	N/A
Acid Extractable Rubidium (Rb)	mg/kg	5.8		4433970	11	4433970	8.4	2.0	4433970	N/A
Acid Extractable Selenium (Se)	mg/kg	<1.0		4433970	<1.0	4433970	<1.0	1.0	4433970	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50		4433970	<0.50	4433970	<0.50	0.50	4433970	N/A
Acid Extractable Strontium (Sr)	mg/kg	33		4433970	16	4433970	12	5.0	4433970	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10		4433970	0.12	4433970	<0.10	0.10	4433970	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0		4433970	<2.0	4433970	<2.0	2.0	4433970	N/A
Acid Extractable Uranium (U)	mg/kg	0.45		4433970	1.8	4433970	1.5	0.10	4433970	N/A
Acid Extractable Vanadium (V)	mg/kg	26		4433970	44	4433970	29	2.0	4433970	N/A
Acid Extractable Zinc (Zn)	mg/kg	50		4433970	55	4433970	66	5.0	4433970	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF269	CBF270	CBF271	CBF278		CBF279			
Sampling Date		2016/03/14	2016/03/14	2016/03/14	2016/03/14		2016/03/14			
COC Number		D07961	D07961	D07961	D07962		D07962			
	UNITS	TP7/2	TP9/2	TP9A/1	TP12/1	QC Batch	TP15/1	RDL	QC Batch	MDL
Inorganics										
Chromium (VI)	ug/g	<0.2	<0.2	<0.2	<0.2	4436636	<0.2	0.2	4436636	0.05
Metals										
Acid Extractable Aluminum (Al)	mg/kg	13000	11000	12000	15000	4433970	16000	10	4433974	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	4433970	<2.0	2.0	4433974	N/A
Acid Extractable Arsenic (As)	mg/kg	4.1	4.5	5.7	9.1	4433970	5.8	2.0	4433974	N/A
Acid Extractable Barium (Ba)	mg/kg	21	17	21	40	4433970	17	5.0	4433974	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	<2.0	<2.0	4433970	<2.0	2.0	4433974	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	4433970	<2.0	2.0	4433974	N/A
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	4433970	<50	50	4433974	N/A
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	<0.30	4433970	<0.30	0.30	4433974	N/A
Acid Extractable Chromium (Cr)	mg/kg	25	23	26	33	4433970	30	2.0	4433974	N/A
Acid Extractable Cobalt (Co)	mg/kg	11	11	10	11	4433970	9.5	1.0	4433974	N/A
Acid Extractable Copper (Cu)	mg/kg	21	24	22	20	4433970	17	2.0	4433974	N/A
Acid Extractable Iron (Fe)	mg/kg	24000	23000	24000	27000	4433970	25000	50	4433974	N/A
Acid Extractable Lead (Pb)	mg/kg	3.9	3.3	4.6	5.0	4433970	5.3	0.50	4433974	N/A
Acid Extractable Lithium (Li)	mg/kg	25	22	29	29	4433970	28	2.0	4433974	N/A
Acid Extractable Manganese (Mn)	mg/kg	370	430	410	460	4433970	350	2.0	4433974	N/A
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	<0.10	4433970	<0.10	0.10	4433974	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	4433970	<2.0	2.0	4433974	N/A
Acid Extractable Nickel (Ni)	mg/kg	25	24	23	26	4433970	25	2.0	4433974	N/A
Acid Extractable Rubidium (Rb)	mg/kg	8.3	8.7	9.9	12	4433970	9.2	2.0	4433974	N/A
Acid Extractable Selenium (Se)	mg/kg	<1.0	<1.0	<1.0	<1.0	4433970	<1.0	1.0	4433974	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	4433970	<0.50	0.50	4433974	N/A
Acid Extractable Strontium (Sr)	mg/kg	7.5	9.4	8.1	9.5	4433970	7.0	5.0	4433974	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	<0.10	<0.10	4433970	<0.10	0.10	4433974	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0	<2.0	<2.0	<2.0	4433970	<2.0	2.0	4433974	N/A
Acid Extractable Uranium (U)	mg/kg	0.66	0.53	0.89	0.64	4433970	0.81	0.10	4433974	N/A
Acid Extractable Vanadium (V)	mg/kg	25	24	26	31	4433970	27	2.0	4433974	N/A
Acid Extractable Zinc (Zn)	mg/kg	45	43	45	46	4433970	50	5.0	4433974	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF280	CBF281	CBF282	CBF283	CBF284	CBF286			
Sampling Date		2016/03/14	2016/03/14	2016/03/14	2016/03/15	2016/03/15	2016/03/15			
COC Number		D07962	D07962	D07962	D07962	D07962	D07962			
	UNITS	TP15/2	TP16/1	TP17/2	TP19/1	TP20/2	TP24/1	RDL	QC Batch	MDL
Inorganics										
Chromium (VI)	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	4434934	0.05
Metals										
Acid Extractable Aluminum (Al)	mg/kg	13000	9500	12000	10000	12000	17000	10	4433974	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4433974	N/A
Acid Extractable Arsenic (As)	mg/kg	7.9	11	<2.0	5.8	4.4	4.6	2.0	4433974	N/A
Acid Extractable Barium (Ba)	mg/kg	21	33	51	28	21	24	5.0	4433974	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4433974	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4433974	N/A
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	<50	<50	<50	50	4433974	N/A
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	4433974	N/A
Acid Extractable Chromium (Cr)	mg/kg	24	19	8.3	17	25	34	2.0	4433974	N/A
Acid Extractable Cobalt (Co)	mg/kg	9.7	7.6	2.7	5.2	6.0	15	1.0	4433974	N/A
Acid Extractable Copper (Cu)	mg/kg	21	15	7.5	15	12	21	2.0	4433974	N/A
Acid Extractable Iron (Fe)	mg/kg	25000	18000	4100	18000	22000	32000	50	4433974	N/A
Acid Extractable Lead (Pb)	mg/kg	4.1	7.0	19	12	8.5	3.8	0.50	4433974	N/A
Acid Extractable Lithium (Li)	mg/kg	25	19	3.5	16	18	40	2.0	4433974	N/A
Acid Extractable Manganese (Mn)	mg/kg	480	580	82	270	280	630	2.0	4433974	N/A
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	0.28	<0.10	<0.10	<0.10	0.10	4433974	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4433974	N/A
Acid Extractable Nickel (Ni)	mg/kg	22	16	8.7	13	14	37	2.0	4433974	N/A
Acid Extractable Rubidium (Rb)	mg/kg	7.3	10	2.4	6.2	6.3	8.2	2.0	4433974	N/A
Acid Extractable Selenium (Se)	mg/kg	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	1.0	4433974	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	4433974	N/A
Acid Extractable Strontium (Sr)	mg/kg	6.7	15	26	22	7.8	11	5.0	4433974	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10	0.10	<0.10	<0.10	<0.10	<0.10	0.10	4433974	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	4433974	N/A
Acid Extractable Uranium (U)	mg/kg	0.73	0.78	1.3	0.43	0.47	0.80	0.10	4433974	N/A
Acid Extractable Vanadium (V)	mg/kg	25	19	9.0	23	32	27	2.0	4433974	N/A
Acid Extractable Zinc (Zn)	mg/kg	43	55	9.7	53	35	67	5.0	4433974	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF317	CBF318	CBF319		CBF320			
Sampling Date		2016/03/15	2016/03/15	2016/03/15		2016/03/15			
COC Number		D07963	D07963	D07963		D07963			
	UNITS	TP25/1	TP25/2	TP26/1	QC Batch	TP27/1	RDL	QC Batch	MDL
Inorganics									
Chromium (VI)	ug/g	<0.2	<0.2	<0.2	4434934	<0.2	0.2	4436636	0.05
Metals									
Acid Extractable Aluminum (Al)	mg/kg	14000	15000	18000	4433974	14000	10	4433974	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Arsenic (As)	mg/kg	13	5.4	4.8	4433974	10	2.0	4433974	N/A
Acid Extractable Barium (Ba)	mg/kg	24	16	30	4433974	28	5.0	4433974	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	4433974	<50	50	4433974	N/A
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	<0.30	4433974	<0.30	0.30	4433974	N/A
Acid Extractable Chromium (Cr)	mg/kg	30	28	34	4433974	25	2.0	4433974	N/A
Acid Extractable Cobalt (Co)	mg/kg	8.6	10	17	4433974	12	1.0	4433974	N/A
Acid Extractable Copper (Cu)	mg/kg	27	19	30	4433974	27	2.0	4433974	N/A
Acid Extractable Iron (Fe)	mg/kg	26000	23000	33000	4433974	26000	50	4433974	N/A
Acid Extractable Lead (Pb)	mg/kg	6.1	4.8	5.7	4433974	5.4	0.50	4433974	N/A
Acid Extractable Lithium (Li)	mg/kg	27	27	39	4433974	28	2.0	4433974	N/A
Acid Extractable Manganese (Mn)	mg/kg	310	380	660	4433974	660	2.0	4433974	N/A
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	<0.10	4433974	<0.10	0.10	4433974	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Nickel (Ni)	mg/kg	19	26	37	4433974	23	2.0	4433974	N/A
Acid Extractable Rubidium (Rb)	mg/kg	9.3	7.4	11	4433974	11	2.0	4433974	N/A
Acid Extractable Selenium (Se)	mg/kg	<1.0	<1.0	<1.0	4433974	<1.0	1.0	4433974	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	4433974	<0.50	0.50	4433974	N/A
Acid Extractable Strontium (Sr)	mg/kg	<5.0	7.2	10	4433974	5.9	5.0	4433974	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	<0.10	4433974	0.11	0.10	4433974	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Uranium (U)	mg/kg	0.87	0.63	0.77	4433974	1.2	0.10	4433974	N/A
Acid Extractable Vanadium (V)	mg/kg	30	25	28	4433974	25	2.0	4433974	N/A
Acid Extractable Zinc (Zn)	mg/kg	42	46	69	4433974	56	5.0	4433974	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF321	CBF322		CBF323		CBF324			
Sampling Date		2016/03/15	2016/03/15		2016/03/15		2016/03/15			
COC Number		D07963	D07963		D07963		D07963			
	UNITS	TP28/2	TP31/1	QC Batch	TP31/2	QC Batch	TP35/2	RDL	QC Batch	MDL
Inorganics										
Chromium (VI)	ug/g	<0.2	<0.2	4434934	<0.2	4436636	<0.2	0.2	4434934	0.05
Metals										
Acid Extractable Aluminum (Al)	mg/kg	12000	14000	4433974	13000	4433974	11000	10	4433974	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	4433974	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Arsenic (As)	mg/kg	5.8	10	4433974	7.3	4433974	6.3	2.0	4433974	N/A
Acid Extractable Barium (Ba)	mg/kg	20	53	4433974	21	4433974	14	5.0	4433974	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	4433974	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	4433974	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Boron (B)	mg/kg	<50	<50	4433974	<50	4433974	<50	50	4433974	N/A
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	4433974	<0.30	4433974	<0.30	0.30	4433974	N/A
Acid Extractable Chromium (Cr)	mg/kg	22	29	4433974	26	4433974	23	2.0	4433974	N/A
Acid Extractable Cobalt (Co)	mg/kg	9.6	10	4433974	12	4433974	9.1	1.0	4433974	N/A
Acid Extractable Copper (Cu)	mg/kg	18	23	4433974	24	4433974	22	2.0	4433974	N/A
Acid Extractable Iron (Fe)	mg/kg	23000	24000	4433974	27000	4433974	22000	50	4433974	N/A
Acid Extractable Lead (Pb)	mg/kg	3.1	8.5	4433974	3.9	4433974	3.6	0.50	4433974	N/A
Acid Extractable Lithium (Li)	mg/kg	23	22	4433974	29	4433974	22	2.0	4433974	N/A
Acid Extractable Manganese (Mn)	mg/kg	420	510	4433974	530	4433974	360	2.0	4433974	N/A
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	4433974	<0.10	4433974	<0.10	0.10	4433974	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	4433974	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Nickel (Ni)	mg/kg	22	23	4433974	28	4433974	21	2.0	4433974	N/A
Acid Extractable Rubidium (Rb)	mg/kg	6.0	16	4433974	8.3	4433974	8.3	2.0	4433974	N/A
Acid Extractable Selenium (Se)	mg/kg	<1.0	<1.0	4433974	<1.0	4433974	<1.0	1.0	4433974	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	4433974	<0.50	4433974	<0.50	0.50	4433974	N/A
Acid Extractable Strontium (Sr)	mg/kg	7.4	19	4433974	8.1	4433974	5.1	5.0	4433974	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10	0.11	4433974	<0.10	4433974	<0.10	0.10	4433974	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0	<2.0	4433974	<2.0	4433974	<2.0	2.0	4433974	N/A
Acid Extractable Uranium (U)	mg/kg	0.58	2.3	4433974	0.65	4433974	0.74	0.10	4433974	N/A
Acid Extractable Vanadium (V)	mg/kg	22	28	4433974	26	4433974	23	2.0	4433974	N/A
Acid Extractable Zinc (Zn)	mg/kg	41	79	4433974	49	4433974	38	5.0	4433974	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF324	CBF325		CBF338	CBF338	CBF339			
Sampling Date		2016/03/15	2016/03/15		2016/03/15	2016/03/15	2016/03/15			
COC Number		D07963	D07963		D07965	D07965	D07965			
	UNITS	TP35/2 Lab-Dup	TP37/2	QC Batch	TP22/2	TP22/2 Lab-Dup	PIPE	RDL	QC Batch	MDL
Inorganics										
Chromium (VI)	ug/g		<0.2	4434934	<0.2		<0.2	0.2	4434934	0.05
Metals										
Acid Extractable Aluminum (Al)	mg/kg	11000	13000	4433974	5500	5700	10000	10	4436224	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	4433974	<2.0	<2.0	<2.0	2.0	4436224	N/A
Acid Extractable Arsenic (As)	mg/kg	6.3	5.9	4433974	<2.0	<2.0	39	2.0	4436224	N/A
Acid Extractable Barium (Ba)	mg/kg	14	18	4433974	9.4	9.7	23	5.0	4436224	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	4433974	<2.0	<2.0	<2.0	2.0	4436224	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	4433974	<2.0	<2.0	<2.0	2.0	4436224	N/A
Acid Extractable Boron (B)	mg/kg	<50	<50	4433974	<50	<50	<50	50	4436224	N/A
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	<0.30	4433974	<0.30	<0.30	<0.30	0.30	4436224	N/A
Acid Extractable Chromium (Cr)	mg/kg	23	24	4433974	6.6	6.9	19	2.0	4436224	N/A
Acid Extractable Cobalt (Co)	mg/kg	9.6	7.3	4433974	1.1	<1.0	8.6	1.0	4436224	N/A
Acid Extractable Copper (Cu)	mg/kg	22	15	4433974	<2.0	<2.0	16	2.0	4436224	N/A
Acid Extractable Iron (Fe)	mg/kg	23000	25000	4433974	2500	2500	36000	50	4436224	N/A
Acid Extractable Lead (Pb)	mg/kg	3.8	9.5	4433974	4.1	4.2	5.3	0.50	4436224	N/A
Acid Extractable Lithium (Li)	mg/kg	22	21	4433974	5.4	5.5	33	2.0	4436224	N/A
Acid Extractable Manganese (Mn)	mg/kg	360	340	4433974	120	120	400	2.0	4436224	N/A
Acid Extractable Mercury (Hg)	mg/kg	<0.10	<0.10	4433974	0.10	0.10	<0.10	0.10	4436224	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	4433974	<2.0	<2.0	<2.0	2.0	4436224	N/A
Acid Extractable Nickel (Ni)	mg/kg	22	18	4433974	2.7	2.8	19	2.0	4436224	N/A
Acid Extractable Rubidium (Rb)	mg/kg	8.6	8.0	4433974	7.1	7.1	13	2.0	4436224	N/A
Acid Extractable Selenium (Se)	mg/kg	<1.0	<1.0	4433974	<1.0	<1.0	<1.0	1.0	4436224	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	4433974	<0.50	<0.50	<0.50	0.50	4436224	N/A
Acid Extractable Strontium (Sr)	mg/kg	5.4	18	4433974	<5.0	<5.0	12	5.0	4436224	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	4433974	<0.10	<0.10	<0.10	0.10	4436224	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0	<2.0	4433974	<2.0	<2.0	<2.0	2.0	4436224	N/A
Acid Extractable Uranium (U)	mg/kg	0.74	0.48	4433974	0.33	0.37	1.8	0.10	4436224	N/A
Acid Extractable Vanadium (V)	mg/kg	23	29	4433974	5.7	5.6	25	2.0	4436224	N/A
Acid Extractable Zinc (Zn)	mg/kg	39	51	4433974	5.1	<5.0	100	5.0	4436224	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF339	CBF340	CBF341		CBF342			
Sampling Date		2016/03/15	2016/03/14	2016/03/14		2016/03/16			
COC Number		D07965	D07965	D07965		D07965			
	UNITS	PIPE Lab-Dup	DUP 1	POND	QC Batch	MW4/1B	RDL	QC Batch	MDL
Inorganics									
Chromium (VI)	ug/g	<0.2	<0.2	<0.2	4434934	<0.2	0.2	4436636	0.05
Metals									
Acid Extractable Aluminum (Al)	mg/kg		12000	13000	4436224	17000	10	4436224	N/A
Acid Extractable Antimony (Sb)	mg/kg		<2.0	<2.0	4436224	<2.0	2.0	4436224	N/A
Acid Extractable Arsenic (As)	mg/kg		10	4.6	4436224	4.1	2.0	4436224	N/A
Acid Extractable Barium (Ba)	mg/kg		20	15	4436224	27	5.0	4436224	N/A
Acid Extractable Beryllium (Be)	mg/kg		<2.0	<2.0	4436224	<2.0	2.0	4436224	N/A
Acid Extractable Bismuth (Bi)	mg/kg		<2.0	<2.0	4436224	<2.0	2.0	4436224	N/A
Acid Extractable Boron (B)	mg/kg		<50	<50	4436224	<50	50	4436224	N/A
Acid Extractable Cadmium (Cd)	mg/kg		<0.30	<0.30	4436224	<0.30	0.30	4436224	N/A
Acid Extractable Chromium (Cr)	mg/kg		29	20	4436224	32	2.0	4436224	N/A
Acid Extractable Cobalt (Co)	mg/kg		13	4.2	4436224	14	1.0	4436224	N/A
Acid Extractable Copper (Cu)	mg/kg		30	7.6	4436224	26	2.0	4436224	N/A
Acid Extractable Iron (Fe)	mg/kg		27000	20000	4436224	29000	50	4436224	N/A
Acid Extractable Lead (Pb)	mg/kg		5.1	8.0	4436224	6.4	0.50	4436224	N/A
Acid Extractable Lithium (Li)	mg/kg		28	16	4436224	35	2.0	4436224	N/A
Acid Extractable Manganese (Mn)	mg/kg		510	190	4436224	520	2.0	4436224	N/A
Acid Extractable Mercury (Hg)	mg/kg		<0.10	<0.10	4436224	<0.10	0.10	4436224	N/A
Acid Extractable Molybdenum (Mo)	mg/kg		<2.0	<2.0	4436224	<2.0	2.0	4436224	N/A
Acid Extractable Nickel (Ni)	mg/kg		27	12	4436224	33	2.0	4436224	N/A
Acid Extractable Rubidium (Rb)	mg/kg		10	5.2	4436224	11	2.0	4436224	N/A
Acid Extractable Selenium (Se)	mg/kg		<1.0	<1.0	4436224	<1.0	1.0	4436224	N/A
Acid Extractable Silver (Ag)	mg/kg		<0.50	<0.50	4436224	<0.50	0.50	4436224	N/A
Acid Extractable Strontium (Sr)	mg/kg		9.4	5.8	4436224	7.6	5.0	4436224	N/A
Acid Extractable Thallium (Tl)	mg/kg		<0.10	<0.10	4436224	<0.10	0.10	4436224	N/A
Acid Extractable Tin (Sn)	mg/kg		<2.0	<2.0	4436224	<2.0	2.0	4436224	N/A
Acid Extractable Uranium (U)	mg/kg		0.97	0.45	4436224	0.69	0.10	4436224	N/A
Acid Extractable Vanadium (V)	mg/kg		27	27	4436224	27	2.0	4436224	N/A
Acid Extractable Zinc (Zn)	mg/kg		48	27	4436224	62	5.0	4436224	N/A

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF361	CBF362	CBF363		CBF364			
Sampling Date		2016/03/15	2016/03/15	2016/03/15		2016/03/20			
COC Number		552096-01-01	552096-01-01	552096-01-01		552096-01-01			
	UNITS	P1A	P1B	P2A	QC Batch	P2B	RDL	QC Batch	MDL
Metals									
Acid Extractable Aluminum (Al)	mg/kg	5700	6500	11000	4433974	7800	10	4436224	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4436224	N/A
Acid Extractable Arsenic (As)	mg/kg	5.9	<2.0	2.1	4433974	3.8	2.0	4436224	N/A
Acid Extractable Barium (Ba)	mg/kg	60	49	30	4433974	12	5.0	4436224	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4436224	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4436224	N/A
Acid Extractable Boron (B)	mg/kg	<50	<50	<50	4433974	<50	50	4436224	N/A
Acid Extractable Cadmium (Cd)	mg/kg	0.39	<0.30	<0.30	4433974	<0.30	0.30	4436224	N/A
Acid Extractable Chromium (Cr)	mg/kg	6.9	3.0	15	4433974	7.7	2.0	4436224	N/A
Acid Extractable Cobalt (Co)	mg/kg	3.7	2.8	3.8	4433974	1.2	1.0	4436224	N/A
Acid Extractable Copper (Cu)	mg/kg	15	10	7.2	4433974	4.4	2.0	4436224	N/A
Acid Extractable Iron (Fe)	mg/kg	13000	2600	12000	4433974	11000	50	4436224	N/A
Acid Extractable Lead (Pb)	mg/kg	27	29	18	4433974	15	0.50	4436224	N/A
Acid Extractable Lithium (Li)	mg/kg	3.4	<2.0	13	4433974	4.1	2.0	4436224	N/A
Acid Extractable Manganese (Mn)	mg/kg	430	31	170	4433974	53	2.0	4436224	N/A
Acid Extractable Mercury (Hg)	mg/kg	0.27	0.24	0.19	4433974	0.13	0.10	4436224	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	<2.0	<2.0	3.5	4433974	<2.0	2.0	4436224	N/A
Acid Extractable Nickel (Ni)	mg/kg	8.8	8.2	11	4433974	3.7	2.0	4436224	N/A
Acid Extractable Rubidium (Rb)	mg/kg	3.4	<2.0	6.1	4433974	3.8	2.0	4436224	N/A
Acid Extractable Selenium (Se)	mg/kg	1.2	1.0	1.3	4433974	<1.0	1.0	4436224	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50	<0.50	<0.50	4433974	<0.50	0.50	4436224	N/A
Acid Extractable Strontium (Sr)	mg/kg	49	41	16	4433974	5.9	5.0	4436224	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10	<0.10	<0.10	4433974	<0.10	0.10	4436224	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0	<2.0	<2.0	4433974	<2.0	2.0	4436224	N/A
Acid Extractable Uranium (U)	mg/kg	0.69	0.45	0.57	4433974	0.29	0.10	4436224	N/A
Acid Extractable Vanadium (V)	mg/kg	11	7.7	20	4433974	27	2.0	4436224	N/A
Acid Extractable Zinc (Zn)	mg/kg	94	7.2	30	4433974	12	5.0	4436224	N/A

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		CBF365			
Sampling Date		2016/03/15			
COC Number		552096-01-01			
	UNITS	P3	RDL	QC Batch	MDL
Metals					
Acid Extractable Aluminum (Al)	mg/kg	8600	10	4433974	N/A
Acid Extractable Antimony (Sb)	mg/kg	<2.0	2.0	4433974	N/A
Acid Extractable Arsenic (As)	mg/kg	2.1	2.0	4433974	N/A
Acid Extractable Barium (Ba)	mg/kg	36	5.0	4433974	N/A
Acid Extractable Beryllium (Be)	mg/kg	<2.0	2.0	4433974	N/A
Acid Extractable Bismuth (Bi)	mg/kg	<2.0	2.0	4433974	N/A
Acid Extractable Boron (B)	mg/kg	<50	50	4433974	N/A
Acid Extractable Cadmium (Cd)	mg/kg	<0.30	0.30	4433974	N/A
Acid Extractable Chromium (Cr)	mg/kg	7.5	2.0	4433974	N/A
Acid Extractable Cobalt (Co)	mg/kg	1.7	1.0	4433974	N/A
Acid Extractable Copper (Cu)	mg/kg	11	2.0	4433974	N/A
Acid Extractable Iron (Fe)	mg/kg	4600	50	4433974	N/A
Acid Extractable Lead (Pb)	mg/kg	22	0.50	4433974	N/A
Acid Extractable Lithium (Li)	mg/kg	<2.0	2.0	4433974	N/A
Acid Extractable Manganese (Mn)	mg/kg	79	2.0	4433974	N/A
Acid Extractable Mercury (Hg)	mg/kg	0.38	0.10	4433974	N/A
Acid Extractable Molybdenum (Mo)	mg/kg	2.1	2.0	4433974	N/A
Acid Extractable Nickel (Ni)	mg/kg	5.9	2.0	4433974	N/A
Acid Extractable Rubidium (Rb)	mg/kg	2.1	2.0	4433974	N/A
Acid Extractable Selenium (Se)	mg/kg	1.9	1.0	4433974	N/A
Acid Extractable Silver (Ag)	mg/kg	<0.50	0.50	4433974	N/A
Acid Extractable Strontium (Sr)	mg/kg	45	5.0	4433974	N/A
Acid Extractable Thallium (Tl)	mg/kg	<0.10	0.10	4433974	N/A
Acid Extractable Tin (Sn)	mg/kg	<2.0	2.0	4433974	N/A
Acid Extractable Uranium (U)	mg/kg	1.1	0.10	4433974	N/A
Acid Extractable Vanadium (V)	mg/kg	5.6	2.0	4433974	N/A
Acid Extractable Zinc (Zn)	mg/kg	23	5.0	4433974	N/A

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF264	CBF267	CBF271	CBF278		CBF282			
Sampling Date		2016/03/14	2016/03/14	2016/03/14	2016/03/14		2016/03/14			
COC Number		D07961	D07961	D07961	D07962		D07962			
	UNITS	TP5/1	TP6/2	TP9A/1	TP12/1	RDL	TP17/2	RDL	QC Batch	MDL
Semivolatile Organics										
Acenaphthene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Acenaphthylene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Anthracene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Benzo(a)anthracene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Benzo(a)pyrene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Benzo(b/j)fluoranthene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Benzo(g,h,i)perylene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Benzo(k)fluoranthene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
1-Chloronaphthalene	ug/g	<1	<1	<1	<1	1	<5	5	4434193	0.01
2-Chloronaphthalene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Chrysene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Dibenz(a,h)anthracene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Fluoranthene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Fluorene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Indeno(1,2,3-cd)pyrene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
1-Methylnaphthalene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
2-Methylnaphthalene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
Naphthalene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
Perylene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
Phenanthrene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Pyrene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Quinoline	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
1,2-Dichlorobenzene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
1,3-Dichlorobenzene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
1,4-Dichlorobenzene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
Hexachlorobenzene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
Pentachlorobenzene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
1,2,3,4-Tetrachlorobenzene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.02
1,2,3,5-Tetrachlorobenzene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.02
1,2,4,5-Tetrachlorobenzene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.02
1,2,3-Trichlorobenzene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.02
1,2,4-Trichlorobenzene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.02
1,3,5-Trichlorobenzene	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.05
2-Chlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
4-Chloro-3-Methylphenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
m/p-Cresol	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.02

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF264	CBF267	CBF271	CBF278		CBF282			
Sampling Date		2016/03/14	2016/03/14	2016/03/14	2016/03/14		2016/03/14			
COC Number		D07961	D07961	D07961	D07962		D07962			
	UNITS	TP5/1	TP6/2	TP9A/1	TP12/1	RDL	TP17/2	RDL	QC Batch	MDL
o-Cresol	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
2,3-Dichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
2,4-Dichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
2,5-Dichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
2,6-Dichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
3,4-Dichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.03
3,5-Dichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
2,4-Dimethylphenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
2,4-Dinitrophenol	ug/g	<1	<1	<1	<1	1	<5	5	4434193	0.02
4,6-Dinitro-2-methylphenol	ug/g	<1 (1)	<1 (1)	<1 (1)	<1 (1)	1	<5 (1)	5	4434193	0.04
2-Nitrophenol	ug/g	<0.5	<0.5	<0.5	<0.5	0.5	<3	3	4434193	0.02
4-Nitrophenol	ug/g	<0.5	<0.5	<0.5	<0.5	0.5	<3	3	4434193	0.03
Pentachlorophenol	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.07
Phenol	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
2,3,4,5-Tetrachlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.03
2,3,4,6-Tetrachlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.03
2,3,5,6-Tetrachlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.03
2,3,4-Trichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.04
2,3,5-Trichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
2,3,6-Trichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.04
2,4,5-Trichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.03
2,4,6-Trichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
3,4,5-Trichlorophenol	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
Benzyl butyl phthalate	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
Bis(2-chloroethoxy)methane	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Bis(2-chloroisopropyl)ether	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
Bis(2-ethylhexyl)phthalate	ug/g	<0.5	<0.5	<0.5	<0.5	0.5	<3	3	4434193	0.01
4-Bromophenyl phenyl ether	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
p-Chloroaniline	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.06
4-Chlorophenyl phenyl ether	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
3,3'-Dichlorobenzidine	ug/g	<0.5	<0.5	<0.5	<0.5	0.5	<3	3	4434193	0.2
Diethyl phthalate	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
Di-N-butyl phthalate	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
Di-N-octyl phthalate	ug/g	<0.5	<0.5	<0.5	<0.5	0.5	<3	3	4434193	0.02
2,4-Dinitrotoluene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
2,6-Dinitrotoluene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Detection limit was raised due to matrix interference.

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF264	CBF267	CBF271	CBF278		CBF282			
Sampling Date		2016/03/14	2016/03/14	2016/03/14	2016/03/14		2016/03/14			
COC Number		D07961	D07961	D07961	D07962		D07962			
	UNITS	TP5/1	TP6/2	TP9A/1	TP12/1	RDL	TP17/2	RDL	QC Batch	MDL
Dimethyl phthalate	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
Biphenyl	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Bis(2-chloroethyl)ether	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
Hexachlorobutadiene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
Hexachlorocyclopentadiene	ug/g	<0.5	<0.5	<0.5	<0.5	0.5	<3	3	4434193	0.02
Hexachloroethane	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.02
Isophorone	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Nitrobenzene	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Nitrosodiphenylamine/Diphenylamine	ug/g	<0.2	<0.2	<0.2	<0.2	0.2	<1	1	4434193	0.01
N-Nitroso-di-n-propylamine	ug/g	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	0.5	4434193	0.01
Surrogate Recovery (%)										
2,4,6-Tribromophenol	%	66	90	87	87		106		4434193	
2-Fluorobiphenyl	%	76	75	74	75		102		4434193	
2-Fluorophenol	%	78	79	80	82		75		4434193	
D14-Terphenyl	%	97	96	96	97		106		4434193	
D5-Nitrobenzene	%	81	81	79	84		103		4434193	
D5-Phenol	%	83	80	83	82		84		4434193	

RDL = Reportable Detection Limit
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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF284		CBF286		CBF287	CBF287	CBF318			
Sampling Date		2016/03/15		2016/03/15		2016/03/14	2016/03/14	2016/03/15			
COC Number		D07962		D07962		D07962	D07962	D07963			
	UNITS	TP20/2	RDL	TP24/1	RDL	TP2/1	TP2/1 Lab-Dup	TP25/2	RDL	QC Batch	MDL
Semivolatile Organics											
Acenaphthene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Acenaphthylene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Anthracene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Benzo(a)anthracene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Benzo(a)pyrene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Benzo(b/j)fluoranthene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Benzo(g,h,i)perylene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Benzo(k)fluoranthene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
1-Chloronaphthalene	ug/g	<1	1	<2	2	<1	<1	<1	1	4434193	0.01
2-Chloronaphthalene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Chrysene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Dibenz(a,h)anthracene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Fluoranthene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Fluorene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Indeno(1,2,3-cd)pyrene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
1-Methylnaphthalene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
2-Methylnaphthalene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
Naphthalene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
Perylene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
Phenanthrene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Pyrene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Quinoline	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
1,2-Dichlorobenzene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
1,3-Dichlorobenzene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
1,4-Dichlorobenzene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
Hexachlorobenzene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
Pentachlorobenzene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
1,2,3,4-Tetrachlorobenzene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.02
1,2,3,5-Tetrachlorobenzene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.02
1,2,4,5-Tetrachlorobenzene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.02
1,2,3-Trichlorobenzene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.02
1,2,4-Trichlorobenzene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.02
1,3,5-Trichlorobenzene	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.05
2-Chlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
4-Chloro-3-Methylphenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02

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

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF284		CBF286		CBF287	CBF287	CBF318			
Sampling Date		2016/03/15		2016/03/15		2016/03/14	2016/03/14	2016/03/15			
COC Number		D07962		D07962		D07962	D07962	D07963			
	UNITS	TP20/2	RDL	TP24/1	RDL	TP2/1	TP2/1 Lab-Dup	TP25/2	RDL	QC Batch	MDL
m/p-Cresol	ug/g	0.3	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.02
o-Cresol	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
2,3-Dichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
2,4-Dichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
2,5-Dichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
2,6-Dichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
3,4-Dichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.03
3,5-Dichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
2,4-Dimethylphenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
2,4-Dinitrophenol	ug/g	<1	1	<2	2	<1	<1	<1	1	4434193	0.02
4,6-Dinitro-2-methylphenol	ug/g	<0.5	0.5	<2 (1)	2	<1 (1)	<1 (1)	<1 (1)	1	4434193	0.04
2-Nitrophenol	ug/g	<0.5	0.5	<1	1	<0.5	<0.5	<0.5	0.5	4434193	0.02
4-Nitrophenol	ug/g	<0.5	0.5	<1	1	<0.5	<0.5	<0.5	0.5	4434193	0.03
Pentachlorophenol	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.07
Phenol	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
2,3,4,5-Tetrachlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.03
2,3,4,6-Tetrachlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.03
2,3,5,6-Tetrachlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.03
2,3,4-Trichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.04
2,3,5-Trichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
2,3,6-Trichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.04
2,4,5-Trichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.03
2,4,6-Trichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
3,4,5-Trichlorophenol	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
Benzyl butyl phthalate	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
Bis(2-chloroethoxy)methane	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Bis(2-chloroisopropyl)ether	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
Bis(2-ethylhexyl)phthalate	ug/g	<0.5	0.5	<1	1	<0.5	<0.5	<0.5	0.5	4434193	0.01
4-Bromophenyl phenyl ether	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
p-Chloroaniline	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.06
4-Chlorophenyl phenyl ether	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
3,3'-Dichlorobenzidine	ug/g	<0.5	0.5	<1	1	<0.5	<0.5	<0.5	0.5	4434193	0.2
Diethyl phthalate	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
Di-N-butyl phthalate	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
Di-N-octyl phthalate	ug/g	<0.5	0.5	<1	1	<0.5	<0.5	<0.5	0.5	4434193	0.02

RDL = Reportable Detection Limit
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Lab-Dup = Laboratory Initiated Duplicate
(1) Detection limit was raised due to matrix interference.

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF284		CBF286		CBF287	CBF287	CBF318			
Sampling Date		2016/03/15		2016/03/15		2016/03/14	2016/03/14	2016/03/15			
COC Number		D07962		D07962		D07962	D07962	D07963			
	UNITS	TP20/2	RDL	TP24/1	RDL	TP2/1	TP2/1 Lab-Dup	TP25/2	RDL	QC Batch	MDL
2,4-Dinitrotoluene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
2,6-Dinitrotoluene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
Dimethyl phthalate	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
Biphenyl	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Bis(2-chloroethyl)ether	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
Hexachlorobutadiene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
Hexachlorocyclopentadiene	ug/g	<0.5	0.5	<1	1	<0.5	<0.5	<0.5	0.5	4434193	0.02
Hexachloroethane	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.02
Isophorone	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Nitrobenzene	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Nitrosodiphenylamine/Diphenylamine	ug/g	<0.2	0.2	<0.4	0.4	<0.2	<0.2	<0.2	0.2	4434193	0.01
N-Nitroso-di-n-propylamine	ug/g	<0.1	0.1	<0.2	0.2	<0.1	<0.1	<0.1	0.1	4434193	0.01
Surrogate Recovery (%)											
2,4,6-Tribromophenol	%	106		85		89	92	103		4434193	
2-Fluorobiphenyl	%	86		64		80	81	87		4434193	
2-Fluorophenol	%	87		72		81	82	81		4434193	
D14-Terphenyl	%	97		99		98	97	97		4434193	
D5-Nitrobenzene	%	88		69		84	86	85		4434193	
D5-Phenol	%	86		71		83	82	83		4434193	

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

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF321		CBF322		CBF324		CBF326	CBF337			
Sampling Date		2016/03/15		2016/03/15		2016/03/15		2016/03/14	2016/03/15			
COC Number		D07963		D07963		D07963		D07963	D07965			
	UNITS	TP28/2	RDL	TP31/1	RDL	TP35/2	RDL	TP16/2	TP19/2	RDL	QC Batch	MDL
Semivolatile Organics												
Acenaphthene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Acenaphthylene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Anthracene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Benzo(a)anthracene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Benzo(a)pyrene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Benzo(b/j)fluoranthene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Benzo(g,h,i)perylene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Benzo(k)fluoranthene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
1-Chloronaphthalene	ug/g	<1	1	<20	20	<1	1	<20	<20	20	4434193	0.01
2-Chloronaphthalene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Chrysene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Dibenz(a,h)anthracene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Fluoranthene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Fluorene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Indeno(1,2,3-cd)pyrene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
1-Methylnaphthalene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
2-Methylnaphthalene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
Naphthalene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
Perylene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
Phenanthrene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Pyrene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Quinoline	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
1,2-Dichlorobenzene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
1,3-Dichlorobenzene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
1,4-Dichlorobenzene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
Hexachlorobenzene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
Pentachlorobenzene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
1,2,3,4-Tetrachlorobenzene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.02
1,2,3,5-Tetrachlorobenzene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.02
1,2,4,5-Tetrachlorobenzene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.02
1,2,3-Trichlorobenzene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.02
1,2,4-Trichlorobenzene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.02
1,3,5-Trichlorobenzene	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.05
2-Chlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
4-Chloro-3-Methylphenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
m/p-Cresol	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.02

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF321		CBF322		CBF324		CBF326	CBF337			
Sampling Date		2016/03/15		2016/03/15		2016/03/15		2016/03/14	2016/03/15			
COC Number		D07963		D07963		D07963		D07963	D07965			
	UNITS	TP28/2	RDL	TP31/1	RDL	TP35/2	RDL	TP16/2	TP19/2	RDL	QC Batch	MDL
o-Cresol	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
2,3-Dichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
2,4-Dichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
2,5-Dichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
2,6-Dichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
3,4-Dichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.03
3,5-Dichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
2,4-Dimethylphenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
2,4-Dinitrophenol	ug/g	<1	1	<20	20	<1	1	<20	<20	20	4434193	0.02
4,6-Dinitro-2-methylphenol	ug/g	<0.5	0.5	<10	10	<0.5	0.5	<10	<10	10	4434193	0.04
2-Nitrophenol	ug/g	<0.5	0.5	<10	10	<0.5	0.5	<10	<10	10	4434193	0.02
4-Nitrophenol	ug/g	<0.5	0.5	<10	10	<0.5	0.5	<10	<10	10	4434193	0.03
Pentachlorophenol	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.07
Phenol	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
2,3,4,5-Tetrachlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.03
2,3,4,6-Tetrachlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.03
2,3,5,6-Tetrachlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.03
2,3,4-Trichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.04
2,3,5-Trichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
2,3,6-Trichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.04
2,4,5-Trichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.03
2,4,6-Trichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
3,4,5-Trichlorophenol	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
Benzyl butyl phthalate	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
Bis(2-chloroethoxy)methane	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Bis(2-chloroisopropyl)ether	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
Bis(2-ethylhexyl)phthalate	ug/g	<0.5	0.5	<10	10	<0.5	0.5	<10	<10	10	4434193	0.01
4-Bromophenyl phenyl ether	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
p-Chloroaniline	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.06
4-Chlorophenyl phenyl ether	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
3,3'-Dichlorobenzidine	ug/g	<0.5	0.5	<10	10	<0.5	0.5	<10	<10	10	4434193	0.2
Diethyl phthalate	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
Di-N-butyl phthalate	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
Di-N-octyl phthalate	ug/g	<0.5	0.5	<10	10	<0.5	0.5	<10	<10	10	4434193	0.02
2,4-Dinitrotoluene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
2,6-Dinitrotoluene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
Dimethyl phthalate	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF321		CBF322		CBF324		CBF326	CBF337			
Sampling Date		2016/03/15		2016/03/15		2016/03/15		2016/03/14	2016/03/15			
COC Number		D07963		D07963		D07963		D07963	D07965			
	UNITS	TP28/2	RDL	TP31/1	RDL	TP35/2	RDL	TP16/2	TP19/2	RDL	QC Batch	MDL
Biphenyl	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Bis(2-chloroethyl)ether	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
Hexachlorobutadiene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
Hexachlorocyclopentadiene	ug/g	<0.5	0.5	<10	10	<0.5	0.5	<10	<10	10	4434193	0.02
Hexachloroethane	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.02
Isophorone	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Nitrobenzene	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Nitrosodiphenylamine/Diphenylamine	ug/g	<0.2	0.2	<4	4	<0.2	0.2	<4	<4	4	4434193	0.01
N-Nitroso-di-n-propylamine	ug/g	<0.1	0.1	<2	2	<0.1	0.1	<2	<2	2	4434193	0.01
Surrogate Recovery (%)												
2,4,6-Tribromophenol	%	59		86		56		94	88		4434193	
2-Fluorobiphenyl	%	64		72		69		84	82		4434193	
2-Fluorophenol	%	74		70		78		70	66		4434193	
D14-Terphenyl	%	96		88		93		94	94		4434193	
D5-Nitrobenzene	%	75		68		80		66	72		4434193	
D5-Phenol	%	77		74		82		78	74		4434193	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF338		CBF339	CBF340	CBF361			
Sampling Date		2016/03/15		2016/03/15	2016/03/14	2016/03/15			
COC Number		D07965		D07965	D07965	552096-01-01			
	UNITS	TP22/2	RDL	PIPE	DUP 1	P1A	RDL	QC Batch	MDL
Semivolatile Organics									
Acenaphthene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Acenaphthylene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Anthracene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Benzo(a)anthracene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Benzo(a)pyrene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Benzo(b/j)fluoranthene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Benzo(g,h,i)perylene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Benzo(k)fluoranthene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
1-Chloronaphthalene	ug/g	<5	5	<1	<1		1	4434193	0.01
2-Chloronaphthalene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Chrysene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Dibenz(a,h)anthracene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Fluoranthene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Fluorene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Indeno(1,2,3-cd)pyrene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
1-Methylnaphthalene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
2-Methylnaphthalene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
Naphthalene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
Perylene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
Phenanthrene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Pyrene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Quinoline	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
1,2-Dichlorobenzene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
1,3-Dichlorobenzene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
1,4-Dichlorobenzene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
Hexachlorobenzene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
Pentachlorobenzene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
1,2,3,4-Tetrachlorobenzene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.02
1,2,3,5-Tetrachlorobenzene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.02
1,2,4,5-Tetrachlorobenzene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.02
1,2,3-Trichlorobenzene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.02
1,2,4-Trichlorobenzene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.02
1,3,5-Trichlorobenzene	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.05
2-Chlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
4-Chloro-3-Methylphenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
m/p-Cresol	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.02

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF338		CBF339	CBF340	CBF361			
Sampling Date		2016/03/15		2016/03/15	2016/03/14	2016/03/15			
COC Number		D07965		D07965	D07965	552096-01-01			
	UNITS	TP22/2	RDL	PIPE	DUP 1	P1A	RDL	QC Batch	MDL
o-Cresol	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
2,3-Dichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
2,4-Dichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
2,5-Dichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
2,6-Dichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
3,4-Dichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.03
3,5-Dichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
2,4-Dimethylphenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
2,4-Dinitrophenol	ug/g	<5	5	<1	<1		1	4434193	0.02
4,6-Dinitro-2-methylphenol	ug/g	<3	3	<0.5	<0.5		0.5	4434193	0.04
2-Nitrophenol	ug/g	<3	3	<0.5	<0.5		0.5	4434193	0.02
4-Nitrophenol	ug/g	<3	3	<0.5	<0.5		0.5	4434193	0.03
Pentachlorophenol	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.07
Phenol	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
2,3,4,5-Tetrachlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.03
2,3,4,6-Tetrachlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.03
2,3,5,6-Tetrachlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.03
2,3,4-Trichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.04
2,3,5-Trichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
2,3,6-Trichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.04
2,4,5-Trichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.03
2,4,6-Trichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
3,4,5-Trichlorophenol	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
Benzyl butyl phthalate	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
Bis(2-chloroethoxy)methane	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Bis(2-chloroisopropyl)ether	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
Bis(2-ethylhexyl)phthalate	ug/g	<3	3	<0.5	<0.5		0.5	4434193	0.01
4-Bromophenyl phenyl ether	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
p-Chloroaniline	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.06
4-Chlorophenyl phenyl ether	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
3,3'-Dichlorobenzidine	ug/g	<3	3	<0.5	<0.5		0.5	4434193	0.2
Diethyl phthalate	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
Di-N-butyl phthalate	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
Di-N-octyl phthalate	ug/g	<3	3	<0.5	<0.5		0.5	4434193	0.02
2,4-Dinitrotoluene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
2,6-Dinitrotoluene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
Dimethyl phthalate	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF338		CBF339	CBF340	CBF361			
Sampling Date		2016/03/15		2016/03/15	2016/03/14	2016/03/15			
COC Number		D07965		D07965	D07965	552096-01-01			
	UNITS	TP22/2	RDL	PIPE	DUP 1	P1A	RDL	QC Batch	MDL
Biphenyl	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Bis(2-chloroethyl)ether	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
Hexachlorobutadiene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
Hexachlorocyclopentadiene	ug/g	<3	3	<0.5	<0.5		0.5	4434193	0.02
Hexachloroethane	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.02
Isophorone	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Nitrobenzene	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Nitrosodiphenylamine/Diphenylamine	ug/g	<1	1	<0.2	<0.2		0.2	4434193	0.01
N-Nitroso-di-n-propylamine	ug/g	<0.5	0.5	<0.1	<0.1		0.1	4434193	0.01
Polyaromatic Hydrocarbons									
1-Methylnaphthalene	mg/kg					<0.0050	0.0050	4436141	N/A
2-Methylnaphthalene	mg/kg					<0.0050	0.0050	4436141	N/A
Acenaphthene	mg/kg					<0.0050	0.0050	4436141	N/A
Acenaphthylene	mg/kg					<0.0050	0.0050	4436141	N/A
Anthracene	mg/kg					<0.0050	0.0050	4436141	N/A
Benzo(a)anthracene	mg/kg					<0.0050	0.0050	4436141	N/A
Benzo(a)pyrene	mg/kg					<0.0050	0.0050	4436141	N/A
Benzo(b)fluoranthene	mg/kg					<0.0050	0.0050	4436141	N/A
Benzo(g,h,i)perylene	mg/kg					<0.0050	0.0050	4436141	N/A
Benzo(j)fluoranthene	mg/kg					<0.0050	0.0050	4436141	N/A
Benzo(k)fluoranthene	mg/kg					<0.0050	0.0050	4436141	N/A
Chrysene	mg/kg					<0.070 (1)	0.070	4436141	N/A
Dibenz(a,h)anthracene	mg/kg					<0.0050	0.0050	4436141	N/A
Fluoranthene	mg/kg					0.083	0.0050	4436141	N/A
Fluorene	mg/kg					<0.0050	0.0050	4436141	N/A
Indeno(1,2,3-cd)pyrene	mg/kg					<0.0050	0.0050	4436141	N/A
Naphthalene	mg/kg					<0.0050	0.0050	4436141	N/A
Perylene	mg/kg					<0.0050	0.0050	4436141	N/A
Phenanthrene	mg/kg					0.074	0.0050	4436141	N/A
Pyrene	mg/kg					0.065	0.0050	4436141	N/A
Phenolics									
2-Chlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,3,4,6-Tetrachlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,3,5-Trichlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,4-Dichlorophenol	ug/g					<0.8	0.8	4435409	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable
(1) Elevated PAH RDL(s) due to matrix / co-extractive interference.

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF338		CBF339	CBF340	CBF361			
Sampling Date		2016/03/15		2016/03/15	2016/03/14	2016/03/15			
COC Number		D07965		D07965	D07965	552096-01-01			
	UNITS	TP22/2	RDL	PIPE	DUP 1	P1A	RDL	QC Batch	MDL
2,4-Dimethylphenol	ug/g					<2	2	4435409	N/A
2,4,6-Trichlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,6-Dichlorophenol	ug/g					<0.8	0.8	4435409	N/A
4-Chloro-3-Methylphenol	ug/g					<2	2	4435409	N/A
4-Nitrophenol	ug/g					<2	2	4435409	N/A
m/p-Cresol	ug/g					<2	2	4435409	N/A
o-Cresol	ug/g					<2	2	4435409	N/A
Pentachlorophenol	ug/g					<0.8	0.8	4435409	N/A
Phenol	ug/g					<2	2	4435409	N/A
2,3,4,5-Tetrachlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,3,5,6-Tetrachlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,3,4-Trichlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,4,5-Trichlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,3,6-Trichlorophenol	ug/g					<0.8	0.8	4435409	N/A
3,4,5-Trichlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,3-Dichlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,5-Dichlorophenol	ug/g					<0.8	0.8	4435409	N/A
3,4-Dichlorophenol	ug/g					<0.8	0.8	4435409	N/A
3,5-Dichlorophenol	ug/g					<0.8	0.8	4435409	N/A
2,4-Dinitrophenol	ug/g					<2	2	4435409	N/A
4,6-Dinitro-2-methylphenol	ug/g					<2	2	4435409	N/A
3 & 4-Chlorophenol	ug/g					<0.8	0.8	4435409	N/A
2-Nitrophenol	ug/g					<2	2	4435409	N/A
Surrogate Recovery (%)									
2,4,6-Tribromophenol	%	106		101	59			4434193	
2-Fluorobiphenyl	%	86		79	77			4434193	
2-Fluorophenol	%	82		82	83			4434193	
D14-Terphenyl	%	100		96	96			4434193	
D5-Nitrobenzene	%	85		83	84			4434193	
D5-Phenol	%	84		86	87			4434193	
2,4,6-Tribromophenol	%					92		4435409	
2-Fluorophenol	%					60		4435409	
D5-Phenol	%					75		4435409	
D10-Anthracene	%					88		4436141	
D14-Terphenyl	%					105		4436141	
D8-Acenaphthylene	%					86		4436141	

RDL = Reportable Detection Limit
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N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF361		CBF362		CBF363	CBF363			
Sampling Date		2016/03/15		2016/03/15		2016/03/15	2016/03/15			
COC Number		552096-01-01		552096-01-01		552096-01-01	552096-01-01			
	UNITS	P1A Lab-Dup	RDL	P1B	RDL	P2A	P2A Lab-Dup	RDL	QC Batch	MDL
Polyaromatic Hydrocarbons										
1-Methylnaphthalene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
2-Methylnaphthalene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Acenaphthene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Acenaphthylene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Anthracene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Benzo(a)anthracene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Benzo(a)pyrene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Benzo(b)fluoranthene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Benzo(g,h,i)perylene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Benzo(j)fluoranthene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Benzo(k)fluoranthene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Chrysene	mg/kg	<0.050 (1)	0.050	<0.060 (1)	0.060	<0.0050		0.0050	4436141	N/A
Dibenz(a,h)anthracene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Fluoranthene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Fluorene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Indeno(1,2,3-cd)pyrene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Naphthalene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Perylene	mg/kg	<0.0050	0.0050	0.055	0.0050	<0.0050		0.0050	4436141	N/A
Phenanthrene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Pyrene	mg/kg	<0.0050	0.0050	<0.0050	0.0050	<0.0050		0.0050	4436141	N/A
Phenolics										
2-Chlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,3,4,6-Tetrachlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,3,5-Trichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,4-Dichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,4-Dimethylphenol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
2,4,6-Trichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,6-Dichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
4-Chloro-3-Methylphenol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
4-Nitrophenol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
m/p-Cresol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
o-Cresol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
Pentachlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable
(1) Elevated PAH RDL(s) due to matrix / co-extractive interference.

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF361		CBF362		CBF363	CBF363			
Sampling Date		2016/03/15		2016/03/15		2016/03/15	2016/03/15			
COC Number		552096-01-01		552096-01-01		552096-01-01	552096-01-01			
	UNITS	P1A Lab-Dup	RDL	P1B	RDL	P2A	P2A Lab-Dup	RDL	QC Batch	MDL
Phenol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
2,3,4,5-Tetrachlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,3,5,6-Tetrachlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,3,4-Trichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,4,5-Trichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,3,6-Trichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
3,4,5-Trichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,3-Dichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,5-Dichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
3,4-Dichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
3,5-Dichlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2,4-Dinitrophenol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
4,6-Dinitro-2-methylphenol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
3 & 4-Chlorophenol	ug/g			<0.8	0.8	<0.2	<0.2	0.2	4435409	N/A
2-Nitrophenol	ug/g			<2	2	<0.3	<0.3	0.3	4435409	N/A
Surrogate Recovery (%)										
2,4,6-Tribromophenol	%			89		91	89		4435409	
2-Fluorophenol	%			68		75	70		4435409	
D5-Phenol	%			82		79	73		4435409	
D10-Anthracene	%	88		77		87			4436141	
D14-Terphenyl	%	103		93		100			4436141	
D8-Acenaphthylene	%	83		80		83			4436141	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF364		CBF365			
Sampling Date		2016/03/20		2016/03/15			
COC Number		552096-01-01		552096-01-01			
	UNITS	P2B	RDL	P3	RDL	QC Batch	MDL
Polyaromatic Hydrocarbons							
1-Methylnaphthalene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
2-Methylnaphthalene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Acenaphthene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Acenaphthylene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Anthracene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Benzo(a)anthracene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Benzo(a)pyrene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Benzo(b)fluoranthene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Benzo(g,h,i)perylene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Benzo(j)fluoranthene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Benzo(k)fluoranthene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Chrysene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Dibenz(a,h)anthracene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Fluoranthene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Fluorene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Indeno(1,2,3-cd)pyrene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Naphthalene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Perylene	mg/kg		0.0050	4.8	0.0050	4436141	N/A
Phenanthrene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Pyrene	mg/kg		0.0050	<0.0050	0.0050	4436141	N/A
Phenolics							
2-Chlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,3,4,6-Tetrachlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,3,5-Trichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,4-Dichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,4-Dimethylphenol	ug/g	<0.2	0.2	<1	1	4435409	N/A
2,4,6-Trichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,6-Dichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
4-Chloro-3-Methylphenol	ug/g	<0.2	0.2	<1	1	4435409	N/A
4-Nitrophenol	ug/g	<0.2	0.2	<1	1	4435409	N/A
m/p-Cresol	ug/g	<0.2	0.2	<1	1	4435409	N/A
o-Cresol	ug/g	<0.2	0.2	<1	1	4435409	N/A
Pentachlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
Phenol	ug/g	<0.2	0.2	<1	1	4435409	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		CBF364		CBF365			
Sampling Date		2016/03/20		2016/03/15			
COC Number		552096-01-01		552096-01-01			
	UNITS	P2B	RDL	P3	RDL	QC Batch	MDL
2,3,4,5-Tetrachlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,3,5,6-Tetrachlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,3,4-Trichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,4,5-Trichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,3,6-Trichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
3,4,5-Trichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,3-Dichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,5-Dichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
3,4-Dichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
3,5-Dichlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2,4-Dinitrophenol	ug/g	<0.2	0.2	<1	1	4435409	N/A
4,6-Dinitro-2-methylphenol	ug/g	<0.2	0.2	<1	1	4435409	N/A
3 & 4-Chlorophenol	ug/g	<0.1	0.1	<0.7	0.7	4435409	N/A
2-Nitrophenol	ug/g	<0.2	0.2	<1	1	4435409	N/A
Surrogate Recovery (%)							
2,4,6-Tribromophenol	%	91		94		4435409	
2-Fluorophenol	%	79		75		4435409	
D5-Phenol	%	83		83		4435409	
D10-Anthracene	%			83		4436141	
D14-Terphenyl	%			99		4436141	
D8-Acenaphthylene	%			81		4436141	

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF262
Sample ID: TP1/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF263
Sample ID: TP3/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF264
Sample ID: TP5/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/30	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF264 Dup
Sample ID: TP5/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc

Maxxam ID: CBF265
Sample ID: TP5/2
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF266
Sample ID: TP6/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF266 Dup
Sample ID: TP6/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin

Maxxam ID: CBF267
Sample ID: TP6/2
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/30	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF268
Sample ID: TP6/3
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF269
Sample ID: TP7/2
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF269 Dup
Sample ID: TP7/2
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF270
Sample ID: TP9/2
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF271
Sample ID: TP9A/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/30	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF278
Sample ID: TP12/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/30	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433970	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF279
Sample ID: TP15/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF280
Sample ID: TP15/2
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436375	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF281
Sample ID: TP16/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF282
Sample ID: TP17/2
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/04/01	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436375	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF283
Sample ID: TP19/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF284
Sample ID: TP20/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/04/01	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436375	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF285
Sample ID: TP22/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TEH in Soil (PIRI)	GC/FID	4428766	2016/03/23	2016/03/23	Bria Harvey
Moisture	BAL	4426993	N/A	2016/03/23	Chloe Bramble
VPH in Soil (PIRI)	PTGC/MS	4430910	2016/03/22	2016/03/24	Thea Holland
ModTPH (T1) Calc. for Soil	CALC	4427487	N/A	2016/03/28	Automated Statchk

Maxxam ID: CBF285 Dup
Sample ID: TP22/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
VPH in Soil (PIRI)	PTGC/MS	4430910	2016/03/22	2016/03/24	Thea Holland

Maxxam ID: CBF286
Sample ID: TP24/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/30	Anh Lieu

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF286
Sample ID: TP24/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436375	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF287
Sample ID: TP2/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/30	Anh Lieu
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF287 Dup
Sample ID: TP2/1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/30	Anh Lieu

Maxxam ID: CBF317
Sample ID: TP25/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF318
Sample ID: TP25/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/30	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF319
Sample ID: TP26/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF320
Sample ID: TP27/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF321
Sample ID: TP28/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/31	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF322
Sample ID: TP31/1
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/04/01	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF323
Sample ID: TP31/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF323 Dup
Sample ID: TP31/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF324
Sample ID: TP35/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/31	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF324
Sample ID: TP35/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF324 Dup
Sample ID: TP35/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc

Maxxam ID: CBF325
Sample ID: TP37/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF326
Sample ID: TP16/2
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/31	Anh Lieu
Moisture	BAL	4436375	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF337
Sample ID: TP19/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/31	Anh Lieu
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF338
Sample ID: TP22/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/04/01	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4436224	2016/03/30	2016/03/30	Bryon Angevine
Moisture	BAL	4436375	N/A	2016/03/30	Valentina Kaftani

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF338 Dup
Sample ID: TP22/2
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Metals Solids Acid Extr. ICPMS	ICP/MS	4436224	2016/03/30	2016/03/30	Bryon Angevine

Maxxam ID: CBF339
Sample ID: PIPE
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/31	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4436224	2016/03/30	2016/03/30	Bryon Angevine
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF339 Dup
Sample ID: PIPE
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin

Maxxam ID: CBF340
Sample ID: DUP 1
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in soil by GC/MS	GC/MS	4434193	2016/03/28	2016/03/31	Anh Lieu
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4436224	2016/03/30	2016/03/30	Bryon Angevine
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF341
Sample ID: POND
Matrix: Soil

Collected: 2016/03/14
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4434934	2016/03/29	2016/03/31	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4436224	2016/03/30	2016/03/30	Bryon Angevine
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

Maxxam ID: CBF342
Sample ID: MW4/1B
Matrix: Soil

Collected: 2016/03/16
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	4436636	2016/03/30	2016/04/01	Sally Coughlin
Metals Solids Acid Extr. ICPMS	ICP/MS	4436224	2016/03/30	2016/03/30	Bryon Angevine
Moisture	BAL	4436997	N/A	2016/03/30	Valentina Kaftani

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF361
Sample ID: P1A
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4435409	2016/03/29	2016/03/31	May Yin Mak
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4432518	N/A	2016/03/28	Chloe Bramble
PAH in sediment by GC/MS (Low Level)	GC/MS	4436141	2016/03/29	2016/03/31	Gina Thompson

Maxxam ID: CBF361 Dup
Sample ID: P1A
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH in sediment by GC/MS (Low Level)	GC/MS	4436141	2016/03/29	2016/03/31	Gina Thompson

Maxxam ID: CBF362
Sample ID: P1B
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4435409	2016/03/29	2016/03/31	May Yin Mak
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4432518	N/A	2016/03/28	Chloe Bramble
PAH in sediment by GC/MS (Low Level)	GC/MS	4436141	2016/03/29	2016/03/31	Gina Thompson

Maxxam ID: CBF363
Sample ID: P2A
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4435409	2016/03/29	2016/03/31	May Yin Mak
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4432518	N/A	2016/03/28	Chloe Bramble
PAH in sediment by GC/MS (Low Level)	GC/MS	4436141	2016/03/29	2016/03/31	Gina Thompson

Maxxam ID: CBF363 Dup
Sample ID: P2A
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4435409	2016/03/29	2016/04/01	May Yin Mak

Maxxam ID: CBF364
Sample ID: P2B
Matrix: Soil

Collected: 2016/03/20
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4435409	2016/03/29	2016/04/01	May Yin Mak
Metals Solids Acid Extr. ICPMS	ICP/MS	4436224	2016/03/30	2016/03/30	Bryon Angevine
Moisture	BAL	4436311	N/A	2016/03/30	Valentina Kaftani

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

TEST SUMMARY

Maxxam ID: CBF365
Sample ID: P3
Matrix: Soil

Collected: 2016/03/15
Shipped:
Received: 2016/03/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractables by GC/MS	GC/MS	4435409	2016/03/29	2016/04/01	May Yin Mak
Metals Solids Acid Extr. ICPMS	ICP/MS	4433974	2016/03/29	2016/03/29	Mike Leblanc
Moisture	BAL	4432518	N/A	2016/03/28	Chloe Bramble
PAH in sediment by GC/MS (Low Level)	GC/MS	4436141	2016/03/29	2016/03/31	Gina Thompson

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GENERAL COMMENTS

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

Package 1	-0.3°C
Package 2	2.3°C

Sample CBF282-01 : ABN analysis: Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Sample CBF286-01 : ABN analysis: Detection limits were adjusted for high moisture content.

Sample CBF322-01 : ABN analysis: Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly for dilution and high moisture content.

Sample CBF326-01 : ABN analysis: Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly for dilution and high moisture content.

Sample CBF337-01 : ABN analysis: Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly for dilution and high moisture content.

Sample CBF338-01 : ABN analysis: Due to the nature of the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Sample CBF361-01 : CPH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly. Further, Detection limits were adjusted for high moisture content.

Sample CBF362-01 : CPH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly. Further, Detection limits were adjusted for high moisture content.

Sample CBF363-01 : CPH Analysis: Detection limits were adjusted for high moisture content.

Sample CBF364-01 : CPH Analysis: Detection limits were adjusted for high moisture content.

Sample CBF365-01 : CPH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly. Further, Detection limits were adjusted for high moisture content.

Results relate only to the items tested.

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4428766	BHR	Matrix Spike	Isobutylbenzene - Extractable	2016/03/23		93	%	30 - 130
			n-Dotriacontane - Extractable	2016/03/23		98	%	30 - 130
			>C10-C16 Hydrocarbons	2016/03/23		94	%	30 - 130
			>C16-C21 Hydrocarbons	2016/03/23		79	%	30 - 130
			>C21-<C32 Hydrocarbons	2016/03/23		72	%	30 - 130
4428766	BHR	Spiked Blank	Isobutylbenzene - Extractable	2016/03/23		94	%	30 - 130
			n-Dotriacontane - Extractable	2016/03/23		90	%	30 - 130
			>C10-C16 Hydrocarbons	2016/03/23		98	%	30 - 130
			>C16-C21 Hydrocarbons	2016/03/23		79	%	30 - 130
			>C21-<C32 Hydrocarbons	2016/03/23		75	%	30 - 130
4428766	BHR	Method Blank	Isobutylbenzene - Extractable	2016/03/23		94	%	30 - 130
			n-Dotriacontane - Extractable	2016/03/23		97	%	30 - 130
			>C10-C16 Hydrocarbons	2016/03/23	<10		mg/kg	
			>C16-C21 Hydrocarbons	2016/03/23	<10		mg/kg	
			>C21-<C32 Hydrocarbons	2016/03/23	<15		mg/kg	
4428766	BHR	RPD - Sample/Sample Dup	>C10-C16 Hydrocarbons	2016/03/23	NC		%	50
			>C16-C21 Hydrocarbons	2016/03/23	NC		%	50
			>C21-<C32 Hydrocarbons	2016/03/23	NC		%	50
4430910	THL	Matrix Spike	Isobutylbenzene - Volatile	2016/03/24		89	%	60 - 130
4430910	THL	Matrix Spike(CBF285)	Benzene	2016/03/24		96	%	60 - 130
			Toluene	2016/03/24		98	%	60 - 130
			Ethylbenzene	2016/03/24		99	%	60 - 130
			Total Xylenes	2016/03/24		100	%	60 - 130
4430910	THL	Spiked Blank	Isobutylbenzene - Volatile	2016/03/24		94	%	60 - 130
			Benzene	2016/03/24		99	%	60 - 140
			Toluene	2016/03/24		101	%	60 - 140
			Ethylbenzene	2016/03/24		104	%	60 - 140
			Total Xylenes	2016/03/24		105	%	60 - 140
4430910	THL	Method Blank	Isobutylbenzene - Volatile	2016/03/24		94	%	60 - 130
			Benzene	2016/03/24	<0.025		mg/kg	
			Toluene	2016/03/24	<0.025		mg/kg	
			Ethylbenzene	2016/03/24	<0.025		mg/kg	
			Total Xylenes	2016/03/24	<0.050		mg/kg	
			C6 - C10 (less BTEX)	2016/03/24	<2.5		mg/kg	
4430910	THL	RPD - Sample/Sample Dup	Benzene	2016/03/24	NC		%	50
			Toluene	2016/03/24	NC		%	50
			Ethylbenzene	2016/03/24	NC		%	50
			Total Xylenes	2016/03/24	NC		%	50
			C6 - C10 (less BTEX)	2016/03/24	NC		%	50
4433970	MLB	Matrix Spike(CBF264)	Acid Extractable Antimony (Sb)	2016/03/29		89	%	75 - 125
			Acid Extractable Arsenic (As)	2016/03/29		100	%	75 - 125
			Acid Extractable Barium (Ba)	2016/03/29		106	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/03/29		101	%	75 - 125
			Acid Extractable Bismuth (Bi)	2016/03/29		100	%	75 - 125
			Acid Extractable Boron (B)	2016/03/29		98	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/03/29		95	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/03/29		NC	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/03/29		104	%	75 - 125
			Acid Extractable Copper (Cu)	2016/03/29		NC	%	75 - 125
			Acid Extractable Lead (Pb)	2016/03/29		98	%	75 - 125
			Acid Extractable Lithium (Li)	2016/03/29		103	%	75 - 125
			Acid Extractable Manganese (Mn)	2016/03/29		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/03/29		93	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/03/29		97	%	75 - 125

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Maxxam Job #: B656770
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Englobe Corp.
Client Project #: 21347

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Acid Extractable Nickel (Ni)	2016/03/29		104	%	75 - 125
			Acid Extractable Rubidium (Rb)	2016/03/29		100	%	75 - 125
			Acid Extractable Selenium (Se)	2016/03/29		101	%	75 - 125
			Acid Extractable Silver (Ag)	2016/03/29		95	%	75 - 125
			Acid Extractable Strontium (Sr)	2016/03/29		104	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/03/29		101	%	75 - 125
			Acid Extractable Tin (Sn)	2016/03/29		99	%	75 - 125
			Acid Extractable Uranium (U)	2016/03/29		104	%	75 - 125
			Acid Extractable Vanadium (V)	2016/03/29		NC	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/03/29		NC	%	75 - 125
4433970	MLB	Spiked Blank	Acid Extractable Antimony (Sb)	2016/03/29		99	%	75 - 125
			Acid Extractable Arsenic (As)	2016/03/29		99	%	75 - 125
			Acid Extractable Barium (Ba)	2016/03/29		99	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/03/29		101	%	75 - 125
			Acid Extractable Bismuth (Bi)	2016/03/29		101	%	75 - 125
			Acid Extractable Boron (B)	2016/03/29		105	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/03/29		96	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/03/29		100	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/03/29		99	%	75 - 125
			Acid Extractable Copper (Cu)	2016/03/29		97	%	75 - 125
			Acid Extractable Lead (Pb)	2016/03/29		97	%	75 - 125
			Acid Extractable Lithium (Li)	2016/03/29		102	%	75 - 125
			Acid Extractable Manganese (Mn)	2016/03/29		98	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/03/29		101	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/03/29		96	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/03/29		99	%	75 - 125
			Acid Extractable Rubidium (Rb)	2016/03/29		97	%	75 - 125
			Acid Extractable Selenium (Se)	2016/03/29		102	%	75 - 125
			Acid Extractable Silver (Ag)	2016/03/29		96	%	75 - 125
			Acid Extractable Strontium (Sr)	2016/03/29		99	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/03/29		100	%	75 - 125
			Acid Extractable Tin (Sn)	2016/03/29		102	%	75 - 125
			Acid Extractable Uranium (U)	2016/03/29		103	%	75 - 125
			Acid Extractable Vanadium (V)	2016/03/29		101	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/03/29		99	%	75 - 125
4433970	MLB	Method Blank	Acid Extractable Aluminum (Al)	2016/03/29	<10		mg/kg	
			Acid Extractable Antimony (Sb)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2016/03/29	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Bismuth (Bi)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Boron (B)	2016/03/29	<50		mg/kg	
			Acid Extractable Cadmium (Cd)	2016/03/29	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2016/03/29	<1.0		mg/kg	
			Acid Extractable Copper (Cu)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2016/03/29	<50		mg/kg	
			Acid Extractable Lead (Pb)	2016/03/29	<0.50		mg/kg	
			Acid Extractable Lithium (Li)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Mercury (Hg)	2016/03/29	<0.10		mg/kg	
			Acid Extractable Molybdenum (Mo)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Rubidium (Rb)	2016/03/29	<2.0		mg/kg	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Acid Extractable Selenium (Se)	2016/03/29	<1.0		mg/kg	
			Acid Extractable Silver (Ag)	2016/03/29	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2016/03/29	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2016/03/29	<0.10		mg/kg	
			Acid Extractable Tin (Sn)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Uranium (U)	2016/03/29	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2016/03/29	<5.0		mg/kg	
4433970	MLB	RPD - Sample/Sample Dup	Acid Extractable Aluminum (Al)	2016/03/29	13		%	35
			Acid Extractable Antimony (Sb)	2016/03/29	NC		%	35
			Acid Extractable Arsenic (As)	2016/03/29	8.1		%	35
			Acid Extractable Barium (Ba)	2016/03/29	NC		%	35
			Acid Extractable Beryllium (Be)	2016/03/29	NC		%	35
			Acid Extractable Bismuth (Bi)	2016/03/29	NC		%	35
			Acid Extractable Boron (B)	2016/03/29	NC		%	35
			Acid Extractable Cadmium (Cd)	2016/03/29	NC		%	35
			Acid Extractable Chromium (Cr)	2016/03/29	12		%	35
			Acid Extractable Cobalt (Co)	2016/03/29	16		%	35
			Acid Extractable Copper (Cu)	2016/03/29	8.2		%	35
			Acid Extractable Iron (Fe)	2016/03/29	4.3		%	35
			Acid Extractable Lead (Pb)	2016/03/29	14		%	35
			Acid Extractable Lithium (Li)	2016/03/29	13		%	35
			Acid Extractable Manganese (Mn)	2016/03/29	15		%	35
			Acid Extractable Mercury (Hg)	2016/03/29	NC		%	35
			Acid Extractable Molybdenum (Mo)	2016/03/29	NC		%	35
			Acid Extractable Nickel (Ni)	2016/03/29	10		%	35
			Acid Extractable Rubidium (Rb)	2016/03/29	NC		%	35
			Acid Extractable Selenium (Se)	2016/03/29	NC		%	35
			Acid Extractable Silver (Ag)	2016/03/29	NC		%	35
			Acid Extractable Strontium (Sr)	2016/03/29	NC		%	35
			Acid Extractable Thallium (Tl)	2016/03/29	NC		%	35
			Acid Extractable Tin (Sn)	2016/03/29	NC		%	35
			Acid Extractable Uranium (U)	2016/03/29	14		%	35
			Acid Extractable Vanadium (V)	2016/03/29	14		%	35
			Acid Extractable Zinc (Zn)	2016/03/29	7.5		%	35
4433974	MLB	Matrix Spike(CBF324)	Acid Extractable Antimony (Sb)	2016/03/29		88	%	75 - 125
			Acid Extractable Arsenic (As)	2016/03/29		97	%	75 - 125
			Acid Extractable Barium (Ba)	2016/03/29		99	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/03/29		102	%	75 - 125
			Acid Extractable Bismuth (Bi)	2016/03/29		97	%	75 - 125
			Acid Extractable Boron (B)	2016/03/29		99	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/03/29		95	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/03/29		95	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/03/29		97	%	75 - 125
			Acid Extractable Copper (Cu)	2016/03/29		94	%	75 - 125
			Acid Extractable Lead (Pb)	2016/03/29		96	%	75 - 125
			Acid Extractable Lithium (Li)	2016/03/29		99	%	75 - 125
			Acid Extractable Manganese (Mn)	2016/03/29		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/03/29		91	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/03/29		92	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/03/29		93	%	75 - 125
			Acid Extractable Rubidium (Rb)	2016/03/29		97	%	75 - 125
			Acid Extractable Selenium (Se)	2016/03/29		97	%	75 - 125
			Acid Extractable Silver (Ag)	2016/03/29		93	%	75 - 125

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Acid Extractable Strontium (Sr)	2016/03/29		101	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/03/29		99	%	75 - 125
			Acid Extractable Tin (Sn)	2016/03/29		97	%	75 - 125
			Acid Extractable Uranium (U)	2016/03/29		104	%	75 - 125
			Acid Extractable Vanadium (V)	2016/03/29		96	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/03/29		NC	%	75 - 125
4433974	MLB	Spiked Blank	Acid Extractable Antimony (Sb)	2016/03/29		101	%	75 - 125
			Acid Extractable Arsenic (As)	2016/03/29		102	%	75 - 125
			Acid Extractable Barium (Ba)	2016/03/29		100	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/03/29		101	%	75 - 125
			Acid Extractable Bismuth (Bi)	2016/03/29		99	%	75 - 125
			Acid Extractable Boron (B)	2016/03/29		102	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/03/29		96	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/03/29		99	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/03/29		99	%	75 - 125
			Acid Extractable Copper (Cu)	2016/03/29		97	%	75 - 125
			Acid Extractable Lead (Pb)	2016/03/29		97	%	75 - 125
			Acid Extractable Lithium (Li)	2016/03/29		102	%	75 - 125
			Acid Extractable Manganese (Mn)	2016/03/29		100	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/03/29		100	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/03/29		105	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/03/29		99	%	75 - 125
			Acid Extractable Rubidium (Rb)	2016/03/29		99	%	75 - 125
			Acid Extractable Selenium (Se)	2016/03/29		102	%	75 - 125
			Acid Extractable Silver (Ag)	2016/03/29		101	%	75 - 125
			Acid Extractable Strontium (Sr)	2016/03/29		101	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/03/29		100	%	75 - 125
			Acid Extractable Tin (Sn)	2016/03/29		105	%	75 - 125
			Acid Extractable Uranium (U)	2016/03/29		105	%	75 - 125
			Acid Extractable Vanadium (V)	2016/03/29		102	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/03/29		96	%	75 - 125
4433974	MLB	Method Blank	Acid Extractable Aluminum (Al)	2016/03/29	<10		mg/kg	
			Acid Extractable Antimony (Sb)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2016/03/29	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Bismuth (Bi)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Boron (B)	2016/03/29	<50		mg/kg	
			Acid Extractable Cadmium (Cd)	2016/03/29	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2016/03/29	<1.0		mg/kg	
			Acid Extractable Copper (Cu)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2016/03/29	<50		mg/kg	
			Acid Extractable Lead (Pb)	2016/03/29	<0.50		mg/kg	
			Acid Extractable Lithium (Li)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Mercury (Hg)	2016/03/29	<0.10		mg/kg	
			Acid Extractable Molybdenum (Mo)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Rubidium (Rb)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Selenium (Se)	2016/03/29	<1.0		mg/kg	
			Acid Extractable Silver (Ag)	2016/03/29	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2016/03/29	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2016/03/29	<0.10		mg/kg	

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			Acid Extractable Tin (Sn)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Uranium (U)	2016/03/29	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2016/03/29	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2016/03/29	<5.0		mg/kg	
4433974	MLB	RPD - Sample/Sample Dup	Acid Extractable Aluminum (Al)	2016/03/29	4.1		%	35
			Acid Extractable Antimony (Sb)	2016/03/29	NC		%	35
			Acid Extractable Arsenic (As)	2016/03/29	NC		%	35
			Acid Extractable Barium (Ba)	2016/03/29	NC		%	35
			Acid Extractable Beryllium (Be)	2016/03/29	NC		%	35
			Acid Extractable Bismuth (Bi)	2016/03/29	NC		%	35
			Acid Extractable Boron (B)	2016/03/29	NC		%	35
			Acid Extractable Cadmium (Cd)	2016/03/29	NC		%	35
			Acid Extractable Chromium (Cr)	2016/03/29	0.15		%	35
			Acid Extractable Cobalt (Co)	2016/03/29	5.5		%	35
			Acid Extractable Copper (Cu)	2016/03/29	0.14		%	35
			Acid Extractable Iron (Fe)	2016/03/29	2.0		%	35
			Acid Extractable Lead (Pb)	2016/03/29	7.3		%	35
			Acid Extractable Lithium (Li)	2016/03/29	0.42		%	35
			Acid Extractable Manganese (Mn)	2016/03/29	0.55		%	35
			Acid Extractable Mercury (Hg)	2016/03/29	NC		%	35
			Acid Extractable Molybdenum (Mo)	2016/03/29	NC		%	35
			Acid Extractable Nickel (Ni)	2016/03/29	0.89		%	35
			Acid Extractable Rubidium (Rb)	2016/03/29	NC		%	35
			Acid Extractable Selenium (Se)	2016/03/29	NC		%	35
			Acid Extractable Silver (Ag)	2016/03/29	NC		%	35
			Acid Extractable Strontium (Sr)	2016/03/29	NC		%	35
			Acid Extractable Thallium (Tl)	2016/03/29	NC		%	35
			Acid Extractable Tin (Sn)	2016/03/29	NC		%	35
			Acid Extractable Uranium (U)	2016/03/29	0.87		%	35
			Acid Extractable Vanadium (V)	2016/03/29	2.7		%	35
			Acid Extractable Zinc (Zn)	2016/03/29	2.8		%	35
4434193	ANL	Matrix Spike	2,4,6-Tribromophenol	2016/03/30		103	%	10 - 130
			2-Fluorobiphenyl	2016/03/30		84	%	30 - 130
			2-Fluorophenol	2016/03/30		82	%	10 - 130
			D14-Terphenyl	2016/03/30		95	%	30 - 130
			D5-Nitrobenzene	2016/03/30		85	%	30 - 130
			D5-Phenol	2016/03/30		81	%	10 - 130
4434193	ANL	Matrix Spike(CBF287)	Acenaphthene	2016/03/30		85	%	30 - 130
			Acenaphthylene	2016/03/30		85	%	30 - 130
			Anthracene	2016/03/30		83	%	30 - 130
			Benzo(a)anthracene	2016/03/30		88	%	30 - 130
			Benzo(a)pyrene	2016/03/30		92	%	30 - 130
			Benzo(b/j)fluoranthene	2016/03/30		92	%	30 - 130
			Benzo(g,h,i)perylene	2016/03/30		90	%	30 - 130
			Benzo(k)fluoranthene	2016/03/30		99	%	30 - 130
			1-Chloronaphthalene	2016/03/30		79	%	30 - 130
			2-Chloronaphthalene	2016/03/30		92	%	30 - 130
			Chrysene	2016/03/30		91	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/30		82	%	30 - 130
			Fluoranthene	2016/03/30		98	%	30 - 130
			Fluorene	2016/03/30		86	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/30		82	%	30 - 130
			1-Methylnaphthalene	2016/03/30		82	%	30 - 130
			2-Methylnaphthalene	2016/03/30		81	%	30 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Naphthalene	2016/03/30		80	%	30 - 130
			Perylene	2016/03/30		92	%	30 - 130
			Phenanthrene	2016/03/30		84	%	30 - 130
			Pyrene	2016/03/30		89	%	30 - 130
			Quinoline	2016/03/30		62	%	30 - 130
			1,2-Dichlorobenzene	2016/03/30		71	%	30 - 130
			1,3-Dichlorobenzene	2016/03/30		65	%	30 - 130
			1,4-Dichlorobenzene	2016/03/30		68	%	30 - 130
			Hexachlorobenzene	2016/03/30		94	%	30 - 130
			Pentachlorobenzene	2016/03/30		90	%	30 - 130
			1,2,3,4-Tetrachlorobenzene	2016/03/30		87	%	30 - 130
			1,2,3,5-Tetrachlorobenzene	2016/03/30		86	%	30 - 130
			1,2,4,5-Tetrachlorobenzene	2016/03/30		88	%	30 - 130
			1,2,3-Trichlorobenzene	2016/03/30		76	%	30 - 130
			1,2,4-Trichlorobenzene	2016/03/30		77	%	30 - 130
			1,3,5-Trichlorobenzene	2016/03/30		85	%	30 - 130
			2-Chlorophenol	2016/03/30		85	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/30		80	%	10 - 130
			m/p-Cresol	2016/03/30		90	%	10 - 130
			o-Cresol	2016/03/30		76	%	10 - 130
			2,3-Dichlorophenol	2016/03/30		78	%	10 - 130
			2,4-Dichlorophenol	2016/03/30		90	%	10 - 130
			2,5-Dichlorophenol	2016/03/30		77	%	10 - 130
			2,6-Dichlorophenol	2016/03/30		76	%	10 - 130
			3,4-Dichlorophenol	2016/03/30		88	%	10 - 130
			3,5-Dichlorophenol	2016/03/30		81	%	10 - 130
			2,4-Dimethylphenol	2016/03/30		82	%	10 - 130
			2,4-Dinitrophenol	2016/03/30		32	%	10 - 130
			4,6-Dinitro-2-methylphenol	2016/03/30		43	%	10 - 130
			2-Nitrophenol	2016/03/30		73	%	10 - 130
			4-Nitrophenol	2016/03/30		87	%	10 - 130
			Pentachlorophenol	2016/03/30		90	%	10 - 130
			Phenol	2016/03/30		83	%	10 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/30		94	%	10 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/30		102	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/30		90	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/30		87	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/30		92	%	10 - 130
			2,3,6-Trichlorophenol	2016/03/30		87	%	10 - 130
			2,4,5-Trichlorophenol	2016/03/30		89	%	10 - 130
			2,4,6-Trichlorophenol	2016/03/30		88	%	10 - 130
			3,4,5-Trichlorophenol	2016/03/30		80	%	10 - 130
			Benzyl butyl phthalate	2016/03/30		80	%	30 - 130
			Bis(2-chloroethoxy)methane	2016/03/30		80	%	30 - 130
			Bis(2-chloroisopropyl)ether	2016/03/30		78	%	30 - 130
			Bis(2-ethylhexyl)phthalate	2016/03/30		80	%	30 - 130
			4-Bromophenyl phenyl ether	2016/03/30		99	%	30 - 130
			p-Chloroaniline	2016/03/30		47	%	30 - 130
			4-Chlorophenyl phenyl ether	2016/03/30		85	%	30 - 130
			3,3'-Dichlorobenzidine	2016/03/30		53	%	30 - 130
			Diethyl phthalate	2016/03/30		84	%	30 - 130
			Di-N-butyl phthalate	2016/03/30		89	%	30 - 130
			Di-N-octyl phthalate	2016/03/30		88	%	30 - 130
			2,4-Dinitrotoluene	2016/03/30		80	%	30 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			2,6-Dinitrotoluene	2016/03/30		74	%	30 - 130
			Dimethyl phthalate	2016/03/30		84	%	30 - 130
			Biphenyl	2016/03/30		87	%	30 - 130
			Bis(2-chloroethyl)ether	2016/03/30		82	%	30 - 130
			Hexachlorobutadiene	2016/03/30		89	%	30 - 130
			Hexachlorocyclopentadiene	2016/03/30		57	%	30 - 130
			Hexachloroethane	2016/03/30		79	%	30 - 130
			Isophorone	2016/03/30		86	%	30 - 130
			Nitrobenzene	2016/03/30		79	%	30 - 130
			Nitrosodiphenylamine/Diphenylamine	2016/03/30		69	%	30 - 130
			N-Nitroso-di-n-propylamine	2016/03/30		96	%	30 - 130
4434193	ANL	Spiked Blank	2,4,6-Tribromophenol	2016/03/30		88	%	10 - 130
			2-Fluorobiphenyl	2016/03/30		83	%	30 - 130
			2-Fluorophenol	2016/03/30		74	%	10 - 130
			D14-Terphenyl	2016/03/30		93	%	30 - 130
			D5-Nitrobenzene	2016/03/30		78	%	30 - 130
			D5-Phenol	2016/03/30		80	%	10 - 130
			Acenaphthene	2016/03/30		81	%	30 - 130
			Acenaphthylene	2016/03/30		84	%	30 - 130
			Anthracene	2016/03/30		80	%	30 - 130
			Benzo(a)anthracene	2016/03/30		86	%	30 - 130
			Benzo(a)pyrene	2016/03/30		91	%	30 - 130
			Benzo(b/j)fluoranthene	2016/03/30		99	%	30 - 130
			Benzo(g,h,i)perylene	2016/03/30		92	%	30 - 130
			Benzo(k)fluoranthene	2016/03/30		105	%	30 - 130
			1-Chloronaphthalene	2016/03/30		77	%	30 - 130
			2-Chloronaphthalene	2016/03/30		86	%	30 - 130
			Chrysene	2016/03/30		89	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/30		85	%	30 - 130
			Fluoranthene	2016/03/30		94	%	30 - 130
			Fluorene	2016/03/30		84	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/30		86	%	30 - 130
			1-Methylnaphthalene	2016/03/30		77	%	30 - 130
			2-Methylnaphthalene	2016/03/30		75	%	30 - 130
			Naphthalene	2016/03/30		73	%	30 - 130
			Perylene	2016/03/30		92	%	30 - 130
			Phenanthrene	2016/03/30		83	%	30 - 130
			Pyrene	2016/03/30		87	%	30 - 130
			Quinoline	2016/03/30		78	%	30 - 130
			1,2-Dichlorobenzene	2016/03/30		69	%	30 - 130
			1,3-Dichlorobenzene	2016/03/30		67	%	30 - 130
			1,4-Dichlorobenzene	2016/03/30		69	%	30 - 130
			Hexachlorobenzene	2016/03/30		91	%	30 - 130
			Pentachlorobenzene	2016/03/30		88	%	30 - 130
			1,2,3,4-Tetrachlorobenzene	2016/03/30		83	%	30 - 130
			1,2,3,5-Tetrachlorobenzene	2016/03/30		80	%	30 - 130
			1,2,4,5-Tetrachlorobenzene	2016/03/30		85	%	30 - 130
			1,2,3-Trichlorobenzene	2016/03/30		74	%	30 - 130
			1,2,4-Trichlorobenzene	2016/03/30		77	%	30 - 130
			1,3,5-Trichlorobenzene	2016/03/30		75	%	30 - 130
			2-Chlorophenol	2016/03/30		77	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/30		79	%	10 - 130
			m/p-Cresol	2016/03/30		85	%	10 - 130
			o-Cresol	2016/03/30		70	%	10 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			2,3-Dichlorophenol	2016/03/30		75	%	10 - 130
			2,4-Dichlorophenol	2016/03/30		81	%	10 - 130
			2,5-Dichlorophenol	2016/03/30		79	%	10 - 130
			2,6-Dichlorophenol	2016/03/30		72	%	10 - 130
			3,4-Dichlorophenol	2016/03/30		83	%	10 - 130
			3,5-Dichlorophenol	2016/03/30		82	%	10 - 130
			2,4-Dimethylphenol	2016/03/30		49	%	10 - 130
			2,4-Dinitrophenol	2016/03/30		23	%	10 - 130
			4,6-Dinitro-2-methylphenol	2016/03/30		31	%	10 - 130
			2-Nitrophenol	2016/03/30		67	%	10 - 130
			4-Nitrophenol	2016/03/30		87	%	10 - 130
			Pentachlorophenol	2016/03/30		89	%	10 - 130
			Phenol	2016/03/30		82	%	10 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/30		95	%	10 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/30		104	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/30		87	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/30		87	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/30		89	%	10 - 130
			2,3,6-Trichlorophenol	2016/03/30		84	%	10 - 130
			2,4,5-Trichlorophenol	2016/03/30		89	%	10 - 130
			2,4,6-Trichlorophenol	2016/03/30		86	%	10 - 130
			3,4,5-Trichlorophenol	2016/03/30		79	%	10 - 130
			Benzyl butyl phthalate	2016/03/30		74	%	30 - 130
			Bis(2-chloroethoxy)methane	2016/03/30		75	%	30 - 130
			Bis(2-chloroisopropyl)ether	2016/03/30		74	%	30 - 130
			Bis(2-ethylhexyl)phthalate	2016/03/30		75	%	30 - 130
			4-Bromophenyl phenyl ether	2016/03/30		94	%	30 - 130
			p-Chloroaniline	2016/03/30		28 (1)	%	30 - 130
			4-Chlorophenyl phenyl ether	2016/03/30		85	%	30 - 130
			3,3'-Dichlorobenzidine	2016/03/30		14 (1)	%	30 - 130
			Diethyl phthalate	2016/03/30		83	%	30 - 130
			Di-N-butyl phthalate	2016/03/30		84	%	30 - 130
			Di-N-octyl phthalate	2016/03/30		87	%	30 - 130
			2,4-Dinitrotoluene	2016/03/30		80	%	30 - 130
			2,6-Dinitrotoluene	2016/03/30		75	%	30 - 130
			Dimethyl phthalate	2016/03/30		83	%	30 - 130
			Biphenyl	2016/03/30		82	%	30 - 130
			Bis(2-chloroethyl)ether	2016/03/30		72	%	30 - 130
			Hexachlorobutadiene	2016/03/30		84	%	30 - 130
			Hexachlorocyclopentadiene	2016/03/30		64	%	30 - 130
			Hexachloroethane	2016/03/30		75	%	30 - 130
			Isophorone	2016/03/30		79	%	30 - 130
			Nitrobenzene	2016/03/30		73	%	30 - 130
			Nitrosodiphenylamine/Diphenylamine	2016/03/30		66	%	30 - 130
			N-Nitroso-di-n-propylamine	2016/03/30		87	%	30 - 130
4434193	ANL	Method Blank	2,4,6-Tribromophenol	2016/03/30		37	%	10 - 130
			2-Fluorobiphenyl	2016/03/30		86	%	30 - 130
			2-Fluorophenol	2016/03/30		70	%	10 - 130
			D14-Terphenyl	2016/03/30		99	%	30 - 130
			D5-Nitrobenzene	2016/03/30		87	%	30 - 130
			D5-Phenol	2016/03/30		84	%	10 - 130
			Acenaphthene	2016/03/30	<0.1		ug/g	
			Acenaphthylene	2016/03/30	<0.1		ug/g	
			Anthracene	2016/03/30	<0.1		ug/g	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Benzo(a)anthracene	2016/03/30	<0.1		ug/g	
			Benzo(a)pyrene	2016/03/30	<0.1		ug/g	
			Benzo(b/j)fluoranthene	2016/03/30	<0.1		ug/g	
			Benzo(g,h,i)perylene	2016/03/30	<0.1		ug/g	
			Benzo(k)fluoranthene	2016/03/30	<0.1		ug/g	
			1-Chloronaphthalene	2016/03/30	<1		ug/g	
			2-Chloronaphthalene	2016/03/30	<0.1		ug/g	
			Chrysene	2016/03/30	<0.1		ug/g	
			Dibenz(a,h)anthracene	2016/03/30	<0.1		ug/g	
			Fluoranthene	2016/03/30	<0.1		ug/g	
			Fluorene	2016/03/30	<0.1		ug/g	
			Indeno(1,2,3-cd)pyrene	2016/03/30	<0.1		ug/g	
			1-Methylnaphthalene	2016/03/30	<0.1		ug/g	
			2-Methylnaphthalene	2016/03/30	<0.1		ug/g	
			Naphthalene	2016/03/30	<0.1		ug/g	
			Perylene	2016/03/30	<0.2		ug/g	
			Phenanthrene	2016/03/30	<0.1		ug/g	
			Pyrene	2016/03/30	<0.1		ug/g	
			Quinoline	2016/03/30	<0.2		ug/g	
			1,2-Dichlorobenzene	2016/03/30	<0.1		ug/g	
			1,3-Dichlorobenzene	2016/03/30	<0.1		ug/g	
			1,4-Dichlorobenzene	2016/03/30	<0.1		ug/g	
			Hexachlorobenzene	2016/03/30	<0.2		ug/g	
			Pentachlorobenzene	2016/03/30	<0.2		ug/g	
			1,2,3,4-Tetrachlorobenzene	2016/03/30	<0.2		ug/g	
			1,2,3,5-Tetrachlorobenzene	2016/03/30	<0.2		ug/g	
			1,2,4,5-Tetrachlorobenzene	2016/03/30	<0.2		ug/g	
			1,2,3-Trichlorobenzene	2016/03/30	<0.2		ug/g	
			1,2,4-Trichlorobenzene	2016/03/30	<0.2		ug/g	
			1,3,5-Trichlorobenzene	2016/03/30	<0.2		ug/g	
			2-Chlorophenol	2016/03/30	<0.1		ug/g	
			4-Chloro-3-Methylphenol	2016/03/30	<0.1		ug/g	
			m/p-Cresol	2016/03/30	<0.2		ug/g	
			o-Cresol	2016/03/30	<0.2		ug/g	
			2,3-Dichlorophenol	2016/03/30	<0.1		ug/g	
			2,4-Dichlorophenol	2016/03/30	<0.1		ug/g	
			2,5-Dichlorophenol	2016/03/30	<0.1		ug/g	
			2,6-Dichlorophenol	2016/03/30	<0.1		ug/g	
			3,4-Dichlorophenol	2016/03/30	<0.1		ug/g	
			3,5-Dichlorophenol	2016/03/30	<0.1		ug/g	
			2,4-Dimethylphenol	2016/03/30	<0.1		ug/g	
			2,4-Dinitrophenol	2016/03/30	<1		ug/g	
			4,6-Dinitro-2-methylphenol	2016/03/30	<0.5		ug/g	
			2-Nitrophenol	2016/03/30	<0.5		ug/g	
			4-Nitrophenol	2016/03/30	<0.5		ug/g	
			Pentachlorophenol	2016/03/30	<0.2		ug/g	
			Phenol	2016/03/30	<0.2		ug/g	
			2,3,4,5-Tetrachlorophenol	2016/03/30	<0.1		ug/g	
			2,3,4,6-Tetrachlorophenol	2016/03/30	<0.1		ug/g	
			2,3,5,6-Tetrachlorophenol	2016/03/30	<0.1		ug/g	
			2,3,4-Trichlorophenol	2016/03/30	<0.1		ug/g	
			2,3,5-Trichlorophenol	2016/03/30	<0.1		ug/g	
			2,3,6-Trichlorophenol	2016/03/30	<0.1		ug/g	
			2,4,5-Trichlorophenol	2016/03/30	<0.1		ug/g	

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			2,4,6-Trichlorophenol	2016/03/30	<0.1		ug/g	
			3,4,5-Trichlorophenol	2016/03/30	<0.1		ug/g	
			Benzyl butyl phthalate	2016/03/30	<0.2		ug/g	
			Bis(2-chloroethoxy)methane	2016/03/30	<0.1		ug/g	
			Bis(2-chloroisopropyl)ether	2016/03/30	<0.1		ug/g	
			Bis(2-ethylhexyl)phthalate	2016/03/30	<0.5		ug/g	
			4-Bromophenyl phenyl ether	2016/03/30	<0.1		ug/g	
			p-Chloroaniline	2016/03/30	<0.2		ug/g	
			4-Chlorophenyl phenyl ether	2016/03/30	<0.1		ug/g	
			3,3'-Dichlorobenzidine	2016/03/30	<0.5		ug/g	
			Diethyl phthalate	2016/03/30	<0.2		ug/g	
			Di-N-butyl phthalate	2016/03/30	<0.2		ug/g	
			Di-N-octyl phthalate	2016/03/30	<0.5		ug/g	
			2,4-Dinitrotoluene	2016/03/30	<0.1		ug/g	
			2,6-Dinitrotoluene	2016/03/30	<0.1		ug/g	
			Dimethyl phthalate	2016/03/30	<0.2		ug/g	
			Biphenyl	2016/03/30	<0.1		ug/g	
			Bis(2-chloroethyl)ether	2016/03/30	<0.2		ug/g	
			Hexachlorobutadiene	2016/03/30	<0.1		ug/g	
			Hexachlorocyclopentadiene	2016/03/30	<0.5		ug/g	
			Hexachloroethane	2016/03/30	<0.1		ug/g	
			Isophorone	2016/03/30	<0.1		ug/g	
			Nitrobenzene	2016/03/30	<0.1		ug/g	
			Nitrosodiphenylamine/Diphenylamine	2016/03/30	<0.2		ug/g	
			N-Nitroso-di-n-propylamine	2016/03/30	<0.1		ug/g	
4434193	ANL	RPD - Sample/Sample Dup	Acenaphthene	2016/03/30	NC		%	50
			Acenaphthylene	2016/03/30	NC		%	50
			Anthracene	2016/03/30	NC		%	50
			Benzo(a)anthracene	2016/03/30	NC		%	50
			Benzo(a)pyrene	2016/03/30	NC		%	50
			Benzo(b/j)fluoranthene	2016/03/30	NC		%	50
			Benzo(g,h,i)perylene	2016/03/30	NC		%	50
			Benzo(k)fluoranthene	2016/03/30	NC		%	50
			1-Chloronaphthalene	2016/03/30	NC		%	50
			2-Chloronaphthalene	2016/03/30	NC		%	50
			Chrysene	2016/03/30	NC		%	50
			Dibenz(a,h)anthracene	2016/03/30	NC		%	50
			Fluoranthene	2016/03/30	NC		%	50
			Fluorene	2016/03/30	NC		%	50
			Indeno(1,2,3-cd)pyrene	2016/03/30	NC		%	50
			1-Methylnaphthalene	2016/03/30	NC		%	50
			2-Methylnaphthalene	2016/03/30	NC		%	50
			Naphthalene	2016/03/30	NC		%	50
			Perylene	2016/03/30	NC		%	50
			Phenanthrene	2016/03/30	NC		%	50
			Pyrene	2016/03/30	NC		%	50
			Quinoline	2016/03/30	NC		%	50
			1,2-Dichlorobenzene	2016/03/30	NC		%	50
			1,3-Dichlorobenzene	2016/03/30	NC		%	50
			1,4-Dichlorobenzene	2016/03/30	NC		%	50
			Hexachlorobenzene	2016/03/30	NC		%	50
			Pentachlorobenzene	2016/03/30	NC		%	50
			1,2,3,4-Tetrachlorobenzene	2016/03/30	NC		%	50
			1,2,3,5-Tetrachlorobenzene	2016/03/30	NC		%	50

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			1,2,4,5-Tetrachlorobenzene	2016/03/30	NC		%	50
			1,2,3-Trichlorobenzene	2016/03/30	NC		%	50
			1,2,4-Trichlorobenzene	2016/03/30	NC		%	50
			1,3,5-Trichlorobenzene	2016/03/30	NC		%	50
			2-Chlorophenol	2016/03/30	NC		%	50
			4-Chloro-3-Methylphenol	2016/03/30	NC		%	50
			m/p-Cresol	2016/03/30	NC		%	50
			o-Cresol	2016/03/30	NC		%	50
			2,3-Dichlorophenol	2016/03/30	NC		%	50
			2,4-Dichlorophenol	2016/03/30	NC		%	50
			2,5-Dichlorophenol	2016/03/30	NC		%	50
			2,6-Dichlorophenol	2016/03/30	NC		%	50
			3,4-Dichlorophenol	2016/03/30	NC		%	50
			3,5-Dichlorophenol	2016/03/30	NC		%	50
			2,4-Dimethylphenol	2016/03/30	NC		%	50
			2,4-Dinitrophenol	2016/03/30	NC		%	50
			4,6-Dinitro-2-methylphenol	2016/03/30	NC (2)		%	50
			2-Nitrophenol	2016/03/30	NC		%	50
			4-Nitrophenol	2016/03/30	NC		%	50
			Pentachlorophenol	2016/03/30	NC		%	50
			Phenol	2016/03/30	NC		%	50
			2,3,4,5-Tetrachlorophenol	2016/03/30	NC		%	50
			2,3,4,6-Tetrachlorophenol	2016/03/30	NC		%	50
			2,3,5,6-Tetrachlorophenol	2016/03/30	NC		%	50
			2,3,4-Trichlorophenol	2016/03/30	NC		%	50
			2,3,5-Trichlorophenol	2016/03/30	NC		%	50
			2,3,6-Trichlorophenol	2016/03/30	NC		%	50
			2,4,5-Trichlorophenol	2016/03/30	NC		%	50
			2,4,6-Trichlorophenol	2016/03/30	NC		%	50
			3,4,5-Trichlorophenol	2016/03/30	NC		%	50
			Benzyl butyl phthalate	2016/03/30	NC		%	50
			Bis(2-chloroethoxy)methane	2016/03/30	NC		%	50
			Bis(2-chloroisopropyl)ether	2016/03/30	NC		%	50
			Bis(2-ethylhexyl)phthalate	2016/03/30	NC		%	50
			4-Bromophenyl phenyl ether	2016/03/30	NC		%	50
			p-Chloroaniline	2016/03/30	NC		%	50
			4-Chlorophenyl phenyl ether	2016/03/30	NC		%	50
			3,3'-Dichlorobenzidine	2016/03/30	NC		%	50
			Diethyl phthalate	2016/03/30	NC		%	50
			Di-N-butyl phthalate	2016/03/30	NC		%	50
			Di-N-octyl phthalate	2016/03/30	NC		%	50
			2,4-Dinitrotoluene	2016/03/30	NC		%	50
			2,6-Dinitrotoluene	2016/03/30	NC		%	50
			Dimethyl phthalate	2016/03/30	NC		%	50
			Biphenyl	2016/03/30	NC		%	50
			Bis(2-chloroethyl)ether	2016/03/30	NC		%	50
			Hexachlorobutadiene	2016/03/30	NC		%	50
			Hexachlorocyclopentadiene	2016/03/30	NC		%	50
			Hexachloroethane	2016/03/30	NC		%	50
			Isophorone	2016/03/30	NC		%	50
			Nitrobenzene	2016/03/30	NC		%	50
			Nitrosodiphenylamine/Diphenylamine	2016/03/30	NC		%	50
			N-Nitroso-di-n-propylamine	2016/03/30	NC		%	50
4434934	SAC	Matrix Spike(CBF339)	Chromium (VI)	2016/03/31		0 (3)	%	75 - 125

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4434934	SAC	QC Standard	Chromium (VI)	2016/03/31		83	%	75 - 125
4434934	SAC	Spiked Blank	Chromium (VI)	2016/03/31		99	%	80 - 120
4434934	SAC	Method Blank	Chromium (VI)	2016/03/31	<0.2		ug/g	
4434934	SAC	RPD - Sample/Sample Dup	Chromium (VI)	2016/03/31	NC		%	35
4435409	MYI	Matrix Spike	2,4,6-Tribromophenol	2016/03/31		93	%	50 - 130
			2-Fluorophenol	2016/03/31		77	%	50 - 130
			D5-Phenol	2016/03/31		80	%	30 - 130
4435409	MYI	Matrix Spike(CBF363)	2-Chlorophenol	2016/03/31		86	%	50 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/31		66	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/31		77	%	10 - 130
			2,4-Dichlorophenol	2016/03/31		95	%	50 - 130
			2,4-Dimethylphenol	2016/03/31		76	%	30 - 130
			2,4,6-Trichlorophenol	2016/03/31		90	%	50 - 130
			2,6-Dichlorophenol	2016/03/31		91	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/31		82	%	10 - 130
			4-Nitrophenol	2016/03/31		84	%	10 - 130
			m/p-Cresol	2016/03/31		79	%	10 - 130
			o-Cresol	2016/03/31		80	%	10 - 130
			Pentachlorophenol	2016/03/31		96	%	50 - 130
			Phenol	2016/03/31		81	%	30 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/31		102	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/31		105	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/31		106	%	10 - 130
			2,4,5-Trichlorophenol	2016/03/31		114	%	50 - 130
			2,3,6-Trichlorophenol	2016/03/31		99	%	10 - 130
			3,4,5-Trichlorophenol	2016/03/31		101	%	10 - 130
			2,3-Dichlorophenol	2016/03/31		89	%	10 - 130
			2,5-Dichlorophenol	2016/03/31		109	%	10 - 130
			3,4-Dichlorophenol	2016/03/31		80	%	10 - 130
			3,5-Dichlorophenol	2016/03/31		97	%	10 - 130
			2,4-Dinitrophenol	2016/03/31		48	%	30 - 130
			4,6-Dinitro-2-methylphenol	2016/03/31		53	%	10 - 130
			3 & 4-Chlorophenol	2016/03/31		84	%	10 - 130
			2-Nitrophenol	2016/03/31		83	%	10 - 130
4435409	MYI	Spiked Blank	2,4,6-Tribromophenol	2016/03/31		76	%	50 - 130
			2-Fluorophenol	2016/03/31		48 (4)	%	50 - 130
			D5-Phenol	2016/03/31		84	%	30 - 130
			2-Chlorophenol	2016/03/31		72	%	50 - 130
			2,3,4,6-Tetrachlorophenol	2016/03/31		74	%	10 - 130
			2,3,5-Trichlorophenol	2016/03/31		89	%	10 - 130
			2,4-Dichlorophenol	2016/03/31		89	%	50 - 130
			2,4-Dimethylphenol	2016/03/31		68	%	30 - 130
			2,4,6-Trichlorophenol	2016/03/31		78	%	50 - 130
			2,6-Dichlorophenol	2016/03/31		97	%	10 - 130
			4-Chloro-3-Methylphenol	2016/03/31		109	%	10 - 130
			4-Nitrophenol	2016/03/31		76	%	10 - 130
			m/p-Cresol	2016/03/31		93	%	10 - 130
			o-Cresol	2016/03/31		86	%	10 - 130
			Pentachlorophenol	2016/03/31		91	%	50 - 130
			Phenol	2016/03/31		94	%	30 - 130
			2,3,4,5-Tetrachlorophenol	2016/03/31		99	%	10 - 130
			2,3,5,6-Tetrachlorophenol	2016/03/31		81	%	10 - 130
			2,3,4-Trichlorophenol	2016/03/31		95	%	10 - 130
			2,4,5-Trichlorophenol	2016/03/31		81	%	50 - 130

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			2,3,6-Trichlorophenol	2016/03/31		88	%	10 - 130
			3,4,5-Trichlorophenol	2016/03/31		91	%	10 - 130
			2,3-Dichlorophenol	2016/03/31		94	%	10 - 130
			2,5-Dichlorophenol	2016/03/31		97	%	10 - 130
			3,4-Dichlorophenol	2016/03/31		86	%	10 - 130
			3,5-Dichlorophenol	2016/03/31		96	%	10 - 130
			2,4-Dinitrophenol	2016/03/31		57	%	30 - 130
			4,6-Dinitro-2-methylphenol	2016/03/31		62	%	10 - 130
			3 & 4-Chlorophenol	2016/03/31		90	%	10 - 130
			2-Nitrophenol	2016/03/31		77	%	10 - 130
4435409	MYI	Method Blank	2,4,6-Tribromophenol	2016/03/31		66	%	50 - 130
			2-Fluorophenol	2016/03/31		40 (4)		50 - 130
			D5-Phenol	2016/03/31		87	%	30 - 130
			2-Chlorophenol	2016/03/31	<0.05		ug/g	
			2,3,4,6-Tetrachlorophenol	2016/03/31	<0.05		ug/g	
			2,3,5-Trichlorophenol	2016/03/31	<0.05		ug/g	
			2,4-Dichlorophenol	2016/03/31	<0.05		ug/g	
			2,4-Dimethylphenol	2016/03/31	<0.1		ug/g	
			2,4,6-Trichlorophenol	2016/03/31	<0.05		ug/g	
			2,6-Dichlorophenol	2016/03/31	<0.05		ug/g	
			4-Chloro-3-Methylphenol	2016/03/31	<0.1		ug/g	
			4-Nitrophenol	2016/03/31	<0.1		ug/g	
			m/p-Cresol	2016/03/31	<0.1		ug/g	
			o-Cresol	2016/03/31	<0.1		ug/g	
			Pentachlorophenol	2016/03/31	<0.05		ug/g	
			Phenol	2016/03/31	<0.1		ug/g	
			2,3,4,5-Tetrachlorophenol	2016/03/31	<0.05		ug/g	
			2,3,5,6-Tetrachlorophenol	2016/03/31	<0.05		ug/g	
			2,3,4-Trichlorophenol	2016/03/31	<0.05		ug/g	
			2,4,5-Trichlorophenol	2016/03/31	<0.05		ug/g	
			2,3,6-Trichlorophenol	2016/03/31	<0.05		ug/g	
			3,4,5-Trichlorophenol	2016/03/31	<0.05		ug/g	
			2,3-Dichlorophenol	2016/03/31	<0.05		ug/g	
			2,5-Dichlorophenol	2016/03/31	<0.05		ug/g	
			3,4-Dichlorophenol	2016/03/31	<0.05		ug/g	
			3,5-Dichlorophenol	2016/03/31	<0.05		ug/g	
			2,4-Dinitrophenol	2016/03/31	<0.1		ug/g	
			4,6-Dinitro-2-methylphenol	2016/03/31	<0.1		ug/g	
			3 & 4-Chlorophenol	2016/03/31	<0.05		ug/g	
			2-Nitrophenol	2016/03/31	<0.1		ug/g	
4435409	MYI	RPD - Sample/Sample Dup	2-Chlorophenol	2016/04/01	NC		%	50
			2,3,4,6-Tetrachlorophenol	2016/04/01	NC		%	50
			2,3,5-Trichlorophenol	2016/04/01	NC		%	50
			2,4-Dichlorophenol	2016/04/01	NC		%	50
			2,4-Dimethylphenol	2016/04/01	NC		%	50
			2,4,6-Trichlorophenol	2016/04/01	NC		%	50
			2,6-Dichlorophenol	2016/04/01	NC		%	50
			4-Chloro-3-Methylphenol	2016/04/01	NC		%	50
			4-Nitrophenol	2016/04/01	NC		%	50
			m/p-Cresol	2016/04/01	NC		%	50
			o-Cresol	2016/04/01	NC		%	50
			Pentachlorophenol	2016/04/01	NC		%	50
			Phenol	2016/04/01	NC		%	50
			2,3,4,5-Tetrachlorophenol	2016/04/01	NC		%	50

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			2,3,5,6-Tetrachlorophenol	2016/04/01	NC		%	50
			2,3,4-Trichlorophenol	2016/04/01	NC		%	50
			2,4,5-Trichlorophenol	2016/04/01	NC		%	50
			2,3,6-Trichlorophenol	2016/04/01	NC		%	50
			3,4,5-Trichlorophenol	2016/04/01	NC		%	50
			2,3-Dichlorophenol	2016/04/01	NC		%	50
			2,5-Dichlorophenol	2016/04/01	NC		%	50
			3,4-Dichlorophenol	2016/04/01	NC		%	50
			3,5-Dichlorophenol	2016/04/01	NC		%	50
			2,4-Dinitrophenol	2016/04/01	NC		%	50
			4,6-Dinitro-2-methylphenol	2016/04/01	NC		%	50
			3 & 4-Chlorophenol	2016/04/01	NC		%	50
			2-Nitrophenol	2016/04/01	NC		%	50
4436141	GTH	Matrix Spike	D10-Anthracene	2016/03/31		97	%	30 - 130
			D14-Terphenyl	2016/03/31		112	%	30 - 130
			D8-Acenaphthylene	2016/03/31		85	%	30 - 130
4436141	GTH	Matrix Spike(CBF361)	1-Methylnaphthalene	2016/03/31		86	%	30 - 130
			2-Methylnaphthalene	2016/03/31		96	%	30 - 130
			Acenaphthene	2016/03/31		95	%	30 - 130
			Acenaphthylene	2016/03/31		94	%	30 - 130
			Anthracene	2016/03/31		107	%	30 - 130
			Benzo(a)anthracene	2016/03/31		113	%	30 - 130
			Benzo(a)pyrene	2016/03/31		74	%	30 - 130
			Benzo(b)fluoranthene	2016/03/31		72	%	30 - 130
			Benzo(g,h,i)perylene	2016/03/31		63	%	30 - 130
			Benzo(j)fluoranthene	2016/03/31		75	%	30 - 130
			Benzo(k)fluoranthene	2016/03/31		84	%	30 - 130
			Chrysene	2016/03/31		110	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/31		78	%	30 - 130
			Fluoranthene	2016/03/31		NC	%	30 - 130
			Fluorene	2016/03/31		101	%	30 - 130
			Indeno(1,2,3-cd)pyrene	2016/03/31		74	%	30 - 130
			Naphthalene	2016/03/31		85	%	30 - 130
			Perylene	2016/03/31		66	%	30 - 130
			Phenanthrene	2016/03/31		NC	%	30 - 130
			Pyrene	2016/03/31		NC	%	30 - 130
4436141	GTH	Spiked Blank	D10-Anthracene	2016/03/31		85	%	30 - 130
			D14-Terphenyl	2016/03/31		98	%	30 - 130
			D8-Acenaphthylene	2016/03/31		84	%	30 - 130
			1-Methylnaphthalene	2016/03/31		85	%	30 - 130
			2-Methylnaphthalene	2016/03/31		95	%	30 - 130
			Acenaphthene	2016/03/31		90	%	30 - 130
			Acenaphthylene	2016/03/31		92	%	30 - 130
			Anthracene	2016/03/31		91	%	30 - 130
			Benzo(a)anthracene	2016/03/31		109	%	30 - 130
			Benzo(a)pyrene	2016/03/31		97	%	30 - 130
			Benzo(b)fluoranthene	2016/03/31		90	%	30 - 130
			Benzo(g,h,i)perylene	2016/03/31		100	%	30 - 130
			Benzo(j)fluoranthene	2016/03/31		92	%	30 - 130
			Benzo(k)fluoranthene	2016/03/31		98	%	30 - 130
			Chrysene	2016/03/31		112	%	30 - 130
			Dibenz(a,h)anthracene	2016/03/31		98	%	30 - 130
			Fluoranthene	2016/03/31		97	%	30 - 130
			Fluorene	2016/03/31		95	%	30 - 130

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Indeno(1,2,3-cd)pyrene	2016/03/31		101	%	30 - 130
			Naphthalene	2016/03/31		84	%	30 - 130
			Perylene	2016/03/31		94	%	30 - 130
			Phenanthrene	2016/03/31		93	%	30 - 130
			Pyrene	2016/03/31		98	%	30 - 130
4436141	GTH	Method Blank	D10-Anthracene	2016/03/31		92	%	30 - 130
			D14-Terphenyl	2016/03/31		105	%	30 - 130
			D8-Acenaphthylene	2016/03/31		89	%	30 - 130
			1-Methylnaphthalene	2016/03/31	<0.0050		mg/kg	
			2-Methylnaphthalene	2016/03/31	<0.0050		mg/kg	
			Acenaphthene	2016/03/31	<0.0050		mg/kg	
			Acenaphthylene	2016/03/31	<0.0050		mg/kg	
			Anthracene	2016/03/31	<0.0050		mg/kg	
			Benzo(a)anthracene	2016/03/31	<0.0050		mg/kg	
			Benzo(a)pyrene	2016/03/31	<0.0050		mg/kg	
			Benzo(b)fluoranthene	2016/03/31	<0.0050		mg/kg	
			Benzo(g,h,i)perylene	2016/03/31	<0.0050		mg/kg	
			Benzo(j)fluoranthene	2016/03/31	<0.0050		mg/kg	
			Benzo(k)fluoranthene	2016/03/31	<0.0050		mg/kg	
			Chrysene	2016/03/31	<0.0050		mg/kg	
			Dibenz(a,h)anthracene	2016/03/31	<0.0050		mg/kg	
			Fluoranthene	2016/03/31	<0.0050		mg/kg	
			Fluorene	2016/03/31	<0.0050		mg/kg	
			Indeno(1,2,3-cd)pyrene	2016/03/31	<0.0050		mg/kg	
			Naphthalene	2016/03/31	<0.0050		mg/kg	
			Perylene	2016/03/31	<0.0050		mg/kg	
			Phenanthrene	2016/03/31	<0.0050		mg/kg	
			Pyrene	2016/03/31	<0.0050		mg/kg	
4436141	GTH	RPD - Sample/Sample Dup	1-Methylnaphthalene	2016/03/31	NC		%	50
			2-Methylnaphthalene	2016/03/31	NC		%	50
			Acenaphthene	2016/03/31	NC		%	50
			Acenaphthylene	2016/03/31	NC		%	50
			Anthracene	2016/03/31	NC		%	50
			Benzo(a)anthracene	2016/03/31	NC		%	50
			Benzo(a)pyrene	2016/03/31	NC		%	50
			Benzo(b)fluoranthene	2016/03/31	NC		%	50
			Benzo(g,h,i)perylene	2016/03/31	NC		%	50
			Benzo(j)fluoranthene	2016/03/31	NC		%	50
			Benzo(k)fluoranthene	2016/03/31	NC		%	50
			Chrysene	2016/03/31	NC (5)		%	50
			Dibenz(a,h)anthracene	2016/03/31	NC		%	50
			Fluoranthene	2016/03/31	NC		%	50
			Fluorene	2016/03/31	NC		%	50
			Indeno(1,2,3-cd)pyrene	2016/03/31	NC		%	50
			Naphthalene	2016/03/31	NC		%	50
			Perylene	2016/03/31	NC		%	50
			Phenanthrene	2016/03/31	NC		%	50
			Pyrene	2016/03/31	NC		%	50
4436224	BAN	Matrix Spike(CBF338)	Acid Extractable Antimony (Sb)	2016/03/30		98	%	75 - 125
			Acid Extractable Arsenic (As)	2016/03/30		93	%	75 - 125
			Acid Extractable Barium (Ba)	2016/03/30		117	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/03/30		98	%	75 - 125
			Acid Extractable Bismuth (Bi)	2016/03/30		102	%	75 - 125
			Acid Extractable Boron (B)	2016/03/30		81	%	75 - 125

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Acid Extractable Cadmium (Cd)	2016/03/30		98	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/03/30		103	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/03/30		99	%	75 - 125
			Acid Extractable Copper (Cu)	2016/03/30		97	%	75 - 125
			Acid Extractable Lead (Pb)	2016/03/30		98	%	75 - 125
			Acid Extractable Lithium (Li)	2016/03/30		102	%	75 - 125
			Acid Extractable Manganese (Mn)	2016/03/30		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/03/30		92	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/03/30		106	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/03/30		99	%	75 - 125
			Acid Extractable Rubidium (Rb)	2016/03/30		98	%	75 - 125
			Acid Extractable Selenium (Se)	2016/03/30		94	%	75 - 125
			Acid Extractable Silver (Ag)	2016/03/30		103	%	75 - 125
			Acid Extractable Strontium (Sr)	2016/03/30		105	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/03/30		102	%	75 - 125
			Acid Extractable Tin (Sn)	2016/03/30		103	%	75 - 125
			Acid Extractable Uranium (U)	2016/03/30		100	%	75 - 125
			Acid Extractable Vanadium (V)	2016/03/30		104	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/03/30		100	%	75 - 125
4436224	BAN	Spiked Blank	Acid Extractable Antimony (Sb)	2016/03/30		107	%	75 - 125
			Acid Extractable Arsenic (As)	2016/03/30		98	%	75 - 125
			Acid Extractable Barium (Ba)	2016/03/30		103	%	75 - 125
			Acid Extractable Beryllium (Be)	2016/03/30		98	%	75 - 125
			Acid Extractable Bismuth (Bi)	2016/03/30		102	%	75 - 125
			Acid Extractable Boron (B)	2016/03/30		97	%	75 - 125
			Acid Extractable Cadmium (Cd)	2016/03/30		100	%	75 - 125
			Acid Extractable Chromium (Cr)	2016/03/30		97	%	75 - 125
			Acid Extractable Cobalt (Co)	2016/03/30		99	%	75 - 125
			Acid Extractable Copper (Cu)	2016/03/30		98	%	75 - 125
			Acid Extractable Lead (Pb)	2016/03/30		99	%	75 - 125
			Acid Extractable Lithium (Li)	2016/03/30		102	%	75 - 125
			Acid Extractable Manganese (Mn)	2016/03/30		100	%	75 - 125
			Acid Extractable Mercury (Hg)	2016/03/30		100	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2016/03/30		105	%	75 - 125
			Acid Extractable Nickel (Ni)	2016/03/30		99	%	75 - 125
			Acid Extractable Rubidium (Rb)	2016/03/30		98	%	75 - 125
			Acid Extractable Selenium (Se)	2016/03/30		99	%	75 - 125
			Acid Extractable Silver (Ag)	2016/03/30		107	%	75 - 125
			Acid Extractable Strontium (Sr)	2016/03/30		101	%	75 - 125
			Acid Extractable Thallium (Tl)	2016/03/30		102	%	75 - 125
			Acid Extractable Tin (Sn)	2016/03/30		106	%	75 - 125
			Acid Extractable Uranium (U)	2016/03/30		102	%	75 - 125
			Acid Extractable Vanadium (V)	2016/03/30		98	%	75 - 125
			Acid Extractable Zinc (Zn)	2016/03/30		99	%	75 - 125
4436224	BAN	Method Blank	Acid Extractable Aluminum (Al)	2016/03/30	<10		mg/kg	
			Acid Extractable Antimony (Sb)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Arsenic (As)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Barium (Ba)	2016/03/30	<5.0		mg/kg	
			Acid Extractable Beryllium (Be)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Bismuth (Bi)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Boron (B)	2016/03/30	<50		mg/kg	
			Acid Extractable Cadmium (Cd)	2016/03/30	<0.30		mg/kg	
			Acid Extractable Chromium (Cr)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Cobalt (Co)	2016/03/30	<1.0		mg/kg	

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
			Acid Extractable Copper (Cu)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Iron (Fe)	2016/03/30	<50		mg/kg	
			Acid Extractable Lead (Pb)	2016/03/30	<0.50		mg/kg	
			Acid Extractable Lithium (Li)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Manganese (Mn)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Mercury (Hg)	2016/03/30	<0.10		mg/kg	
			Acid Extractable Molybdenum (Mo)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Nickel (Ni)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Rubidium (Rb)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Selenium (Se)	2016/03/30	<1.0		mg/kg	
			Acid Extractable Silver (Ag)	2016/03/30	<0.50		mg/kg	
			Acid Extractable Strontium (Sr)	2016/03/30	<5.0		mg/kg	
			Acid Extractable Thallium (Tl)	2016/03/30	<0.10		mg/kg	
			Acid Extractable Tin (Sn)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Uranium (U)	2016/03/30	<0.10		mg/kg	
			Acid Extractable Vanadium (V)	2016/03/30	<2.0		mg/kg	
			Acid Extractable Zinc (Zn)	2016/03/30	<5.0		mg/kg	
4436224	BAN	RPD - Sample/Sample Dup	Acid Extractable Aluminum (Al)	2016/03/30	2.5		%	35
			Acid Extractable Antimony (Sb)	2016/03/30	NC		%	35
			Acid Extractable Arsenic (As)	2016/03/30	NC		%	35
			Acid Extractable Barium (Ba)	2016/03/30	NC		%	35
			Acid Extractable Beryllium (Be)	2016/03/30	NC		%	35
			Acid Extractable Bismuth (Bi)	2016/03/30	NC		%	35
			Acid Extractable Boron (B)	2016/03/30	NC		%	35
			Acid Extractable Cadmium (Cd)	2016/03/30	NC		%	35
			Acid Extractable Chromium (Cr)	2016/03/30	NC		%	35
			Acid Extractable Cobalt (Co)	2016/03/30	NC		%	35
			Acid Extractable Copper (Cu)	2016/03/30	NC		%	35
			Acid Extractable Iron (Fe)	2016/03/30	1.1		%	35
			Acid Extractable Lead (Pb)	2016/03/30	3.3		%	35
			Acid Extractable Lithium (Li)	2016/03/30	NC		%	35
			Acid Extractable Manganese (Mn)	2016/03/30	2.2		%	35
			Acid Extractable Mercury (Hg)	2016/03/30	NC		%	35
			Acid Extractable Molybdenum (Mo)	2016/03/30	NC		%	35
			Acid Extractable Nickel (Ni)	2016/03/30	NC		%	35
			Acid Extractable Rubidium (Rb)	2016/03/30	NC		%	35
			Acid Extractable Selenium (Se)	2016/03/30	NC		%	35
			Acid Extractable Silver (Ag)	2016/03/30	NC		%	35
			Acid Extractable Strontium (Sr)	2016/03/30	NC		%	35
			Acid Extractable Thallium (Tl)	2016/03/30	NC		%	35
			Acid Extractable Tin (Sn)	2016/03/30	NC		%	35
			Acid Extractable Uranium (U)	2016/03/30	NC		%	35
			Acid Extractable Vanadium (V)	2016/03/30	NC		%	35
			Acid Extractable Zinc (Zn)	2016/03/30	NC		%	35
4436311	VGS	RPD - Sample/Sample Dup	Moisture	2016/03/30	0.73		%	20
4436375	VGS	RPD - Sample/Sample Dup	Moisture	2016/03/30	0.57		%	20
4436636	SAC	Matrix Spike(CBF266)	Chromium (VI)	2016/04/01		3.4 (6)	%	75 - 125
4436636	SAC	QC Standard	Chromium (VI)	2016/04/01		79	%	75 - 125
4436636	SAC	Spiked Blank	Chromium (VI)	2016/04/01		101	%	80 - 120
4436636	SAC	Method Blank	Chromium (VI)	2016/04/01	<0.2		ug/g	
4436636	SAC	RPD - Sample/Sample Dup	Chromium (VI)	2016/04/01	NC		%	35

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QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4436997	NS3	RPD - Sample/Sample Dup	Moisture	2016/03/30	4.2		%	20

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

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

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

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

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

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) The recovery was below the lower control limit. This may represent a low bias in some results for this specific analyte.

(2) Detection limit was raised due to matrix interference.

(3) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was reanalyzed with the same results.

(4) Surrogate recovery was below the lower control limit . This may represent a low bias in some results.

(5) Elevated PAH RDL(s) due to matrix / co-extractive interference.

(6) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The matrix spike was reanalyzed to confirm result.

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Maxxam Job #: B656770
Report Date: 2016/04/04

Englobe Corp.
Client Project #: 21347

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Alan Stewart, Scientific Specialist (Organics)

Cristina Carriere, Scientific Services

Mike MacGillivray, Scientific Specialist (Inorganics)

Rosemarie MacDonald, Scientific Specialist (Organics)

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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ATL FCD 00149 / 19

CHAIN OF CUSTODY RECORD

COC #: D 07961 Page 1 of 4

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Englobe	Company Name:	Quotation #: B61795	☑ Regular TAT (5 business days) Most analyses
Contact Name: A. Cole	Contact Name:	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: cc. L. Ladouceur	Address:	Project ID: 21371	F RUSH please specify date (Surcharges will be applied)
Postal Code:	Postal Code:	Site Location:	Date Required:
Phone: Fax:	Phone: Fax:	Site #:	Rush Confirmation #
Email:	Email:	Sampled By:	

Laboratory Use Only

CUSTODY SEAL Y / N		COOLER TEMPERATURES			AVERAGE TEMP	INTEGRITY YES / NO
Present	Intact					
		0	1	-2		
		4	2	1		Integrity Checklist By: AW

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

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED & PRESERVED	Lab Filtration Required	RCAP-30 (CIRCLE) TOTAL / DISSOLVED	RCAP-MS (CIRCLE) TOTAL / DISSOLVED	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury	Metals (Soil): Metals & Mercury (Default Acid Extractable (Available) Digest	Metals (Soil): Metals Total Digest -for Ocean Sediments (HNO3/HF/HClO4)	Metals (Soil): Mercury Low level by Cold Vapour AA	Metals (Soil): Hot Water Soluble Boron (Required for CCME Agricultural)	RBCA Hydrocarbons (BTEX, C6-C32)	Hydrocarbons Soil (Potable), NS Fuel Oil Spill Policy Low Level BTEX ,C6-C32	NB Potable Water BTEX, VPH, Low level T.E.H	PAHs	FWAL PAHs in water (with Acridine, Quinoline)	PCBs	VOCs	HOLD- DO NOT ANALYZE	COMMENTS
1	TP1/1	Mar14		Soil									✓	✓											+CrVI
2	TP3/1	↓		↓									✓	✓											Cr6
3	TP5/1												✓	✓											ABN Cr6
4	TP5/2												✓	✓											Cr6
5	TP6/1												✓	✓											Cr6
6	TP6/2												✓	✓											ABN Cr6
7	TP6/3												✓	✓											Cr6
8	TP7/2												✓	✓											Cr6
9	TP9/2												✓	✓											Cr6
10	TP9A/1	↓		↓									✓	✓											ABN Cr6

2016 MAR 22 11:19

Regulatory Requirements

☐ PIRI ☐ CCME
☐ Tier 1
☐ Tier 2
☐ OTHER (Please Specify)

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
	16/3/21	14h35	ERICA CHAFE			'16 MAR 21 16:23
Lisa Ladouceur						B656770

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CHAIN OF CUSTODY RECORD

COC #: D 07962 Page 2 of 4

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Englobe	Company Name:	Quotation #: B61795	☑ Regular TAT (5 business days) Most analyses
Contact Name: A. Cole	Contact Name:	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: cc L. Ladouceur	Address:	Project ID: 21347	IF RUSH please specify date (Surcharges will be applied)
Postal Code:	Postal Code:	Site Location:	Date Required:
Phone: Fax:	Phone: Fax:	Site #:	
Email:	Email:	Sampled By:	Rush Confirmation #

Laboratory Use Only

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES			AVERAGE TEMP	INTEGRITY YES / NO (circled)
		0	1	-2		Integrity Checklist By: tw
		4	2	1		

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

Analysis Requested — columns: # OF CONTAINERS SUBMITTED; FIELD FILTERED & PRESERVED; Lab Filtration Required; RCAP-30 (CIRCLE) TOTAL / DISSOLVED; RCAP-MS (CIRCLE) TOTAL / DISSOLVED; Metals (Water): Total Digest (Default Method) for well water & surface water; Dissolved for ground water; Mercury; Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest; Metals Total Digest -for Ocean sediments (HNO3/HF/HClO4); Mercury Low level by Cold Vapour AA; Hot Water Soluble Boron (required for CCME Agricultural); RBCA Hydrocarbons (BTEX, C6-C32); Hydrocarbons Soil (Potable), NS Fuel Oil Spill Policy Low Level BTEX, C6-C32; NB Potable Water BTEX, VPH, Low level T.E.H; PAHs; FWAL PAHs in water (with Acridine, Quinoline); PCBs; VOCs; HOLD- DO NOT ANALYZE

Regulatory Requirements: ☐ PIRI ☐ CCME ☐ Tier 1 ☐ Tier 2 ☐ OTHER (Please Specify)

#	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	Metals & Mercury Default Acid Extractable	RBCA Hydrocarbons (BTEX, C6-C32)	COMMENTS
1	TP12/1	Mar 14		Soil	✓		ABN Cr6
2	TP15/1	↓		↓	✓		Cr6
3	TP15/2	↓		↓	✓		Cr6
4	TP16/1	↓		↓	✓		Cr6
5	TP17/2	↓		↓	✓		Cr6 ABN
6	TP19/1	Mar 15		↓	✓		Cr6
7	TP20/2	↓		↓	✓		ABN Cr6
8	TP22/1	↓		↓		✓	
9	TP24/1	↓		↓	✓		ABN, Cr6
10	TP2/1	Mar 14		↓			ABN

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
[signature] Lisa Ladouceur	16/3/21	14:35	Erica Chafe			2016 MAR 22 11:19
			[signature] Ashton Walters			B6S6770 '16 MAR 21 16:23

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CHAIN OF CUSTODY RECORD

COC #: D 07963 Page 3 of 4

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Englobe	Company Name:	Quotation #: B61795	✓ Regular TAT (5 business days) Most analyses
Contact Name: A. Cole	Contact Name:	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: cc L. Ladouceur	Address:	Project ID: 21347	IF RUSH please specify date (Surcharges will be applied)
Postal Code:	Postal Code:	Site Location:	Date Required:
Phone: Fax:	Phone: Fax:	Site #:	Rush Confirmation #
Email:	Email:	Sampled By:	

Laboratory Use Only

CUSTODY SEAL Y / N		COOLER TEMPERATURES			AVERAGE TEMP	INTEGRITY
Present	Intact					YES / NO
		0	1	-2		Integrity Checklist By: RW
		4	2	1		

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

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED &PRESERVED	Lab Filtration Required	RCAP-30 (CIRCLE) TOTAL / DISSOLVED	RCAP-MS (CIRCLE) TOTAL / DISSOLVED	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury	Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest	Metals (Soil): Metals Total Digest -for Ocean sediments (HNO3/HF/HClO4)	Metals (Soil): Mercury Low level by Cold Vapour AA	Metals (Soil): Hot Water Soluble Boron (required for CCME Agricultural)	RBCA Hydrocarbons (BTEX, C6-C32)	Hydrocarbons Soil (Potable), NS Fuel Oil Spill Policy Low Level BTEX, C6-C32	NB Potable Water BTEX, VPH, Low level T.E.H	PAHs	FWAL PAHs in water (with Acridine, Quinoline)	PCBs	VOCs	HOLD- DO NOT ANALYZE	COMMENTS
1	TP25/1	Mar15		Soil									✓												Crb,
2	TP25/2												✓												ABN, Crb
3	TP26/1												✓												Crb
4	TP27/1												✓												Crb
5	TP28/2												✓												ABN Crb
6	TP31/1				1-60.								✓												ABN Crb
7	TP31/2												✓												Crb
8	TP35/2												✓												ABN Crb
9	TP37/2												✓												Crb
10	TP16/2	Mar14																							ABN

Regulatory Requirements: ☐ PIRI ☐ CCME ☐ Tier 1 ☐ Tier 2 ☐ OTHER (Please Specify)

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
	16/3/21	14h35	ERICA CHAFE			B656770
Lisa Ladouceur			MAXXAM WATERLOO			

16 MAR 22 11:19

16 MAR 21 16:23

I think only 1-60? Please call if so.

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CHAIN OF CUSTODY RECORD

COC #: D 07965 Page 4 of 4

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Englobe	Company Name:	Quotation #: B61795.	☑ Regular TAT (5 business days) Most analyses
Contact Name: A Cole	Contact Name:	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: CC. L. Ladouceur	Address:	Project ID: 2347	IF RUSH please specify date (Surcharges will be applied)
Postal Code:	Postal Code:	Site Location:	Date Required:
Phone: Fax:	Phone: Fax:	Site #:	Rush Confirmation #
Email:	Email:	Sampled By:	

Laboratory Use Only

CUSTODY SEAL Y / N		COOLER TEMPERATURES			AVERAGE TEMP	INTEGRITY
Present	Intact					YES / NO
		0	1	-2		Integrity Checklist By: AW
		4	2	1		

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

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED &PRESERVED	Lab Filtration Required	RCAP-30 (CIRCLE) TOTAL / DISSOLVED	RCAP-MS (CIRCLE) TOTAL / DISSOLVED	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury	Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest	Metals (Soil): Metals Total Digest -for Ocean sediments (HNO3/HF/HClO4)	Metals (Soil): Mercury Low level by Cold Vapour AA	Metals (Soil): Hot Water Soluble Boron (required for CCME Agricultural)	RBCA Hydrocarbons (BTEX, C6-C32)	Hydrocarbons Soil (Potable), NS Fuel Oil Spill Policy Low Level BTEX, C6-C32	NB Potable Water BTEX, VPH, Low level T.E.H	PAHs	EWAL PAHs in water (with Acridine, Quinoline)	PCBs	VOCs	HOLD- DO NOT ANALYZE	COMMENTS
1	TP 19/2	Mar 15		Soil																					ABN
2	TP 22/2	↓		↓									✓												ABN Cr6
3	Pipe	↓		↓									✓												ABN Cr6
4	Dup 1	Mar 14		↓									✓												ABN Cr6
5	pond	↓		↓									✓												Cr6
6	MW 4/18	Mar 16		↓									✓												Cr6
7																									
8																									2016 MAR 22 11:19
9																									
10																									

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
	16/3/21	14h35	ERICA CHAFE			'16 MAR 21 16:28
Lisa Ladouceur			[illegible] Anson	WATERS		B656770

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Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#41009 Englobe Corp.	Company Name		Quotation #	B61795	Maxxam Job #	Bottle Order #:
Contact Name	Accounts Payable	Contact Name	Lisa Ladouceur / Ben Cole	P.O. #		B656770	552096
Address	97 Troop Ave Dartmouth NS B3B 2A7	Address		Project #	21347	Chain Of Custody Record	Project Manager
Phone	(902) 468-6486 Fax: (902) 468-4919	Phone	Fax:	Project Name		C#552096-01-01	Avery Withrow
Email	Dartmouth.AP@englobecorp.com	Email	lisa.ladouceur@englobecorp.com	Site #			
				Sampled By	LL #		

Regulatory Criteria: FWAL

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

Special Instructions

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

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered & Preserved	Lab Filtration Required	Metals Solids Acid Extr: ICPMS	Chlorinated Phenols - Acid Extractables by GC/MS	PAH in sediment by GC/MS (Low Level)	RBCA Hydrocarbons in Soil	Silica Gel Clean-up (Soil)	# of Bottles	Comments / Hazards / Other Required Analysis
1		~~PT~~ P1A	3/15/16		Sed.			X	X	X				
2		~~P2~~ P1B						X	X	X				
3		~~P3~~ P2A						X	X	X				
4		~~P4~~ P2B	3/20/16					X	X					
5		~~P-DUP~~ P3	3/15/16					X	X	X				
6														
7														
8														
9														
10														

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: X

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

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

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

Job Specific Rush TAT (if applies to entire submission)

Date Required: Time Required:

2016 MAR 22 11:

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Lisa Ladouceur	16/3/21	14:35	ERICA CHAFE AWalters ERICA WALTERS				☐	0,1,-2 / 4,2,1	☐ Yes ☐ No

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

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Your P.O. #: 21347
Your Project #: 21347
Your C.O.C. #: D 08001, D 08002

Attention:Aven Cole

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

Report Date: 2016/04/26
Report #: R3973040
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B680134
Received: 2016/04/21, 14:31

Sample Matrix: Drinking Water
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Phenols (4-AAP)	11	N/A	2016/04/26	ATL SOP 00039	EPA 420.2 m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Avery Withrow, Project Manager
Email: AWithrow@maxxam.ca
Phone# (902)420-0203 Ext:233
==========
This report has been generated and distributed using a secure automated process.
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Maxxam Job #: B680134
Report Date: 2016/04/26

Englobe Corp.
Client Project #: 21347
Your P.O. #: 21347
Sampler Initials: DM

RESULTS OF ANALYSES OF DRINKING WATER

Maxxam ID		CFS458	CFS458	CFS459	CFS460	CFS462	CFS463			
Sampling Date		2016/04/20	2016/04/20	2016/04/20	2016/04/20	2016/04/20	2016/04/20			
COC Number		D 08001	D 08001	D 08001	D 08001	D 08001	D 08001			
	UNITS	PW1	PW1 Lab-Dup	PW2	PW2A	PW3	PW4	RDL	QC Batch	MDL
Inorganics										
Phenols-4AAP	mg/L	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	4472883	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

Maxxam ID		CFS464	CFS465	CFS467	CFS468	CFS469	CFS508			
Sampling Date		2016/04/20	2016/04/20	2016/04/20	2016/04/20	2016/04/20	2016/04/20			
COC Number		D 08001	D 08001	D 08001	D 08001	D 08001	D 08002			
	UNITS	PW5	PW6	PW7	PW8	PW9	PW10	RDL	QC Batch	MDL
Inorganics										
Phenols-4AAP	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	4472883	N/A

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics 200 Bluewater Rd, Suite 105, Bedford, Nova Scotia Canada B4B 1G9 Tel: 902-420-0203 Toll-free: 800-565-7227 Fax: 902-420-8612 www.maxxamanalytics.com

Maxxam Job #: B680134
Report Date: 2016/04/26

Englobe Corp.
Client Project #: 21347
Your P.O. #: 21347
Sampler Initials: DM

TEST SUMMARY

Maxxam ID: CFS458 **Collected:** 2016/04/20
Sample ID: PW1 **Shipped:**
Matrix: Drinking Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS458 Dup **Collected:** 2016/04/20
Sample ID: PW1 **Shipped:**
Matrix: Drinking Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS459 **Collected:** 2016/04/20
Sample ID: PW2 **Shipped:**
Matrix: Drinking Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS460 **Collected:** 2016/04/20
Sample ID: PW2A **Shipped:**
Matrix: Drinking Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS462 **Collected:** 2016/04/20
Sample ID: PW3 **Shipped:**
Matrix: Drinking Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS463 **Collected:** 2016/04/20
Sample ID: PW4 **Shipped:**
Matrix: Drinking Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS464 **Collected:** 2016/04/20
Sample ID: PW5 **Shipped:**
Matrix: Drinking Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

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Maxxam Job #: B680134
Report Date: 2016/04/26

Englobe Corp.
Client Project #: 21347
Your P.O. #: 21347
Sampler Initials: DM

TEST SUMMARY

Maxxam ID: CFS465
Sample ID: PW6
Matrix: Drinking Water
Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS467
Sample ID: PW7
Matrix: Drinking Water
Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS468
Sample ID: PW8
Matrix: Drinking Water
Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS469
Sample ID: PW9
Matrix: Drinking Water
Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

Maxxam ID: CFS508
Sample ID: PW10
Matrix: Drinking Water
Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phenols (4-AAP)	TECH	4472883	N/A	2016/04/26	Cliff Raymond

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Maxxam Job #: B680134
Report Date: 2016/04/26

Englobe Corp.
Client Project #: 21347
Your P.O. #: 21347
Sampler Initials: DM

GENERAL COMMENTS

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

Package 1	4.3°C

Results relate only to the items tested.

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Maxxam Job #: B680134
Report Date: 2016/04/26

Englobe Corp.
Client Project #: 21347
Your P.O. #: 21347
Sampler Initials: DM

QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	% Recovery	UNITS	QC Limits
4472883	CRA	Matrix Spike(CFS458)	Phenols-4AAP	2016/04/26		100	%	80 - 120
4472883	CRA	Spiked Blank	Phenols-4AAP	2016/04/26		100	%	80 - 120
4472883	CRA	Method Blank	Phenols-4AAP	2016/04/26	<0.0010		mg/L	
4472883	CRA	RPD - Sample/Sample Dup	Phenols-4AAP	2016/04/26	NC		%	25

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

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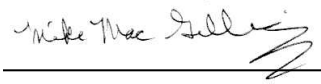
Maxxam Job #: B680134
Report Date: 2016/04/26

Englobe Corp.
Client Project #: 21347
Your P.O. #: 21347
Sampler Initials: DM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Mike MacGillivray, Scientific Specialist (Inorganics)

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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ATL FCD 00149 / 19

CHAIN OF CUSTODY RECORD

COC #: D 08001 Page 1 of 2

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Englobe	Company Name: // //	Quotation #: B61795	☑ Regular TAT (5 business days) Most analyses
Contact Name: Aven Cole	Contact Name:	P.O. #/ AFE#: 21347	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 97 Troop Ave., Dartmouth NS. Postal Code: B3B 2A7	Address: Postal Code:	Project ID: 21347	IF RUSH please specify date (Surcharges will be applied)
Phone: (902)468-6486 Fax: (902)468-4919	Phone: Fax:	Site Location:	Date Required:
Email: aven.cole@englobecorp.com	Email: (cc) david.mcginnis@englobecorp.com	Site #:	Rush Confirmation #
		Sampled By: D.M.	

Laboratory Use Only

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES			AVERAGE TEMP	INTEGRITY YES / NO	Integrity Checklist By:
		3	4	6			SM

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

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX
1	PW1	2016/4/20		Potable water
2	PW2	//		//
3	PW2A	//		//
4	PW3	//		//
5	PW4	//		//
6	PW5	//		//
7	PW6	//		//
8	PW7	//		//
9	PW8	//		//
10	PW9	//		//

Analysis Requested columns: # OF CONTAINERS SUBMITTED; FIELD FILTERED & PRESERVED; Lab Filtration Required; RCAP-30 (CIRCLE) TOTAL / DISSOLVED; RCAP-MS (CIRCLE) TOTAL / DISSOLVED; Metals (Water): Total Digest (Default Method) (or well water & surface water); Dissolved for ground water; Mercury; Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest; Metals Total Digest - for Ocean Sediments (HNO3/HF/HClO4); Mercury Low level by Cold Vapour AA; Hot Water Soluble Boron (required for CCME Agricultural); RBCA Hydrocarbons (BTEX, C6-C32); Hydrocarbons Soil (Potable), NS Fuel Oil Spill Policy Low Level BTEX, C6-C32; NB Potable Water BTEX, VPH, Low level T.E.H; PAHs; FWAL PAHs in water (with Acridine, Quinoline); PCBs; VOCs; phenols.; HOLD- DO NOT ANALYZE

Regulatory Requirements

☐ PIRI ☐ CCME ☐ Tier 1 ☐ Tier 2 ☐ OTHER (Please Specify)

COMMENTS

2016 APR 21 15:18

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
David McGinnis	2016/4/20		JRD for Dave Sara Mason SARA MASON			B6880134

White: Maxxam Pink: Client

'16 APR 21 14:31

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CHAIN OF CUSTODY RECORD

COC #: D 08002 Page 2 of 2

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: Englobe	Company Name: " "	Quotation #: B61795	☑ Regular TAT (5 business days) Most analyses
Contact Name: Aven Cole	Contact Name:	P.O. #/ AFE#: 21347	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 97 Troop Ave., Dartmouth NS Postal Code: B3B 2A7	Address: Postal Code:	Project ID: 21347	F RUSH please specify date (Surcharges will be applied)
Phone: 902-468-6486 Fax: 902-468-4919	Phone: Fax:	Site Location:	Date Required:
Email: aven.cole@englobecorp.com	Email: a.david.mcginnis@englobecorp.com	Site #:	Rush Confirmation #
		Sampled By: D.M.	

Laboratory Use Only

CUSTODY SEAL Y / N		COOLER TEMPERATURES			AVERAGE TEMP	INTEGRITY
Present	Intact					YES / NO
						Integrity Checklist By: SM
		3	4	6		

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

Analysis Requested

Regulatory Requirements

☐ PIRI ☐ CCME
☐ Tier 1
☐ Tier 2
☐ OTHER (Please Specify)

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX
1	PW10	2016/4/20		Potable water
2				
3				
4				
5				
6				
7				
8				
9				
10				

# OF CONTAINERS SUBMITTED	FIELD FILTERED & PRESERVED	Lab Filtration Required	RCAP-30 (CIRCLE) TOTAL / DISSOLVED	RCAP-MS (CIRCLE) TOTAL / DISSOLVED	Metals (Water): Total Digest (Default Method) for well water & surface water	Metals (Water): Dissolved for ground water	Metals (Water): Mercury	Metals (Soil): Metals & Mercury Default Acid Extractable (Available) Digest	Metals (Soil): Metals Total Digest - for Ocean Sediments (HNO3/HF/HClO4)	Metals (Soil): Mercury Low level by Cold Vapour AA	Metals (Soil): Hot Water Soluble Boron (required for CCME Agricultural)	RBCA Hydrocarbons (BTEX, C6-C32)	Hydrocarbons Soil (Potable), NS Fuel Oil Spill Policy Low Level BTEX ,C6-C32	NB Potable Water BTEX, VPH, low level T.E.H	PAHs	PWAL PAHs in water (with Acridine, Quinoline)	PCBs	VOCs	Phenols				HOLD- DO NOT ANALYZE	COMMENTS
																			✓				

2016 APR 21 15:18

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
David McGinnis	2016/4/20		JRD Jae Doyle			B680134
David McGinnis			Sara Nason SARA NASON			

White: Maxxam Pink: Client

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