



Report Date: March 09, 2018

File: 8124

Report Number: 074000

Brown's Bay Packing Company Ltd.

15007 Browns Bay Road
Campbell River, BC V9H 1N9

Dear Brown's Bay Packing Company Ltd.

Re: Non-compliance Advisory Letter, Permit 8124, Brown's Bay Packing Company Ltd. - Campbell River, Effluent

On December 04, 2017, Ministry of Environment and Climate Change Strategy, Environmental Protection Division staff conducted an inspection of your facility, Brown's Bay Packing Company Ltd. 15007 Brown's Bay Road, Campbell River, with authorization number 8124 under the Environmental Management Act. Ministry staff were accompanied on site by the Brown's Bay Packing Company Ltd. Operations Manager and the Brown's Bay Packing Company Ltd. Regulations Certification Specialist.

This Advisory, the alleged violations and the circumstances to which it refers will form part of the compliance history of Brown's Bay Packing Company Ltd., and will be taken into account in the event of future non-compliance.

Please note that this authorization is considered to be out of compliance until such a time as it can be confirmed to meet the authorization requirements.

Inspection Details:

Requirement Description:	Environmental Management Act, Environmental Management Act 6 (4): Subject to subsection (5), a person must not introduce waste into the environment in such a manner or quantity as to cause pollution.
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Details/Findings:	<p>On December 4, 2017, BC Ministry of Environment and Climate Change Strategy (Ministry) Officer Laura Hunse (Officer) conducted an onsite inspection of Brown's Bay Packing Company Ltd. (Brown's Bay) located at 15007 Browns Bay Rd, accompanied by an Environment and Climate Change Canada Senior Enforcement Officer and a Molecular Genetics Technician of Fisheries and Oceans, Canada. Upon arrival at the site, initial orientation and discussions were held in the site office with the Operations Manager and the Regulations Certification Specialist. Subsequent correspondence with the Wastewater Treatment Operator was conducted in the days following the inspection, as the operator was not available at the time of the inspection. Following the meeting, the Operations Manager accompanied government staff for inspection of the facilities. Arrival at site was approximately 1210h and departure at approximately 1445h. Samples were taken by the Officer of the process water prior to discharge to the outfall during the inspection (see Photo 5). It should be noted that an amendment request that would bring the permit in line with current operations was submitted by the permittee in 2011 and has been in process for several years. If the amendment in its proposed form is approved, among other changes, allowable discharge volume would increase significantly and authorized works would reflect current works in place. The draft permit is currently circulating for consultation and comments.</p> <p>Samples of the processing effluent were taken by the Officer at the time of the inspection. The samples were collected after the effluent had passed through the authorized treatment works, prior to discharge through the outfall.</p> <p>The analytical results of the effluent (Laboratory Certificate of Analysis attached) were:</p> <table><tr><td>Parameter</td><td>Result</td><td>Units</td></tr><tr><td>pH</td><td>6.68</td><td>pH</td></tr><tr><td>Total Suspended Solids</td><td>218</td><td>mg/L</td></tr><tr><td>Ammonia, Total (as N)</td><td>1.54</td><td>mg/L</td></tr><tr><td>Nitrate (as N)</td><td>0.25</td><td>mg/L</td></tr><tr><td>Nitrite (as N)</td><td>0.050</td><td>mg/L</td></tr><tr><td>Total Nitrogen</td><td>116</td><td>mg/L</td></tr><tr><td>Total Organic Nitrogen</td><td>115</td><td>mg/L</td></tr><tr><td>E. coli</td><td>10</td><td>CFU/100mL</td></tr><tr><td>Enterococcus</td><td>>60000</td><td>CFU/100mL</td></tr><tr><td>BOD</td><td>930</td><td>mg/L</td></tr><tr><td>COD</td><td>1890</td><td>mg/L</td></tr></table> <p>It should be noted that the recommended hold times were exceeded for the analyses for pH, E.coli and Enterococcus and that these results should not be considered to be reliable for assessing compliance with this section.</p> <p>A single sample of the processing effluent was collected; therefore, there are insufficient available data at this time to determine whether the effluent has substantially altered or impaired the usefulness of the environment.</p>	Parameter	Result	Units	pH	6.68	pH	Total Suspended Solids	218	mg/L	Ammonia, Total (as N)	1.54	mg/L	Nitrate (as N)	0.25	mg/L	Nitrite (as N)	0.050	mg/L	Total Nitrogen	116	mg/L	Total Organic Nitrogen	115	mg/L	E. coli	10	CFU/100mL	Enterococcus	>60000	CFU/100mL	BOD	930	mg/L	COD	1890	mg/L
Parameter	Result	Units																																			
pH	6.68	pH																																			
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Enterococcus	>60000	CFU/100mL																																			
BOD	930	mg/L																																			
COD	1890	mg/L																																			
Compliance:	Not Determined																																				
Actions to be taken:																																					

Requirement Description:	APPENDIX 01 - EFFLUENT 1 (b): The maximum rate at which effluent may be discharged is 28 m /d.
Details/Findings:	Effluent discharge volume numbers from 2016 and 2017 were provided by Brown's Bay. Quarterly daily average rates ranged between 186 and 484 m3/day, with lows of zero discharge to highs exceeding the proposed 600 m3 limit on 6 occasions in 2016 and 19 in 2017. The highest recorded volume discharge for the time period was 1045 m3. The wastewater operator notes that Brown's Bay is actively investigating the exceedances in an effort to ensure the proposed limit is not exceeded.
Compliance:	Out
Actions to be taken:	Brown's Bay will remain out of compliance with this requirement until flow volume does not exceed authorization limit. Continue to pursue compliance with regards to flow discharge volume.
Requirement Description:	APPENDIX 01 - EFFLUENT 1 (c): The characteristics of the effluent shall be equivalent to or better than fine screened fish processing effluent plus typical septic tank effluent.
Details/Findings:	Samples of the processing effluent were taken by the Officer at the time of the inspection. Fine screen was operating at the time. Sampling results (Laboratory Certificate of Analysis attached), are consistent with expected concentrations for screened fish processing effluent. Compare with Environment Canada 1994 "Fraser River Action Plan: Guide for Best Management Practices for Process Water Management At Fish Processing Plants in British Columbia" for examples of typical effluent concentration estimates. Offal and other fish solid wastes are collected at various stages through the operation and taken to Vancouver for processing into product. Chlorination/dechlorination facilities are available on site for use if necessary. The operator notes that the system is used infrequently and as required but is tested regularly.
Compliance:	In
Actions to be taken:	

Requirement Description:	APPENDIX 01 - EFFLUENT 1 (d): The works authorized are coarse screen floor drains, sump, and Rotostrainer (0.5 mm apertures) for the process wastewater, two septic tanks (2.1 mJ and 2.9 m3, respectively) for the domestic sewage, a common outfall terminating 30 m from and 15 m below mean low water, and related appurtenances approximately located as shown on the attached Appendix A-1.
Details/Findings:	Coarse screen floor drains, sump and Rotostrainer were viewed at time of inspection (see photos 1 - 3). Rotostrainer includes intermittent auto spray down to prevent clogging.
Compliance:	In
Actions to be taken:	
Requirement Description:	APPENDIX 01 - EFFLUENT 1 (d): The works authorized are coarse screen floor drains, sump, and Rotostrainer (0.5 mm apertures) for the process wastewater, two septic tanks (2.1 mJ and 2.9 m3, respectively) for the domestic sewage, a common outfall terminating 30 m from and 15 m below mean low water, and related appurtenances approximately located as shown on the attached Appendix A-1.
Details/Findings:	Regarding "...two septic tanks...", the primary treatment level septic system was replaced with a secondary treatment level Whitewater package treatment plant that includes aeration and settling of solids for the domestic wastewater several years ago and produces effluent quality significantly better than typical septic tank effluent. Because the newer treatment works are not listed in the authorized works section of the permit, Brown's Bay is out of compliance with regards to these specific authorized works. The permit amendment application accounts for the current sewage treatment works.
Compliance:	Out
Actions to be taken:	Brown's Bay will remain out of compliance with this clause until the current treatment system is included in the authorized works. Continue to pursue compliance with regards to authorized works.

Requirement Description:	APPENDIX 01 - EFFLUENT 1 (d): The works authorized are coarse screen floor drains, sump, and Rotostrainer (0.5 mm apertures) for the process wastewater, two septic tanks (2.1 mJ and 2.9 m3, respectively) for the domestic sewage, a common outfall terminating 30 m from and 15 m below mean low water, and related appurtenances approximately located as shown on the attached Appendix A-1.
Details/Findings:	Regarding "... a common outfall terminating 30 m from and 15 m below mean low water...", a new outfall installed in June 2002 to accommodate deep-water discharge is approximately 100 m long and 30 m deep. A shorter, shallower outfall is still listed in the authorized works, therefore Brown's Bay is out of compliance with regards to this specific authorized work. The amendment request includes the outfall in its current dimensions and configuration.
Compliance:	Out
Actions to be taken:	Brown's Bay will remain out of compliance with this clause until the current outfall is included in the authorized works. Continue to pursue compliance with regards to authorized works.
Requirement Description:	APPENDIX B-1 - Maintenance of Works B-1 (A): The Permittee shall inspect the pollution control works regularly and maintain them in good working order. Notify the Regional Waste Manager of any malfunction of these works.
Details/Findings:	An outfall dive inspection was carried out in December 2015. Follow up work was conducted in July 2016 to implement recommended actions to re-anchor and reposition some outfall weights including video of the outfall following the repair work. Land works are inspected daily and logged for pre-shift inspection and post process clean-up. Logs viewed at time of inspection. Wastewater operator is Level IV certified by the Environmental Operators Certification Program.
Compliance:	In
Actions to be taken:	

Requirement Description:	APPENDIX B-1 - Posting of Outfall B-1 (D): The Permittee shall erect a sign along the alignment of the outfall above high water mark. The sign shall identify the nature of the works. The wording and size of the sign shall be approved by the Regional Waste Manager.
Details/Findings:	Outfall sign was not posted at time of inspection. As requested by the permittee, the Officer provided information by email on Dec 11, 2017 on recommended wording and sizing as prescribed by the Environmental Management Act's Municipal Wastewater Regulation section 101. Brown's Bay is in the process of obtaining and posting signage.
Compliance:	Out
Actions to be taken:	Post outfall signage as required. Please provide a photo of the posted sign upon completion to the Officer.
Requirement Description:	APPENDIX B-1 - Septic Tank Sludge and Scum Removal B-1 (E): Sludge and scum shall be removed from the septic tanks annually, or at other frequencies as the Regional Waste Manager may allow, for disposal at a suitable site. The disposal arrangements are subject to the approval of the Regional Waste Manager. Records of sludge and scum removal should be maintained for inspection.
Details/Findings:	Receipt for the most recent pumpout was provided at the time of inspection, and took place in May 2015. Frequency of pumpout is monitored by the certified operator.
Compliance:	In
Actions to be taken:	
Requirement Description:	APPENDIX C-1 - Flow Measurement C-1 (A): Periodic measurements of the effluent volume discharged over specified 24-hour periods may be required by the Regional Waste Manager. Suitable provisions should therefore be incorporated into the works to accommodate this requirement. If approved by the Regional Waste Manager, water consumption records may be acceptable in lieu of actual discharge measurements.

Details/Findings:	Flow measurement device is installed and flow volume is measured in real-time and can be downloaded (see photo 4).
Compliance:	In
Actions to be taken:	

It should be noted that an amendment request that would bring the permit in line with current operations was submitted by the permittee in 2011 and has been in process for several years. If the amendment in its proposed form is approved, among other changes, allowable discharge volume would increase significantly and authorized works would reflect current works in place. These circumstances were taken into account in the decision making which results in an Advisory. ---- You are reminded that per Appendix B-1(F) of your permit, based on receiving environment monitoring data and/or other information obtained in connection with this discharge, the permittee may be required to provide additional treatment facilities. ----- Please send a photo of the posted outfall sign to my email at Laura.Hunse@gov.bc.ca. ---- Previous Electronic Compliance History: IR8846 - Advisory, Flow Exceedence; IR10025 - Advisory, Flow Exceedence

Please be advised that this inspection report may be published on the provincial government website within 7 days. Please note that this inspection version replaces the original dated December 20, 2017. It has been updated to include an compliance assessment for EMA 6(4).

Below are attachments related to this inspection.

If you have any questions about this letter, please contact the undersigned.

Yours truly,

Laura Hunse
Environmental Protection Officer
cc:

Attachments:

- 1) 2017-12-04 COA EMS ID E310568.PDF Certificate of Analysis
- 2) Photo Record for IR.pdf Inspection Photo Record

Deliver via:

Email: ☒ Fax: ☐ Mail: ☐
Registered Mail: ☐ Hand Delivery: ☐

**Ministry of Environment
and Climate Change
Strategy**

Compliance
Environmental
Protection Division

Mailing Address:
2080-A
Labieux Rd
Nanaimo BC V9E 6J9

Telephone: 250 751 3100
Facsimile: 250 751 3103
Website: www.gov.bc.ca/env

DISCLAIMER:

Please note that sections of the permit, regulation or code of practice referenced in this inspection record are for guidance and are not the official version. Please refer to the original permit, regulation or code of practice.

To see the most up to date version of the regulations and codes of practices please visit
<http://www.bclaws.ca>

If you require a copy of the original permit, please contact the inspector noted on this inspection record.

It is also important to note that this inspection record does not necessarily reflect each requirement or condition of the authorization therefore compliance is noted only for the requirements or conditions listed in the inspection record.



BC MINISTRY OF ENVIRONMENT -
Compliance - Surrey
ATTN: Laura Hunze
200-10470 152 Street
Surrey BC V3R 0Y3

Date Received: 07-DEC-17
Report Date: 15-DEC-17 17:37 (MT)
Version: FINAL

Client Phone: 604-582-5216

Certificate of Analysis

Lab Work Order #: L2032197

Project P.O. #: 50233907

Job Reference: 8124

C of C Numbers:

Legal Site Desc:

Other Client: CL
Information: EMS ID: E310568

Dean Watt, B.Sc.
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L2032197-1 Water 04-DEC-17 13:30 E310568_REG_0M				
Grouping	Analyte					
WATER						
Physical Tests	pH (pH)	6.68				
	Total Suspended Solids (mg/L)	218				
Anions and Nutrients	Ammonia, Total (as N) (mg/L)	1.54				
	Nitrate (as N) (mg/L)	<0.25 ^{DLDS}				
	Nitrite (as N) (mg/L)	<0.050 ^{DLDS}				
	Total Nitrogen (mg/L)	116				
	Total Organic Nitrogen (mg/L)	115				
Bacteriological Tests	E. coli (CFU/100mL)	<10 ^{DLM}				
	Enterococcus (CFU/100mL)	>60000 ^{TNTC}				
Aggregate Organics	BOD (mg/L)	930				
	COD (mg/L)	1890				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
TNTC	Too numerous to count at the maximum sample dilution analyzed.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BOD5-VA	Water	Biochemical Oxygen Demand- 5 day	APHA 5210 B- BIOCHEMICAL OXYGEN DEMAND
This analysis is carried out using procedures adapted from APHA Method 5210 B - "Biochemical Oxygen Demand (BOD)". All forms of biochemical oxygen demand (BOD) are determined by diluting and incubating a sample for a specified time period, and measuring the oxygen depletion using a dissolved oxygen meter. Dissolved BOD (SOLUBLE) is determined by filtering the sample through a glass fibre filter prior to dilution. Carbonaceous BOD (CBOD) is determined by adding a nitrification inhibitor to the diluted sample prior to incubation.			
COD-COL-VA	Water	Chemical Oxygen Demand by Colorimetric	APHA 5220 D. CHEMICAL OXYGEN DEMAND
This analysis is carried out using procedures adapted from APHA Method 5220 "Chemical Oxygen Demand (COD)". Chemical oxygen demand is determined using the closed reflux colourimetric method.			
EC-SCREEN-VA	Water	Conductivity Screen (Internal Use Only)	APHA 2510
Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.			
ECOLI-MF-ENV-VA	Water	E.coli by MF partition	APHA METHOD 9222G
This analysis is carried out using procedures adapted from APHA Method 9222G "MF Partition". E.coli bacteria are enumerated by culturing and colony counting. A known sample volume is filtered through a 0.45 micron membrane filter. The test involves an initial 24 hour incubation of the filter with the appropriate growth medium, positive results require further testing (an additional 4 hours) to quantify the E. coli bacteria. This method is applicable to non-turbid waters.			
ENTERO-MF-ENV-VA	Water	Enterococcus by membrane filtration	APHA METHOD 9230 C
This analysis is carried out using procedures adapted from APHA Method 9230 C. "Fecal Streptococcus and Enterococcus Groups - Membrane Filter Techniques". Enterococcus bacteria is enumerated by culturing and colony counting. A known sample volume is filtered through a 0.45 micron membrane filter. The test involves a 48 hour incubation of the filter with the appropriate growth medium and subsequent verification testing on positives (additional 72 hours). This method is applicable to non-turbid waters.			
N-T-COL-VA	Water	Total Nitrogen in water by Colour	APHA4500-P(J)/NEMI9171/USGS03-4174
This analysis is carried out using procedures adapted from APHA Method 4500-P (J) "Persulphate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus" and National Environmental Methods Index - Nemi method 5735.			
N-T-ORG-CALC(TN)-VA	Water	Total Organic Nitrogen (Calc from TN)	EN12260/J. ENVIRON. MONIT, 2005/EPA 300
Total Organic Nitrogen is a calculated parameter. Total Organic Nitrogen = Total Nitrogen - {Ammonia + (Nitrate+Nitrite)}.			
NH3-F-VA	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			
NO2-L-IC-N-VA	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-L-IC-N-VA	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
PH-PCT-VA	Water	pH by Meter (Automated)	APHA 4500-H pH Value
This analysis is carried out using procedures adapted from APHA Method 4500-H "pH Value". The pH is determined in the laboratory using a pH electrode			
It is recommended that this analysis be conducted in the field.			
TSS-VA	Water	Total Suspended Solids by Gravimetric	APHA 2540 D - GRAVIMETRIC
This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Suspended Solids (TSS) are determined by filtering a sample through a glass fibre filter, TSS is determined by drying the filter at 104 degrees celsius. Samples containing very high dissolved solid content (i.e. seawaters, brackish waters) may produce a positive bias by this method. Alternate analysis methods are available for these types of samples.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Reference Information

VA

Chain of Custody Numbers:

Additional Information:

Average Cooler Temperature (Deg Celsius): 3

Sampling Agency Code: 10

GLOSSARY OF REPORT TERMS

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

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg ww - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

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

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L2032197

Report Date: 15-DEC-17

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Client: BC MINISTRY OF ENVIRONMENT - Compliance - Surrey
200-10470 152 Street
Surrey BC V3R 0Y3

Contact: Laura Hunze

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BOD5-VA								
Water								
Batch	R3911922							
WG2679977-2	LCS							
BOD			98.7		%		85-115	07-DEC-17
WG2679977-1	MB							
BOD			<2.0		mg/L		2	07-DEC-17
COD-COL-VA								
Water								
Batch	R3913546							
WG2684213-3	LCS							
COD			104.4		%		85-115	14-DEC-17
WG2684213-6	LCS							
COD			96.6		%		85-115	14-DEC-17
WG2684213-1	MB							
COD			<20		mg/L		20	14-DEC-17
WG2684213-5	MB							
COD			<20		mg/L		20	14-DEC-17
ECOLI-MF-ENV-VA								
Water								
Batch	R3907593							
WG2679993-2	MB							
E. coli			<1		CFU/100mL		1	07-DEC-17
ENTERO-MF-ENV-VA								
Water								
Batch	R3907847							
WG2679992-2	MB							
Enterococcus			<1		CFU/100mL		1	07-DEC-17
N-T-COL-VA								
Water								
Batch	R3914369							
WG2685345-3	DUP	L2032197-1						
Total Nitrogen		116	119		mg/L	2.3	20	15-DEC-17
WG2685345-2	LCS							
Total Nitrogen			93.8		%		75-125	15-DEC-17
WG2685345-1	MB							
Total Nitrogen			<0.030		mg/L		0.03	15-DEC-17
NH3-F-VA								
Water								
Batch	R3914231							
WG2684721-2	LCS							
Ammonia, Total (as N)			101.1		%		85-115	15-DEC-17
WG2684721-1	MB							



Quality Control Report

Workorder: L2032197

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-F-VA								
Water								
Batch	R3914231							
WG2684721-1	MB							
Ammonia, Total (as N)			<0.0050		mg/L		0.005	15-DEC-17
NO2-L-IC-N-VA								
Water								
Batch	R3906958							
WG2680024-14	LCS							
Nitrite (as N)			99.9		%		90-110	07-DEC-17
WG2680024-2	LCS							
Nitrite (as N)			100.2		%		90-110	07-DEC-17
WG2680024-5	LCS							
Nitrite (as N)			99.4		%		90-110	07-DEC-17
WG2680024-9	LCS							
Nitrite (as N)			99.9		%		90-110	07-DEC-17
WG2680024-1	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	07-DEC-17
WG2680024-12	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	07-DEC-17
WG2680024-4	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	07-DEC-17
WG2680024-8	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	07-DEC-17
NO3-L-IC-N-VA								
Water								
Batch	R3906958							
WG2680024-14	LCS							
Nitrate (as N)			99.6		%		90-110	07-DEC-17
WG2680024-2	LCS							
Nitrate (as N)			99.6		%		90-110	07-DEC-17
WG2680024-5	LCS							
Nitrate (as N)			99.4		%		90-110	07-DEC-17
WG2680024-9	LCS							
Nitrate (as N)			99.4		%		90-110	07-DEC-17
WG2680024-1	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	07-DEC-17
WG2680024-12	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	07-DEC-17
WG2680024-4	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	07-DEC-17
WG2680024-8	MB							



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-L-IC-N-VA	Water							
Batch R3906958								
WG2680024-8 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	07-DEC-17
PH-PCT-VA	Water							
Batch R3907655								
WG2679668-7 CRM		VA-PH7-BUF						
pH			7.00		pH		6.9-7.1	08-DEC-17
TSS-VA	Water							
Batch R3907784								
WG2680122-5 LCS								
Total Suspended Solids			101.2		%		85-115	08-DEC-17
WG2680122-4 MB								
Total Suspended Solids			<3.0		mg/L		3	08-DEC-17

Quality Control Report

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Quality Control Report

Workorder: L2032197

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH by Meter (Automated)	1	04-DEC-17 13:30	08-DEC-17 11:09	0.25	94	hours	EHTR-FM
Bacteriological Tests							
E.coli by MF partition	1	04-DEC-17 13:30	07-DEC-17 12:30	30	71	hours	EHTR
Enterococcus by membrane filtration	1	04-DEC-17 13:30	07-DEC-17 14:40	30	73	hours	EHTR

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.

Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2032197 were received on 07-DEC-17 09:25.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS Global

Req # 50233908

Instructions To Lab

GENERAL (250 mL PLASTIC)

SPECIFIC Tests

	Obs Well Package
	Cyanide: SAD (60 mL Plastic + NaOH)
	Cyanide: WAD (60 mL Plastic + NaOH)
	Sulphide: Total (125 mL Plastic, ZnAc & NaOH)
	Residue: Nonfilterable (TSS) -Whole Bottle - 1 mg/L LOR (150 mL Plastic)
	Chlorophyll a (250 mL Brown Plastic Bottle or Filter) Vol:
	Phaeophytin (250 mL Brown Plastic Bottle or Filter) Vol:

ORGANICS

BTEX (2 X 40 mL glass vials, NaHSO ₄ or Na ₂ S ₂ O ₃ , No headspace)
VOC Full List (2 X 40 mL glass vials, NaHSO ₄ or Na ₂ S ₂ O ₃ , No headspace)
Volatile Hydrocarbons (VH) (2X40 mL glass vials, NaHSO ₄ or Na ₂ S ₂ O ₃ , No headspace)
Trihalomethanes (THM) (2 X 40 mL glass vials, NaHSO ₄ or Na ₂ S ₂ O ₃ , No headspace)
VPH (2 X 40 mL glass vials, NaHSO ₄ or Na ₂ S ₂ O ₃ , No headspace)
EPH (2 X 100 mL Amber Glass, NaHSO ₄)
PAH (2 X100 mL Amber Glass, NaHSO ₄)
LEPH/HEPH (Calc) (2 X 100 mL Amber Glass, NaHSO ₄)
Oil & Grease (2 X 250 mL Amber Glass, 2 mL 1:1 HCl or 1:1 H ₂ SO ₄)
Mineral Oil & Grease (2 x 250 mL Amber Glass, 2 mL 1:1 HCl or 1:1 H ₂ SO ₄)
Organochlorine Pesticides (OCP) (2 X 500 mL Amber Glass)
Organophosphorus Pesticides (OPP) (2 X 500 mL Amber Glass)
Polychlorinated Biphenyls (PCBs) (2 X 500 mL Amber Glass)
Chlorophenols (Tri, Tetra & Penta) (2 X 500 mL Amber Glass, C ₆ H ₈ O ₆ & NaHSO ₄)
Phenolics, Chlorinated (2 X 500 mL Amber Glass, C ₆ H ₈ O ₆ & NaHSO ₄)
Phenolics, Non-Chlorinated (2 X 500 mL Amber Glass, C ₆ H ₈ O ₆ & NaHSO ₄)
Phenols, Colorimetric (125 mL Amber Glass, H ₂ SO ₄)
Acid Extractable Herbicides (2 X 1 L Amber Glass, NaHSO ₄)
Resin Acids (2 X 500 mL Amber Glass, C ₆ H ₈ O ₆ & NaHSO ₄)
Fatty Acids (2 X 500 mL Amber Glass, C ₆ H ₈ O ₆ & NaHSO ₄)

BACTERIOLOGY

X	E. coli - MF
X	Enterococci - MF
	Fecal coliform - MF
	Fecal coliform - MPN
	Fecal streptoc - MF
	Total coliform - MF
	Total coliform - MPN

OTHER Tests

GENERAL NUTRIENTS (125 mL AMBER GLASS) - H₂SO₄

	Carbon: TOC
X	Chemical Oxygen Demand (COD)
X	Nitrogen: Ammonia
	Nitrogen: Total
	Nitrogen: Total Kjeldahl (Calc)
X	Nitrogen: Total Organic
	Phosphorus: Total

GENERAL (125 mL AMBER GLASS) - FIELD FILTER, H₂SO₄

Carbon: DIC (Field Filter)
Carbon: DOC (FF, H2SO4)
Nitrogen: Dissolved Kjeldahl (Calc) (FF, H2SO4)
Nitrogen: Total Dissolved (FF, H2SO4)
Phosphorus : Total Dissolved (FF, H2SO4)

METALS: TOTAL

METALS: TOTAL	
High Low	
	Metal Pkg. (ICPMS) - HIGH (60 mL Plastic) - HNO3
	Metal Pkg. (ICPMS) - LOW (60 mL Plastic) - HNO3
	Mercury - 40mL Glass, HCl
	Hardness (60 mL Plastic) - HNO3

METALS: DISSOLVED

High	Low	
		Metal Pkg (ICPMS) - HIGH (60 mL Plastic)-Field Filter, HNO3
		Metal Pkg. (ICPMS) - LOW (60 mL Plastic)-Field Filter, HNO3
		Mercury - 40mL. Glass, Field Filter, HCl
		Hardness (60 mL Plastic) - Field Filter, HNO3

Smpl No.	FIELD TEST Details	Method Results	Units
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(B) DEC - 7 2017 3' 925 AM JC



2032197-COFC

Document : 2017-12-04 COA EMS ID E310568.PDF

Document comment: Certificate of Analysis

Authorization: 8124	Brown's Bay Packing Company Ltd.
NRIS IR #: 74000	2017-12-04 Site Inspection Photos

Photo 1

Coarse screen
floor drain



Photo 2

Sump



Authorization: 8124	Brown's Bay Packing Company Ltd.
NRIS IR #: 74000	2017-12-04 Site Inspection Photos

Photo 3

Rotostrainer



Photo 4

Flow
measurement
with download
capacity

Authorization: 8124	Brown's Bay Packing Company Ltd.
NRIS IR #: 74000	2017-12-04 Site Inspection Photos

Photo 5

Sample collection



Document : Photo Record for IR.pdf

Document comment: Inspection Photo Record