



Report Date: December 20, 2017

File: 7952

Report Number: 073999

Lions' Gate Fisheries Limited
612 Campbell Street
Tofino BC V0R 2Z0

Lions' Gate Fisheries Limited

Re: Non-compliance Advisory Letter - Permit 7952 - Lions' Gate Fisheries Ltd., Tofino,

On December 5 and 6, 2017, staff from the Environmental Protection Division of the Ministry of Environment and Climate Change Strategy, conducted an inspection of your facility, Lions' Gate Fisheries Limited located at 612 Campbell Street in Tofino with authorization number 7952 under the *Environmental Management Act*. Ministry staff were accompanied on site management and staff of Lions' Gate Fisheries Limited.

This Advisory, the alleged violations and the circumstances to which it refers will form part of the compliance history of Lions' Gate Fisheries Limited, 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:	AUTHORIZED DISCHARGES 1.1.1: The maximum rate at which effluent may be discharged is 150 m3/d.
Details/Findings:	On December 5, 2017, BC Ministry of Environment and Climate Change Strategy (Ministry) Officer Laura Hunse (Officer) conducted an onsite inspection of Lions' Gate Fisheries Ltd. (site) located at 612 Campbell Street, Tofino, accompanied by an Environment and Climate Change (ECC) Canada Senior Enforcement Officer and a Molecular Genetics Technician from Fisheries and Oceans (DFO), Canada. Upon arrival at the site, Lions' Gate staff discussed operations with the Officer and the site was toured and inspected. Arrival at site on December 5 was approximately 0910h and departure at approximately 1050h; processing was not taking place at the time of the inspection. The Officer returned at 0800h on December 6 with ECC and DFO staff to obtain samples from the site during processing. Samples were taken first of the boat hold effluent as fish were offloaded to the plant, and then of the process water following screening prior to discharge to the outfall. Site staff noted that there is no flow measurement on outgoing effluent; however, boat hold effluent volume is known (approx. 30 m3) and incoming water used at the site is metered (approx. 15 m3 on processing days, usually twice per week), and between the two effluent sources the discharge would not exceed 150 m3/day. There is no requirement in the permit to install a suitable flow measurement device for outfall discharge.

Compliance:	In
Actions to be taken:	
Requirement Description:	AUTHORIZED DISCHARGES 1.1.2: The characteristics of the discharge shall be equivalent to or better than fine screened fish processing plant effluent combined with ice melt water, coarse screened floor wash water and wash water from a net-pen washer.
Details/Findings:	Samples of the screened fish processing plant effluent as well as of the unscreened boat hold effluent were taken on the morning of Dec 6 by the Officer (see Photos 5 and 6). The plant was actively processing at the time, and the boat was offloading salmon (Photo 7). Sampling results (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 waste are collected and taken down island and ultimately repurposed as garden/landscape product.
Compliance:	In
Actions to be taken:	
Requirement Description:	AUTHORIZED DISCHARGES 1.1.3: The works authorized are an effluent collection system, fine screen (minimum 25 mesh), floor drains with coarse screens (6 mm openings), an outfall extending a minimum of 5 m below mean low water, and related appurtenances approximately located as shown on the attached Site Plan A.
Details/Findings:	All works listed above except for the submerged outfall were viewed at inspection (see Photos 2- 4).
Compliance:	In

Actions to be taken:	
Requirement Description:	AUTHORIZED DISCHARGES 1.1.4: The works authorized must be complete and in operation on and from the date of this amended permit.
Details/Findings:	Works are complete and in operation.
Compliance:	In
Actions to be taken:	
Requirement Description:	GENERAL REQUIREMENTS - Maintenance of Works and Emergency Procedures 2.1: The permittee shall inspect the pollution control works regularly and maintain them in good working order. In the event of an emergency or condition beyond the control of the permittee which prevents continuing operation of the approved method of pollution control, the permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.
Details/Findings:	The site is a small operation and most issues can be quickly recognized and repaired. Inspection logs were viewed at inspection.
Compliance:	In
Actions to be taken:	
Requirement Description:	GENERAL REQUIREMENTS - Bypasses 2.2: The discharge of effluent which has bypassed the designated treatment works is prohibited unless the approval of the Regional Waste Manager is obtained and confirmed in writing.

Details/Findings:	At the time of inspection, effluent from the boat hold was sent directly to the outfall where it joins the screened effluent. It was discussed with site staff that the intention of the permit is to screen the boat hold effluent prior to release to the environment. Upon learning this, staff committed to ensure the connection is corrected within the next month to incorporate the flow prior to the screen to enable any solids removal before discharge.
Compliance:	Out
Actions to be taken:	Connect the boat effluent to enable screening prior to discharge. Contact the Officer to confirm completion of connection no later than January 8, 2017.
Requirement Description:	GENERAL REQUIREMENTS - Process Modifications 2.3: The permittee shall notify the Regional Waste Manager prior to implementing changes to any process that may affect the quality and/or quantity of the discharge.
Details/Findings:	No significant changes have taken place -- process remains essentially unchanged except that guts are no longer sent to grinder and then to the screen, but are now removed and exported for composting.
Compliance:	In
Actions to be taken:	
Requirement Description:	GENERAL REQUIREMENTS - Solid Waste Disposal 2.5: Solids from the screens and any other solid wastes from the operation are to be disposed of in a manner that is acceptable to the Regional Waste Manager.
Details/Findings:	Offal and other fish solid waste are collected and taken down island and ultimately repurposed as garden/landscape product.
Compliance:	In

Actions to be taken:	
Requirement Description:	GENERAL REQUIREMENTS - Odour 2.6: Should odours attributable to the storage, handling and/or washing of the net-pens become objectionable, the permittee may be required by the Regional Waste Manager to undertake appropriate corrective measures.
Details/Findings:	Corrective measures not required at this time.
Compliance:	Not Applicable
Actions to be taken:	

You are reminded that per Section 2.4 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 and/or extend the outfall, or connect this discharge to the municipal sewerage system. Please contact me indicating the connection of boat hold to process prior to screening has been completed no later than January 8, 2017, in writing to Laura.Hunse@gov.bc.ca.

Below are attachments related to this inspection.

Please be advised that this inspection report may be published on the provincial government website in 7 days.

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

Yours truly,

Laura Hunse

Environmental Protection Officer

cc: Brady Nelless, Director, Compliance

Attachments:

- 1) IR Photo Record.pdf Inspection Photo Record
- 2) 2017-12-06 L2032198_COA.PDF Sampling Certificate of Analysis

Deliver via:

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

**Ministry of Environment
and Climate Change
Strategy**

Compliance
Environmental
Protection Division

Mailing Address:
2080-ALabieux Rd
Nanaimo BC V9T 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.

Authorization: PE-7952	Lions' Gate Fisheries Ltd.
NRIS IR #: 73999	2017-12-05and 06 Site Inspection Photos

Photo 1

Offloading
salmon and hold



Photo 2

Processing floor



Authorization: PE-7952	Lions' Gate Fisheries Ltd.
NRIS IR #: 73999	2017-12-05and 06 Site Inspection Photos

Photo 3

Fine screen



Photo 4

Floor screen



Authorization: PE-7952	Lions' Gate Fisheries Ltd.
NRIS IR #: 73999	2017-12-05and 06 Site Inspection Photos

Photo 5

Sample point,
screened effluent



Photo 6

Sample point,
boat hold





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

Date Received: 07-DEC-17
Report Date: 15-DEC-17 17:38 (MT)
Version: FINAL

Client Phone: 604-582-5216

Certificate of Analysis

Lab Work Order #: L2032198

Project P.O. #: 50233908

Job Reference: 7952

C of C Numbers:

Legal Site Desc:

Other Client: CL
Information: EMS ID: E310569

Dean Watt, B.Sc.
Account Manager

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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	L2032198-1 Water 06-DEC-17 09:30 E310569_OM PROCESS EFFLUENT	L2032198-2 Water 06-DEC-17 09:05 E310569_OM BOAT HOLD			
Grouping	Analyte						
WATER							
Physical Tests	pH (pH)		6.78	6.73			
	Total Suspended Solids (mg/L)		139	211			
Anions and Nutrients	Ammonia, Total (as N) (mg/L)		7.34	1.22			
	Nitrate (as N) (mg/L)		0.104	<0.50 ^{DLDS}			
	Nitrite (as N) (mg/L)		0.0021	<0.10 ^{DLDS}			
	Total Nitrogen (mg/L)		36.4	177			
	Total Organic Nitrogen (mg/L)		28.9	175			
Bacteriological Tests	E. coli (CFU/100mL)		<10 ^{DLM}	20 ^{MBER}			
	Enterococcus (CFU/100mL)		>60000 ^{TNTC}	690 ^{MBER}			
Aggregate Organics	BOD (mg/L)		337	1200			
	COD (mg/L)		671	1780			

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

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
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).		
MBER	Estimated Result (Microbiological test). Colony count outside ideal range. Result calculated from most nearly acceptable value.		
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.

Reference Information

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
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

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: L2032198

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 Hunse

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							
WG2679992-1	DUP	L2032198-2						
Enterococcus		690	570		CFU/100mL	19	65	07-DEC-17
WG2679992-2	MB							
Enterococcus			<1		CFU/100mL		1	07-DEC-17
N-T-COL-VA								
Water								
Batch	R3914369							
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							
Ammonia, Total (as N)			<0.0050		mg/L		0.005	15-DEC-17



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-L-IC-N-VA		Water						
Batch	R3907208							
WG2680311-13	LCS							
Nitrite (as N)			99.99		%		90-110	08-DEC-17
WG2680311-17	LCS							
Nitrite (as N)			100.1		%		90-110	08-DEC-17
WG2680311-2	LCS							
Nitrite (as N)			99.5		%		90-110	08-DEC-17
WG2680311-21	LCS							
Nitrite (as N)			100.4		%		90-110	08-DEC-17
WG2680311-26	LCS							
Nitrite (as N)			100.4		%		90-110	08-DEC-17
WG2680311-5	LCS							
Nitrite (as N)			100.2		%		90-110	08-DEC-17
WG2680311-9	LCS							
Nitrite (as N)			99.8		%		90-110	08-DEC-17
WG2680311-1	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680311-12	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680311-16	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680311-20	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680311-24	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680311-4	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680311-8	MB							
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
Batch	R3907631							
WG2680394-13	LCS							
Nitrite (as N)			99.8		%		90-110	08-DEC-17
WG2680394-18	LCS							
Nitrite (as N)			100.0		%		90-110	08-DEC-17
WG2680394-2	LCS							
Nitrite (as N)			98.6		%		90-110	08-DEC-17
WG2680394-5	LCS							
Nitrite (as N)			99.2		%		90-110	08-DEC-17
WG2680394-9	LCS							
Nitrite (as N)			99.9		%		90-110	08-DEC-17



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-L-IC-N-VA		Water						
Batch	R3907631							
WG2680394-1 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680394-12 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680394-16 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680394-4 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
WG2680394-8 MB								
Nitrite (as N)			<0.0010		mg/L		0.001	08-DEC-17
NO3-L-IC-N-VA		Water						
Batch	R3907208							
WG2680311-13 LCS								
Nitrate (as N)			99.5		%		90-110	08-DEC-17
WG2680311-17 LCS								
Nitrate (as N)			99.3		%		90-110	08-DEC-17
WG2680311-2 LCS								
Nitrate (as N)			99.3		%		90-110	08-DEC-17
WG2680311-21 LCS								
Nitrate (as N)			99.3		%		90-110	08-DEC-17
WG2680311-26 LCS								
Nitrate (as N)			99.7		%		90-110	08-DEC-17
WG2680311-5 LCS								
Nitrate (as N)			99.1		%		90-110	08-DEC-17
WG2680311-9 LCS								
Nitrate (as N)			99.2		%		90-110	08-DEC-17
WG2680311-1 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680311-12 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680311-16 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680311-20 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680311-24 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680311-4 MB								
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680311-8 MB								



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-L-IC-N-VA		Water						
Batch	R3907208							
WG2680311-8	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
Batch		R3907631						
WG2680394-13	LCS							
Nitrate (as N)			100.3		%		90-110	08-DEC-17
WG2680394-18	LCS							
Nitrate (as N)			100.5		%		90-110	08-DEC-17
WG2680394-2	LCS							
Nitrate (as N)			99.7		%		90-110	08-DEC-17
WG2680394-5	LCS							
Nitrate (as N)			100.1		%		90-110	08-DEC-17
WG2680394-9	LCS							
Nitrate (as N)			99.6		%		90-110	08-DEC-17
WG2680394-1	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680394-12	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680394-16	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680394-4	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
WG2680394-8	MB							
Nitrate (as N)			<0.0050		mg/L		0.005	08-DEC-17
PH-PCT-VA		Water						
Batch	R3907655							
WG2679668-12	CRM	VA-PH7-BUF						
pH			7.01		pH		6.9-7.1	08-DEC-17
WG2679668-7	CRM	VA-PH7-BUF						
pH			7.00		pH		6.9-7.1	08-DEC-17
TSS-VA		Water						
Batch	R3913593							
WG2683079-2	LCS							
Total Suspended Solids			97.3		%		85-115	13-DEC-17
WG2683079-1	MB							
Total Suspended Solids			<3.0		mg/L		3	13-DEC-17

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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

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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	06-DEC-17 09:30	08-DEC-17 11:09	0.25	50	hours	EHTR-FM
	2	06-DEC-17 09:05	08-DEC-17 11:09	0.25	50	hours	EHTR-FM

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 L2032198 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 #. 50233907

Urgent?

Study

Lab

Ministry Contact

Sampler

Signature

EMS Id

Location

Csr No.

Project

ALS Global

LAHUNSE HUNSE, LAURA

HUNSE, LAURA

E3105619

PE 0121 BROWN BAY PACKING COMPANY LTD CAMPBELL

Office CL

N/A

Well Plate #

7952

Sampling Agency

Code 10

Name

Address

City

Postal Code

Number of Containers

Vancouver Island, Nanaimo

2080-A Labieux Road

Nanaimo

V9T6J9

(250)751-3100

Instructions To Lab

State

Descriptor

Collection Method

VW

OT

GRB

No.	Class	Collection Start	Collection End	Depth	Upper	Lower	Tide	Comment
		YYYY-MM-DD HH:MI	YYYY-MM-DD HH:MI					
1		2017-12-06 9:25	12-06 9:30	0m				PROCESS EFFLUENT
2		2017-12-06 9:50	12-06 9:05	0m				BOAT HOLD
3								
4								
5								
6								

GENERAL (250 mL PLASTIC)

Acidity pH 8.3

Alkalinity Titration Curve

Alkalinity: Total: pH 4.5

Alkalinity: Phenolphthalein

X (500 mL Plastic) Biochemical Oxygen Demand (BOD)

Bromide

(500 mL Plastic) Carb. Biochem. Oxygen Demand (CBOD)

Carbon: TIC

Chloride

Colour: True

Fluoride

Nitrogen: Nitrate and Nitrite

Nitrogen: Nitrate

Nitrogen: Nitrite

X pH

Phosphorus: Diss. ortho-phosphate

(500 mL Plastic) Residue: Filterable (TDS)

X (500 mL Plastic) Residue: Nonfilterable (TSS) -Subsample (3 mg/L LOR)

(500 mL Plastic) Residue: Nonfilterable, Fixed

(500 mL Plastic) Residue: Total (TS)

Specific Conductance

Turbidity

Sulphate

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, NaHSO4 or Na2S2O3, No headspace)

VOC Full List (2 X 40 mL glass vials, NaHSO4 or Na2S2O3, No headspace)

Volatile Hydrocarbons (VH) (2X40 mL glass vials, NaHSO4 or Na2S2O3, No headspace)

Trihalomethanes (THM) (2 X 40 mL glass vials, NaHSO4 or Na2S2O3, No headspace)

VPH (2 X 40 mL glass vials, NaHSO4 or Na2S2O3, No headspace)

EPH (2 X 100 mL Amber Glass, NaHSO4)

PAH (2 X100 mL Amber Glass, NaHSO4)

LEPH/HEPH (Calc) (2 X 100 mL Amber Glass, NaHSO4)

Oil & Grease (2 X 250 mL Amber Glass, 2 mL 1:1 HCl or 1:1 H2SO4)

Mineral Oil & Grease (2 x 250 mL Amber Glass, 2 mL 1:1 HCl or 1:1 H2SO4)

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, C6H8O6 & NaHSO4)

Phenolics, Chlorinated (2 X 500 mL Amber Glass, C6H8O6 & NaHSO4)

Phenolics, Non-Chlorinated (2 X 500 mL Amber Glass, C6H8O6 & NaHSO4)

Phenols, Colorimetric (125 mL Amber Glass, H2SO4)

Acid Extractable Herbicides (2 X 1 L Amber Glass, NaHSO4)

Resin Acids (2 X 500 mL Amber Glass, C6H8O6 & NaHSO4)

Fatty Acids (2 X 500 mL Amber Glass, C6H8O6 & NaHSO4)

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

BACTERIOLOGY

X E. coli - MF

X Enterococci - MF

Fecal coliform - MF

Fecal coliform - MPN

Fecal streptoc - MF

Total coliform - MF

Total coliform - MPN

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

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

Smp# No.

FIELD TEST Details

Method Results

Units

B

DEC - 7 2017

3:00

925 AM

J

Date: 2017-11-29 15:07



2032198-COFC

