Report Date: April 09, 2018

File: 7952

Report Number: 081740

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

Dear Lions' Gate Fisheries Limited:

Re: Notice Letter, Permit 7952, Tofino

On December 06, 2017, Ministry of Environment and Climate Change Strategy, Environmental Protection Division staff conducted an inspection of your facility, Lions' Gate Fisheries Limited located at 612 Campbell Avenue Fish Processing Plant with authorization number 7952 under the *Environmental Management Act*. Ministry staff were accompanied on site by Andy Greig, Lions' Gate Fisheries Ltd.; Grayam Greig, Lions' Gate Fisheries Ltd.; Jack Greig, Lions' Gate Fisheries.

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.

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

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. For the December 6 sampling, a sample was taken first from the boat hold effluent as fish were offloaded to the plant, and a second sample was taken of the process water after having passed through the authorized treatment works, prior to discharge through the outfall. Compliance with the general permit requirements was assessed under separate inspection report IR73999. At the time of sampling, the process water and boat hold water were discharged as separate waste streams through a common outfall. The boat hold effluent has since been rerouted to pass through the authorized works; this was addressed in follow up inspection report IR76129. The analytical results of the effluent (Sampling Certificate of Analysis attached) were: Processing Effluent: Parameter Result Units pH 6.78 pH Total Suspended Solids 139 mg/L Ammonia, Total (as N) 7.34 mg/L Nitrate (as N) 0.104 mg/L Nitrite (as N) 0.0021 mg/L Total Nitrogen 36.4 mg/L Total Organic Nitrogen 28.9 mg/L E. coli 10 CFU/100mL Enterococcus >60000 CFU/100mL BOD 337 mg/L COD 671 mg/L Boat Hold Effluent: Parameter Result Units pH 6.73 pH Total Suspended Solids 211 mg/L Ammonia, Total (as N) 1.22 mg/L Nitrate (as N) 0.50 mg/L Nitrite (as N) 0.10 mg/L Total Nitrogen 177 mg/L Total Organic Nitrogen 175 mg/L E. coli 20 CFU/100mL Enterococcus 690 CFU/100mL BOD 1200 mg/L COD 1780 mg/L A single sample of the processing effluent and the boat hold 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. It should be noted that the recommended hold times were exceeded for the analyses for pH and that the pH results should not be considered to be reliable for assessing compliance with this section.

Compliance:	Not Determined
Actions to be taken:	

Compliance History:
2018-01-08 IR76129 - Notice
2017-12-20 IR73999 - Advisory - Unauthorized Bypass (s2.2)

Please submit all annual/quarterly/monthly reports and data submissions to the Ministry's Routine Environmental Reporting Submission Mailbox at EnvAuthorizationsReporting@gov.bc.ca. More information about the reporting requirements may be found at http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox.

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

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) 2017-12-06 L2032198_COA.PDF Sampling Certificate of Analysis

Deliver via:
Email: [X] **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

Ministry of Environment and Climate Change Strategy

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Website: www.gov.bc.ca/env

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

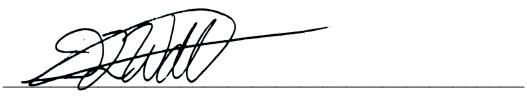
Client Phone: 604-582-5216

Certificate of Analysis

Lab Work Order #: L2032198

Project P.O. #: 50233908
Job Reference: 7952
C of C Numbers:
Legal Site Desc:

Other Information: Client: CL
EMS ID: E310569



Dean Watt, B.Sc.
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L2032198-1	L2032198-2			
	Description	Water	Water			
	Sampled Date	06-DEC-17	06-DEC-17			
	Sampled Time	09:30	09:05			
	Client ID	E310569_0M PROCESS EFFLUENT	E310569_0M 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 wwt - 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

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

Quality Control Report

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

Quality Control Report

Workorder: L2032198 Report Date: 15-DEC-17

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								

Quality Control Report

Workorder: L2032198 Report Date: 15-DEC-17

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

Quality Control Report

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

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.

WATER, GENERAL CHEMISTRY AND BACTERIOLOGICAL REQUISITION

ALS Global

Province Of British Columbia
Ministry of Environment

Req # 5023390 8

Urgent?	**Csr No.**	**Office** 10	**Client** CL
Study		**Project** N/A	
Lab	ALS Global		
Ministry Contact	LAHUNSE HUNSE, LAURA		
Sampler	HUNSE, LAURA		
Signature			
EMS Id	E31056 9	**Well Plate #**	7952
Location	~~PE 8424 BROWNS BAY PACKING CAMPBELL~~		

Sampling Agency

Code 10	**Name** Vancouver Island, Nanaimo
Address	2080-A Labieux Road
	LAURA HUNSE 757-3224
City	Nanaimo
Postal Code	V9T6J9 **Phone** (250)751-3100

Number of Containers

Instructions To Lab

State WW Descriptor OT Collection Method GRB

No.	Class	Collection Start YYYY-MM-DD HH:MI	Collection End YYYY-MM-DD HH:MI	Depth Upper	Depth Lower	Tide	Comment
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

	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 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

	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)

	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

Smpl No.	FIELD TEST Details	Method Results	Units

(B) DEC - 7 2017 3°C 925AM JC

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