



Province of
British Columbia

Ministry of
Environment
~~and Parks~~

Vancouver Island Region 1
Regional Headquarters
2569 Kenworth Road
Nanaimo
British Columbia
V9T 4P7
Phone: (604) 758-3951

FEB 16 1989

REGISTERED MAIL

File: PE-8124

J. W. Timber Co. Ltd.
906 Island Highway
Campbell River, British Columbia
V9W 2C3

Gentlemen:

LETTER OF TRANSMITTAL

Enclosed is a copy of Permit No. PE-8124, issued under the provisions of the Waste Management Act, in the name of J. W. Timber Co. Ltd. Your attention is respectfully directed to the terms and conditions outlined in the Permit. An annual fee for Permit No. PE-8124 will be determined on the basis of your industrial code and capacity in accordance with the Waste Management Permit Fees Regulation.

The administration of this Permit will be carried out by staff from our Regional Office located at 2569 Kenworth Road, Nanaimo, British Columbia, V9T 4P7 (telephone 758-3951). Plans, data and reports pertinent to the Permit are to be submitted to the Regional Waste Manager at this address.

You will note that values have been expressed in the International System of Units (SI). These units are to be used in submitting monitoring results and any other information in connection with this Permit.

This Permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the Permittee.

Yours very truly,

G. E. Oldham, P. Eng.
Regional Waste Manager



MINISTRY OF ENVIRONMENT

PERMIT

Under the Provisions of the Waste Management Act

J. W. TIMBER CO. LTD.
906 Island Highway
Campbell River, British Columbia
V9W 2C3

is hereby authorized to discharge effluent
from a fish processing plant
located at Brown Bay, British Columbia
to Brown Bay.

This permit has been issued under the terms and
conditions prescribed in the attached Appendices

01, A-1, B-1, and C-1

Regional Waste Manager

Permit No. PE-8124

Date issued: FEB 16 1989

Date amended: _____



MINISTRY OF ENVIRONMENT
WASTE MANAGEMENT BRANCH

APPENDIX 01

to Permit No. PE-8124

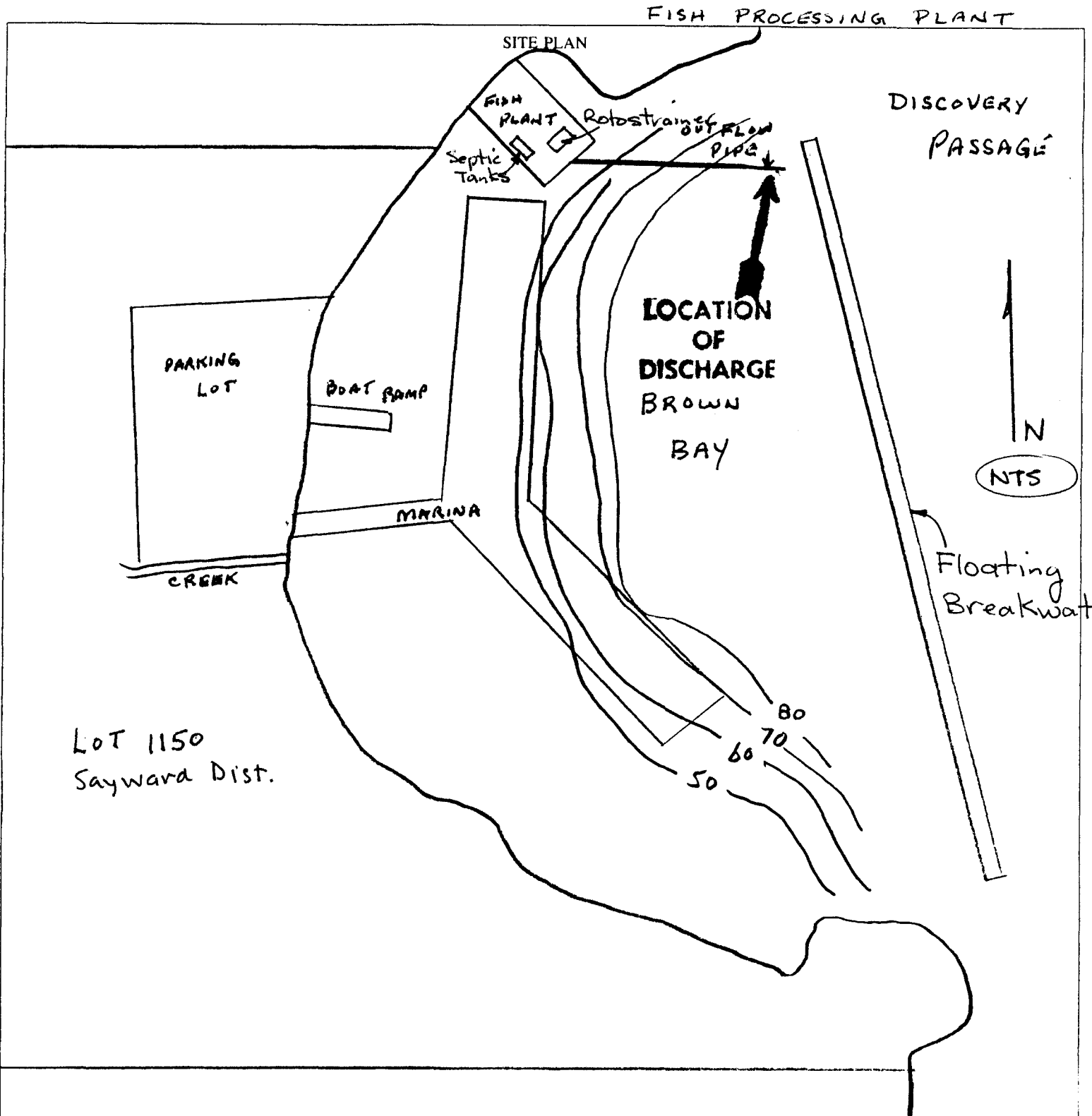
(Effluent)

- (a) The discharge of effluent to which this appendix is applicable is from a fish processing plant as shown on the attached Appendix A-1.
- (b) The maximum rate at which effluent may be discharged is 28 m³/d.
- (c) The characteristics of the effluent shall be equivalent to or better than fine screened fish processing effluent plus typical septic tank effluent.
- (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 m³ 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.
- (e) The location of the facilities from which the effluent originates and to which this appendix is appurtenant is that parcel or tract of land situated on Lot 1150 at Brown Bay, Sayward District and all that parcel or tract of land situated at Brown Bay, Sayward District, containing 0.500 ha more or less, Ministry of Lands File No. 1403960 and all that parcel or tract of land (water) situated at Brown Bay, Sayward District being a pier under Crown File No. 1404327.
- (f) The location of the point of discharge and to which this appendix is appurtenant is Brown Bay.
- (g) Those works authorized must be completed and in operation when discharge commences.

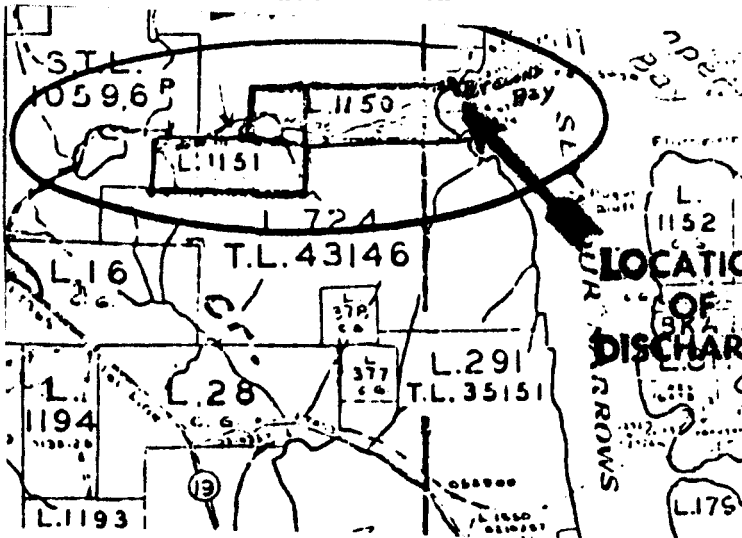
Date issued: FEB 16 1989

Date amended: _____

Regional Waste Manager



LOCATION MAP



J. W. TIMBER CO. LTD.

(Name of applicant)

SEPT 2 / 88
(Date)

(Signature of applicant(s) or agent)

(FOR OFFICE USE ONLY)

FEB 16 1989
Date Issued

Regional Waste Manager

Date Amended

Appendix A-1 to Permit No. PE-8124

Approval No.



MINISTRY OF ENVIRONMENT
WASTE MANAGEMENT BRANCH

APPENDIX B-1

to Permit No. PE-8124

A. MAINTENANCE OF WORKS

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.

B. BYPASSES

The discharge of effluent which has bypassed the authorized works is prohibited unless the approval of the Director or the Regional Waste Manager is obtained and confirmed in writing.

C. PROCESS MODIFICATIONS

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.

D. POSTING OF OUTFALL

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.

E. SEPTIC TANK SLUDGE AND SCUM REMOVAL

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.

F. EFFLUENT UPGRADING

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.

Date issued: FEB 16 1989

Date amended: _____

Regional Waste Manager



MINISTRY OF ENVIRONMENT
WASTE MANAGEMENT BRANCH

APPENDIX C-1

to Permit No. P.E.-8124

A. FLOW MEASUREMENT

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.

Date issued: FEB 16 1989

Date amended: _____

Regional Waste Manager



Tracking Number: 227898
Authorization Number: 8124

April 8, 2019

REGISTERED MAIL

Brown's Bay Packing Company Ltd.
1900-1040 W. Georgia Street
Vancouver, BC V6E 4H3

Brown's Bay Packing Company Ltd.
15007 Browns Bay Road
Campbell River, BC V9H 1N9

Dear Permittee:

Pursuant to Section 16 of the *Environmental Management Act*, Authorization 8124 is amended as described herein. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Permit and Approval Fees and Charges Regulation.

Where this authorization provides that the director may require an action to be carried out, the permittee must carry out the action in accordance with the requirements of the director.

The Director may amend any requirements in this authorization based on data submitted by the permittee and any other data gathered in connection with this authorization.

The Director may require the permittee to repair, alter, remove, improve or add to existing works, or to construct new works, and to submit plans and specifications for works specified in this authorization.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works.

Date issued: February 16, 1989
Date amended: April 8, 2019
(most recent)

Kirsten White, B.Sc., P.Ag.
for Director, *Environmental Management Act*
Authorizations - South Region



The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120 (3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization.

It is the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out regarding the rights of third parties and comply with other applicable legislation that may be in force. Note that this includes any federal and/or provincial requirements that may be applicable to the processing of diseased fish and/or pertaining to bloodwater treatment and/or disease monitoring (e.g. Environment and Climate Change Canada, Department of Fisheries and Oceans and the Canadian Food Inspection Agency).

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director. To meet the reporting requirements in a form and manner acceptable to the Director, reports and notifications related to the administration of this approval must be submitted electronically to the following ministry email addresses:

- EnvironmentalReporting@gov.bc.ca, for monitoring and annual reports.
- EnvironmentalCompliance@gov.bc.ca, for non-compliance reports and emergency notifications.

For guidelines on how to properly name the files and email subject lines or for further information, please visit the ministry's Data and Report Submissions web page at <http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions>.

Date issued: February 16, 1989
Date amended: April 8, 2019
(most recent)

Kirsten White, B.Sc., P.Ag.
for Director, *Environmental Management Act*
Authorizations - South Region



Administration of this permit will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director, designated officer, or as further instructed.

Yours truly,

Kirsten White, B.Sc., P.Ag.
for Director, *Environmental Management Act*
Authorizations - South Region

CC: Environment and Climate Change Canada

Date issued: February 16, 1989
Date amended: April 8, 2019
(most recent)

Kirsten White, B.Sc., P.Ag.
for Director, *Environmental Management Act*
Authorizations - South Region

**MINISTRY OF
ENVIRONMENT AND
CLIMATE CHANGE
STRATEGY**

PERMIT

8124

Under the Provisions of the Environmental Management Act

Brown's Bay Packing Company Ltd.

**1900-1040 W. Georgia ST
Vancouver, BC V6E 4H3**

is authorized to discharge effluent to Brown Bay from a fish processing plant and domestic sewage treatment system located on the northwest shore of Brown Bay (Lot 1150 at Brown Bay, Sayward District), British Columbia, subject to the requirements listed below.

Contravention of any of these requirements is a violation of the *Environmental Management Act* and may lead to prosecution.

This authorization supersedes and replaces all previous versions of Permit 8124 issued under the *Environmental Management Act*.

Capitalized terms referred to in this authorization are defined in the attached Glossary. Other terms used in this authorization have the same meaning as those defined in the *Environmental Management Act* and applicable regulations.

Where this authorization provides that the director may require an action to be carried out, the permittee must carry out the action in accordance with the requirements of the director.

Date issued: February 16, 1989
Date amended: April 8, 2019
(most recent)



Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
Authorizations - South Region

1 AUTHORIZED DISCHARGES

1.1 Authorized Source – Fish Processing Effluent

This Section applies to the discharge of effluent from a fish processing plant. The site reference number for this discharge is E212103.

1.1.1 The maximum authorized rate of discharge is 600 m³ per day.

1.1.2 The authorized discharge period is continuous.

1.1.3 The characteristics of the discharge must be equivalent to or better than the following parameters:

Parameter	Maximum Daily Concentration*
pH	6.0 – 9.0
Total Ammonia (NH ₃) as N	10 mg/L
5-day Biochemical Oxygen Demand (BOD ₅)	200 mg/L
Oil & Grease (O&G)	30 mg/L
Total Suspended Solids (TSS)	200 mg/L
Nitrate (NO ₃) as N	5 mg/L
Hydrogen Peroxide (H ₂ O ₂)	100 mg/L [34 mg/L average]
Enterococci	100 MPN/100mL or 100 CFU/100 mL

*Maximum daily concentrations of all parameters, except for hydrogen peroxide, are measured in composite samples required under Section 3.3. Maximum daily concentrations of hydrogen peroxide are calculated based on instantaneous results of continuous monitoring required under Section 3.2 averaged over 24-hour period.

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Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
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- 1.1.4 The authorized works include a processing and wash water collection system comprised of coarse screen floor drains, sumps, a Rotostrainer (0.5 millimeters apertures or finer), equalization tank, advanced oxidation system (including disinfection with hydrogen peroxide), a dissolved air flotation system (DAF), a single outfall (common with the domestic sewage discharge) extending at least 100m from and 25m below mean low water, and all related appurtenances, located approximately as shown on Site Plan.
- 1.1.5 The permittee must not discharge under this authorization unless the authorized works are complete and fully operational.
- 1.1.6 The location of the facilities from which the discharge is authorized to originate from Sayward District Lot 1150 at Brown Bay, Sayward District and all that parcel or tract of land situated at Brown Bay, Sayward District.
- 1.1.7 The two water leases include District Lot 1655 (Crown Land File #1404327) on which the wharf and administration building/shop are supported on piles, and District Lot 1693 (Crown Land File #1409124) on which the processing plant is supported on piles. The two land leases include District Lot 1664 (Crown Land File #1403960) on which the wastewater treatment system and generator are located, and District Lot 1692 (Crown Land File #1409121) on which the ice plant and truck loading area are located.
- 1.1.8 The location of the point where the discharge is authorized to occur is 50.16308 N and 125.37293 W.

1.2 Authorized Source – Sewage Effluent

This Section applies to the discharge of effluent from a domestic sewage treatment system. The site reference number for this discharge is E212103.

- 1.2.1 The maximum authorized rate of discharge is 3.75 m³/d.
- 1.2.2 The authorized discharge period is continuous.
- 1.2.3 The authorized works include one 23 m³ polyethylene treatment system, an outfall (common with the process wastewater) terminating 100 m from and 25 m below mean low water, and related appurtenances located approximately as shown on Site Plan.

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Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
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- 1.2.4 The permittee must not discharge under this authorization unless the authorized works are complete and fully operational.
- 1.2.5 The location of the facilities from which the discharge is authorized to originate is Sayward District Lot 1150 at Brown Bay, Sayward District and all that parcel or tract of land situated at Brown Bay, Sayward District.
- 1.2.6 The location of the point where the discharge is authorized to occur is 50.16308 N and 125.37293 W.

2 **OPERATIONAL REQUIREMENTS**

2.1 **Record Keeping**

The permittee must ensure that all records required to be kept at the facility as per this authorization are retained for a minimum of five years.

2.2 **Bypasses**

The permittee must not allow any discharge authorized by this authorization to bypass the authorized works, except with the prior written approval of the director.

2.3 **Maintenance of Works**

2.3.1 The permittee must regularly inspect the authorized works and maintain them in good working order. If components of the authorized works have a manufacturer's recommended maintenance schedule, then those components must, at a minimum, be maintained in accordance with that schedule.

2.3.2 The permittee must maintain a record of inspections and maintenance of the authorized works and make the record available to Ministry staff upon request.

2.3.3 In the event of an emergency or other condition which prevents normal operation of the authorized works or leads to an unauthorized discharge, the permittee must take remedial action immediately to restore the normal operation of the authorized works and to prevent any unauthorized discharges. The permittee must immediately report the emergency or other condition and the remedial action that has and/or will be taken to the following address at EnvironmentalCompliance@gov.bc.ca email address

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(most recent)



Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
Authorizations - South Region

or as otherwise instructed by the director.

2.4 **Facility Classification and Operator Certification**

The permittee, in a manner and on timelines specified by the director, must have the authorized works classified (and the classification must be maintained) by the Environmental Operators Certification Program Society (Society). The permittee must cause the authorized works to be operated and maintained by:

- a) persons certified within and according to the program provided by the Society to the satisfaction of the director, or
- b) persons who are qualified in the safe and proper operation of the facility for the protection of the environment, as demonstrated to the satisfaction of the director.

The permittee must notify the director of the classification level of the facility and certification levels of the operators, and changes of operators and/or operator certification levels within 30 days of any change

2.5 **Treatment Plant Offal Disposal and Sludge Wasting**

2.5.1 The permittee must dispose of offal and sludge wasted from the fish processing works authorized in Section 1.1.4 in a manner approved by the director, or as otherwise authorized under the *Environmental Management Act*.

2.5.2 The permittee must remove sludge and scum from the sewage treatment works authorized in Section 1.2.3 annually or at other frequencies specified by the director. The permittee must dispose of the sewage sludge and scum at a site approved by the director, or as otherwise authorized under the *Environmental Management Act*.

2.5.3 The permittee must retain records of quantities, disposal location and dates of all offal, sludge and scum and keep such records available at the facility for inspection.

Date issued: February 16, 1989
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Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
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2.6 Pathogen Control

Based on all available information the director may require testing for pathogens in the effluent, which may include but is not limited to types of bacteria, yeast, mould, and viruses, and/or, may require the permittee to take action to minimize the discharge of pathogens.

3 MONITORING REQUIREMENTS

3.1 Discharge Flow Measurement

Prior to discharge, the permittee must install and maintain a flow measuring device suitable to the director and record once per day the effluent volumes discharged over a 24-hour period for each of the two waste streams (process wastewater and sewage effluent stream) prior to the streams combining and discharging.

The permittee must retain the records for inspection by Ministry staff.

3.2 Continuous Monitoring Requirements

The permittee must install and maintain suitable measuring devices to monitor and record continuously the temperature ($^{\circ}\text{C}$), salinity (ppt) or conductivity ($\mu\text{S}/\text{cm}$) and hydrogen peroxide (mg/L) concentration of the fish processing effluent.

The permittee must retain the records for inspection by Ministry staff.

3.3 Composite Sampling of Fish Processing Effluent

3.3.1 Prior to discharge, the permittee must install and maintain a sampling facility acceptable to the director to collect samples of the fish processing effluent authorized by Section 1.1 at Site 11 as per Table 1 and in accordance with Section 3.1.

3.3.2 The permittee must ensure that composite samples consist of a minimum of eight discrete samples collected hourly, over a period of 24 hours, and are mixed to form a single sample. Alternatively, the permittee may use a flow proportional continuous sampler that is acceptable to the director.

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- 3.3.3 Prior to discharge, the permittee must collect effluent as defined in Section 1.1 as follows:
- a) Composite samples of the effluent must be collected monthly at the location defined in Section 3.3.1. Monthly sample collection must be separated by a minimum of 21 days.
 - b) To track the dilution and verify modelling predictions, a composite sample must be collected concurrently with quarterly receiving environment sampling; and,
 - c) For the sampling which occurs in Quarter 3 (as defined in Section 3.7.8), a composite effluent sample must be collected concurrently with the receiving environment samples as per Table 1 and Table 3.

3.4 **Analysis of Fish Processing Influent**

- 3.4.1 The permittee must collect a composite influent sample and obtain analyses of the sample for the following parameter:
- a) Enterococci, MPN/100mL (or CFU/100mL)
- 3.4.2 The permittee must ensure that composite sample consist of a minimum of eight discrete samples collected hourly, over a period of 24 hours, and are mixed to form a single sample. Alternatively, the permittee may use a flow proportional continuous sampler that is acceptable to the director.
- 3.4.3 Composite sample of the influent must be collected following screening and in advance of cleaning procedures (i.e. application of cleaning agents).
- 3.4.4 Composite samples of the influent must be collected monthly and concurrently with effluent sampling.

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Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
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3.5 Analysis of Fish Processing Effluent

The permittee must collect samples as required in Section 3.3, and obtain analyses of the samples for the following parameters:

- a) pH
- b) BOD₅, mg/L
- c) TSS, mg/L
- d) Enterococci, MPN/100mL (or CFU/100mL)
- e) Oil & Grease, mg/L
- f) Ammonia (NH₃) as (N), mg/L
- g) Nitrate (NO₃) as (N), mg/L

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Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
Authorizations - South Region

Table 1. Fish Processing Effluent Sampling					
Site ID	Site Name	Sampling Location	Sampling Type	Sampling Parameters	Sampling Frequency
11	fish processing effluent sample port	E309926	Flow monitoring	Flow rate, m ³ /d	Daily, Once per 24 hours
			Composite samples	<ul style="list-style-type: none"> ▪ pH ▪ Total Ammonia (NH₃), mg/L ▪ BOD₅, mg/L ▪ Oil & Grease, mg/L ▪ TSS, mg/L ▪ Nitrate (NO₃), mg/L ▪ Enterococci, MPN (CFU)/100mL 	12 monthly samples per year <ul style="list-style-type: none"> ▪ Five of the twelve monthly samples will be collected concurrent with quarterly REM sampling as follows: <ul style="list-style-type: none"> ▪ Quarter 1 – 1 sample ▪ Quarter 2 – 1 sample ▪ Quarter 3 – 2 samples collected concurrent with Week 1 and Week 4 or 5 receiving environment sampling ▪ Quarter 4 – 1 sample Additional composite sampling is required when a second round of receiving environment monitoring is required.
			Continuous monitoring	<ul style="list-style-type: none"> ▪ Temperature, C° ▪ Salinity (ppt) [or conductivity (µS/cm)] ▪ Hydrogen peroxide, mg/L 	
			Composite samples	<ul style="list-style-type: none"> ▪ Toxicity Testing, 96-h LC₅₀ 	Once within 30 days of discharge commencement and once per quarter thereafter

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(most recent)

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April 8, 2019



Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
Authorizations - South Region

3.6 **Toxicity Testing**

- 3.6.1 The permittee must ensure that within 30 days of the commencement of the discharge and thereafter, once per quarter, a composite sample of the fish processing effluent is collected and analyzed for salinity and effluent toxicity to fish using a dilution series toxicity test to determine the 96-h LC₅₀.
- 3.6.2 The permittee must collect the composite sample in accordance with Section 3.3.1 and Section 3.3.2.
- 3.6.3 Analyses for determining the 96-h LC₅₀ of liquid effluent to fish must be carried out in accordance with the procedures of one of the following methods:
- a) if salinity of the effluent composite sample used for the toxicity test is ≤ 10 ppt “Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout” (EPS1/RM/13) (the most recent edition). The test methodology may be accessed at http://publications.gc.ca/collections/collection_2013/ec/En49-24-1-13-eng.pdf
 - b) salinity of the effluent composite sample used for the toxicity test is > 10 ppt “Biological Test Method: Reference Method for Determining Acute Lethality Using Threespine Stickleback (*Gasterosteus aculeatus*)” (EPS1/RM/10) (the most recent edition). The test methodology may be accessed at <http://publications.gc.ca/site/eng/9.848989/publication.html>
 - c) a suitable alternative method as authorized by the director.

Biological test methods may be accessed at:

<https://www.canada.ca/en/environment-climate-change/services/wildlife-research-landscape-science/biological-test-method-publications.html>

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Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
Authorizations - South Region

3.7 Receiving Environment Monitoring Program

The Permittee must implement a Receiving Environment Monitoring Plan (REMP) as defined in Table 3. Sampling must take place at the site locations defined in Table 2. Any updates or changes to the REMP must be approved by the Director in writing prior to implementation.

The director may amend any requirements under this Section, based on data submitted by the permittee and any other data gathered in connection with this authorization.

- 3.7.1 The permittee must collect discrete grab samples and conduct profile monitoring of ambient seawater at site locations, profile depths, and sampling frequencies as specified in Table 2 and Table 3.
- 3.7.2 The permittee must ensure that at least one cycle of monitoring occurs per quarter. For the purpose of this Section, quarterly periods are defined as follows:
- Quarter 1 (Q1) - January 1-March 31
 - Quarter 2 (Q2) - April 1-Jun 30
 - Quarter 3 (Q3) - July 15 - August 31*
 - Quarter 4 (Q4) - October 1-December 31

*The permittee must conduct the Q3 monitoring as per Section 3.7.8.

- 3.7.3 The permittee must collect a minimum of one quarterly cycle of grab samples during a period when the plant is routinely discharging and operating at greater than eighty percent (>80%) of peak annual production.
- 3.7.4 The permittee must ensure that there are a minimum of 30 days between quarterly receiving environment sampling cycles.
- 3.7.5 The permittee must ensure quarterly sampling done in Q1, Q2, Q3 and Q4 is timed to occur at different tide cycles such that flood, ebb and slack tides are each sampled over the course of the year.
- 3.7.6 The permittee must conduct the first cycle of quarterly sampling at Sites 1, 2, 4, 6, 8 and Site 10 (background) as specified in Table 3.

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for Director, Environmental Management Act
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- 3.7.7 If exceedances of applicable Water Quality Guidelines are detected for any parameters analysed in the grab samples at receiving environment sites 2, 4, 6, or 8, the permittee must initiate a second cycle of sampling within 30 days of obtaining the results of analyses from the first cycle of monitoring. In addition to sites 1, 2, 4, 6, or 8 and 10, the second cycle must include sampling at sites 3, 5, 7, 9 as specified in Table 2 and Table 3.
- 3.7.8 Each summer (Q3) cycle of receiving environment monitoring must include five rounds of weekly sampling. The permittee must ensure that samples are collected within 30 consecutive days at each of the sites as specified in Table 2 and Table 3. The first cycle of summer (Q3) quarterly sampling must be conducted between July 15 and August 31.

3.8 **Profile Monitoring Sampling Depths**

The permittee must collect water column profile data at the sites specified in Table 2 at the following depths:

- a) 1 m below surface, and
- b) 2 m intervals from the surface to 1 m from the bottom.

3.9 **Profile Monitoring**

The permittee must ensure that profile measurements required under Section 3.8 are obtained prior to grab sampling for the following parameters:

- a) Temperature ($^{\circ}\text{C}$),
- b) Dissolved Oxygen (mg/L),
- c) pH, and
- d) Specific Conductivity ($\mu\text{S}/\text{cm}$) or Salinity (ppt)

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Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
Authorizations - South Region

3.10 Receiving Environment Grab Sampling

The permittee must collect receiving environment grab samples at the sites specified in Table 2 at the following depths:

- a) 1 m below surface, and
- b) 1 m above bottom, and
- c) at a mid-depth in the plume

In situ water column profile measurements must be used to determine plume depth for the mid-depth sample. If the plume is located, the mid-depth sample must be collected within the plume and the sample depth recorded. If after making every reasonable effort to locate the plume, it cannot be located, the mid-depth sample must be collected at 6 m below the surface. Efforts to locate the plume must be documented.

3.11 Analyses for Receiving Environment Grab Samples

The permittee must collect grab samples as required under Section 3.8 and obtain analyses of the samples for the following parameters:

- a) Total Ammonia (as N), mg/L
- b) Nitrate (as N), mg/L
- c) Enterococci, MPN/100mL (or CFU/100mL), and
- d) Hydrogen peroxide, mg/L*

*Hydrogen peroxide, mg/L (using field sampling and analytical methods and equipment acceptable to the director).

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Kirsten White, B.Sc., P.Ag.
for Director, Environmental Management Act
Authorizations - South Region

**Table 2. Monitoring Site Locations
and Environmental Management System (EMS)
Identification**

Site Number	Site Location	EMS ID	Coordinates	
			Decimal degrees	
1	Outfall terminus (OT) (combined discharge)	E212103	50.16308N	125.37293W
2	15 m North of OT	E309968	50.16319N	125.37280W
3	40 m North of OT	E309969	50.16338N	125.37259W
4	15 m South of OT	E309950	50.16297N	125.37303W
5	40 m South of OT	E309951	50.16278N	125.37322W
6	15 m East of OT	E309970	50.16298N	125.37273W
7	40 m East of OT	E309952	50.16287N	125.37248W
8	15 m West of OT	E315370	50.16306N	125.37306W
9	40 m West of OT	E315375	50.16327N	125.37340W
10	Reference (1700 m N OT)	E309953	50.17775N	125.37900W
11	Effluent sample port	E309926	50.16365 N	125.37373W
12	Sewage sampling port	E903371	50.16365 N	125.37373W

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Table 3. Receiving Environment Monitoring Program (REMP)					
Site Number & location		EMS ID	Site Rationale	Sampling Method(s) and Parameter(s)	Sampling Frequency
1	Outfall terminus (OT - combined discharge)	E212103	REMP, Initial Dilution Zone boundary	Profile Monitoring At depths defined in Section 3.8 <ul style="list-style-type: none"> ▪ Temperature (C), ▪ Dissolved Oxygen (mg/L), ▪ pH, ▪ Specific Conductivity (μS/cm), and ▪ Salinity (ppt) 	Q1 , with a tide level differing from Q2 & Q4 Q2 , with a tide level differing from Q1 & Q4 Q3 , 5 weekly samples taken over a 30-day period, and at different tide levels for each of the 5 weeks Q4 , with a tide level differing from Q1 & Q2
2	15 m North of OT	E309968			
4	15 m South of OT	E309950			
6	15 m East of OT	E309970			
8	15 m West of OT	E315370			
3	40 m North of OT*	E309969	REMP, Mixing Zone	Grab Samples At depths defined in Section 3.10 <ul style="list-style-type: none"> ▪ Total Ammonia (as N), mg/L, ▪ Nitrate (as N), mg/L, ▪ Hydrogen peroxide, mg/L, and, ▪ Enterococci, MPN/100mL 	
5	40 m South of OT*	E309951			
7	40 m East of OT*	E309952			
9	40 m West of OT*	E315375			
10	Reference (1700m N of OT)	E309953	REMP, Background		
*Sampling at sites 3, 5, 7, 9 is required in Q3 as per S.3.7.8, in the event exceedances of WQGs occur, as per S.3.7.7 ** Refer to Section 3.11 for analytical procedures for hydrogen peroxide ***Refer to Section 4.2 for SPO exceedances					

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3.12 **Sampling Procedures**

The permittee must carry out sampling in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2013 Edition (Permittee)" or most recent edition, or by alternative procedures as authorized by the director.

A copy of the above manual is available on the Ministry website at <https://www2.gov.bc.ca/gov/content?id=307726C4B5C64194BA39E51605E33827>

3.13 **Analytical Procedures**

The permittee must carry out analyses in accordance with procedures described in the "British Columbia Laboratory Manual (2015 Permittee Edition)", or the most recent edition or by alternative procedures as authorized by the director.

A copy of the above manual is available on the Ministry website at <https://www2.gov.bc.ca/gov/content?id=6C06E7FC3FB242738BAB41458A2121A3>

Analytical procedures for toxicity testing are specified in Section 3.6.

3.14 **Posting of Outfall**

Prior to discharging, the permittee must erect and maintain a sign along the alignment of the outfall above the high-water mark. The sign must identify the nature of the works. The permittee must confirm whether the wording and size of the sign is acceptable to the director prior to installing the sign.

3.15 **Outfall Inspection**

Once every five years, the permittee must conduct a dye test on the outfall pipe or inspect the outfall pipe by another method acceptable to the director. The director may, in writing, vary the frequency of testing or inspection.

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3.16 **Records of Fish Processing Plant Production**

The permittee must maintain fish processing plant production records. Total production (in tonnes), species (type and quantity in tonnes) and duration of fish processing production must be recorded each day. The permittee must retain the records for inspection by Ministry staff.

3.17 **Quality Assurance**

3.17.1 The permittee must obtain from the analytical laboratory(ies) their precision, accuracy and blank data for each sample set submitted by the permittee and an evaluation of the data acceptability, based on criteria set by such laboratory.

3.17.2 The permittee must submit samples to analytical laboratory(ies) that meet the definition of a qualified laboratory under the Environmental Data Quality Assurance Regulation.

3.17.3 The permittee must collect, prepare and submit for analysis by the analytical laboratory(ies) quality control (QC) duplicates as follows:

- a) for a minimum of 10% of the samples collected for receiving environment program required under Sections 3.6 to 3.11.
- b) at a minimum of twice per year for the effluent composite sample required under Section 3.3.

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4 SITE PERFORMANCE OBJECTIVE

- 4.1 The following Site Performance Objective (SPO) applies to the edge of the initial dilution zones at sampling locations E309968 (Site 2), E309950 (Site 4), E309970 (Site 6), E315370 (Site 8):

Parameter	SPO
Hydrogen peroxide	0.4 mg/L

- 4.2 In the event that the SPO (i.e. 0.4 mg/L) is exceeded at 15 m IDZ, the permittee must conduct sampling at 5m increments extending out from the IDZ in order to delineate the SPO boundary. Additionally, the permittee must implement preventative and/or corrective measures to reduce hydrogen peroxide levels in the discharge such that the SPO will not be exceeded.
- 4.3 The permittee must use the site performance objective for data interpretation purposes, for all reports required in Section 5.

5 REPORTING

5.1 Spill Reporting

The permittee must immediately report all spills to the environment (as defined in the Spill Reporting Regulation) in accordance with the Spill Reporting Regulation, which among other things, requires notification to the Provincial Emergency Program at 1-800-663-3456.

5.2 Environmental Monitoring System Reporting

The permittee must ensure that the results of the effluent and receiving environment monitoring required under Section 3 are uploaded into the Ministry's Environmental Management System (EMS) database using the appropriate EMS site identification numbers within one month of completion of analysis.

The permittee must keep all original laboratory reports for submitted data on site and provide them to the Ministry, in an electronic format, upon written request by the director.

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5.3 **Notification of Status**

The permittee must notify the director in writing of the commencement date of the discharge authorised in Section 1.1.

5.4 **Operational Reports**

5.4.1 The permittee must submit operational reports prepared by a Qualified Professional to the director at the following frequencies:

- a) A startup report within 6 weeks of the commencement date of the discharge authorized in Section 1.1; and,
- b) A report within 30 days of the end of the first full quarter from the commencement date of the discharge authorized in Section 1.1.

These reports must be submitted to the director by email at EnvAuthorizationsReporting@gov.bc.ca or as otherwise instructed by the director.

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5.4.2 The permittee must include the following information in each operational report for its specific reporting period:

- a) Continuous monitoring data (i.e. daily average and daily maximum) for hydrogen peroxide, temperature, and salinity or conductivity as required under Section 3.2;
- b) Results of fish processing effluent quality samples as required under Section 3.3;
- c) Results of toxicity testing as required under Section 3.6; and,
- d) Data summary and interpretation of the results as specified in a), b), and c) above.

5.4.3 In addition to the requirements set in Section 5.4.2, the first quarter report must also include:

- a) Results of receiving environment monitoring (water profiles and grab samples) required under Sections 3.6 to 3.11; and,
- b) Summary of actions taken as a result of any exceedances of the SPO as required under Section 4, and if applicable, any future actions required.

5.5 **Annual Report and Evaluation**

The permittee must, by March 31 of each year, submit to the director for the preceding calendar year, an annual report prepared and signed by a Qualified Professional (QP). The annual report must include, but not be limited to, the following:

- a) A tabulated summary of the monitoring data collected as per Section 3 and Section 4, and an excel spreadsheet of the raw data, including profile data as per Section 3.9 along with the depths required as per Section 3.8;
- b) A summary and graphical analysis, with suitable interpretation by a QP of any trends in the monitoring results for the influent sampling, effluent sampling and the receiving environment sampling;

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- c) A summary of the 96-h LC₅₀ results including a determination, using the dilution model, of the location within the Initial Dilution Zone (IDZ) at which the 96-h LC₅₀ is estimated to pass if LC₅₀ is lower than 100% effluent concentration as determined by the toxicity tests required under Section 3.6;
- d) Results of daily and monthly average and maximum flows tabulated and graphed for the fish processing effluent (m³/day) and compared to permit discharge limits;
- e) Verification of the Technical Assessment Report (TAR) dilution model predicted parameter concentrations at the 15 m IDZ and 40 m mixing boundary using effluent monitoring data collected concurrently with the REMP;

Using effluent monitoring data as model inputs, compare the predicted IDZ and 40 m mixing boundary parameter concentrations (model outputs) with those predicted in the TAR and to the concurrent REMP results (Q1, Q2, Q3-week1, Q3-week 4 or 5 and Q4). Provide the results of the model verification exercise and comment on the accuracy of model predictions;

- f) Tabulated results showing parameter concentrations of effluent discharge (Section 1.1.3) and receiving environment water quality samples (Section 3.11) and results of model verification compared to predictions from the model;

Provide a discussion of how the calculated dilution, based on monitoring data, compares to the predicted dilution model;

- g) Summary of any exceedances of the SPO as required under Section 4;
- h) Summary of actions taken as a result of any exceedances of the SPO as required under Section 4;
- i) An assessment of potential effects in the receiving environment, including a verification of the predicted effluent and receiving environment limits as per the dilution model for the authorized discharge;

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- j) A QP assessment of the effectiveness of the effluent and receiving environment monitoring program (REMP) required under Section 3, and if necessary, recommendations for update, including parameters, locations, period, frequency, sampling type and detection limit;
- k) An evaluation of the quality assurance program required under Section 3.17;
- l) An evaluation of the performance of the treatment works and identification of any necessary changes, including efficacy of the disinfection treatment works and the necessity for additional disinfection;
- m) Monthly fish processing plant production records, attached in a table, as per Section 3.16;
- n) A statement outlining the number and dates of non-compliance instances that occurred during the reporting period, with an explanation as to the cause of the non-compliance, and a description of the corrective actions taken. If no non-compliance instances occurred, the statement to that effect must be included; and,
- o) The Annual Report must be signed and sealed by a QP and include a signed Declaration of Competency form.

The annual report should be prepared in accordance with the applicable Sections of the most recent edition of "Technical Guidance 4, Environmental Management Act Authorizations, Annual Reporting Under the Environmental Management Act, A Guide for Mines in British Columbia" or by suitable alternative procedures as approved by the director.

A copy of the above manual is available on the Ministry website at https://www2.gov.bc.ca/assets/gov/environment/waste-management/industrial-waste/industrial-waste/mining-smelt-energy/annual_reporting_guidance_for_mines.pdf

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5.6 Adaptive Management

The permittee must submit a hydrogen peroxide (H₂O₂) adaptive management report prepared by a Qualified Professional to the director within 13 months of the date of commencement of the discharge. The report must contain:

- a) A summary of the H₂O₂ discharge and receiving environment data, and discharge toxicity results, including the main conclusions and an integrated interpretation of the findings.

This must include comparison of the discharge data to the permit limits specified in Section 1.1.3 and a comparison of the receiving environment data to the site performance objective specified in Section 4;

- b) An assessment of the appropriateness of the H₂O₂ permit limits specified in light of the results of (a);
- c) Recommendations for changes to plans and/or permit requirements, if any, for discharge limits, water treatment, monitoring plans, the site performance objective or any other regulatory tools advisable to limit impacts from H₂O₂ and to ensure compliance with permit requirements;
- d) A description of the remaining residual uncertainties related to H₂O₂; and,
- e) A workplan for the subsequent calendar year to continue to resolve uncertainties, if warranted.

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5.7 **Non-Compliance Notification**

The permittee must immediately notify the director or designate by email at EnvironmentalCompliance@gov.bc.ca, or as otherwise instructed by the director of any non-compliance with the requirements of this authorization by the permittee and take remedial action to remedy any effects of such non-compliance.

The permittee must provide the director with written confirmation of all such non-compliance events, including available test results within 24 hours of the original notification by email at EnvironmentalCompliance@gov.bc.ca, or as otherwise instructed by the director.

5.8 **Non-Compliance Reporting**

If the permittee fails to comply with any of the requirements of this authorization, the permittee must, within 30 days of such non-compliance, submit to the director a written report that is satisfactory to the director and includes, but is not necessarily limited to, the following:

- a) all relevant test results obtained by the permittee related to the non-compliance;
- b) an explanation of the most probable cause(s) of the non-compliance; and,
- c) a description of remedial action planned and/or taken by the permittee to prevent similar non-compliance(s) in the future.

The permittee must submit all non-compliance reporting required to be submitted under this Section by email to the Ministry's Compliance Reporting Submission Mailbox (CRSM) at EnvironmentalCompliance@gov.bc.ca.

For guidelines on how to report a non-compliance or for more information visit the Ministry website at <https://www2.gov.bc.ca/gov/content?id=076C5CA3ABD342A784CC49EC78CBAE12>

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5.9 Publication of Documents

The Ministry of Environment and Climate Change Strategy *and Climate Change Strategy* publishes Regulatory Documents on its website for the purpose of research, public education and to provide transparency in the administration of environmental laws. The permittee acknowledges that the Province may publish any Regulatory Documents submitted by the permittee excluding information that would be exempted from disclosure if the document was disclosed pursuant to a request under Section 5 of the *Freedom of Information and Protection of Privacy Act*, and the permittee consents to such publication by the Province

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GLOSSARY

"Facility"

"Facility" means the fish processing plant located at Sayward District Lot 1150 at Brown Bay, Sayward District and all that parcel or tract of land situated at Brown Bay, Sayward District.

"96-h LC₅₀"

"96-h LC₅₀" means the median lethal concentration, i.e. concentration of effluent in water that is estimated to be lethal to 50% of the test organisms after 96 hours of exposure.

"Qualified Professional"

"Qualified Professional" means an applied scientist or technologist specializing in an applied science or technology applicable to the duty or function, including, if applicable and without limiting this, agrology, biology, chemistry, engineering, geology or hydrogeology and who:

- a) is registered with the appropriate professional organization, is acting under that organization's code of ethics and is subject to disciplinary action by that organization, and
- b) through suitable education, experience, accreditation and/or knowledge, may be reasonably relied on to provide advice within their area of expertise.

All documents submitted to the director by a Qualified Professional must be signed by the author(s).

"Province"

"Province" means Her Majesty the Queen in right of British Columbia.

"Regulatory Document"

"Regulatory Document" means any document that the permittee is required to provide to the director or the Province pursuant to:

- a) this authorization;
- b) any regulation made under the *Environmental Management Act* that regulates the facility described in this authorization or the discharge of waste from that facility; or
- c) any order issued under the *Environmental Management Act* directed against the permittee that is related to the facility described in this authorization or the discharge of waste from that facility.

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"Water Quality Guidelines (WQGs)"

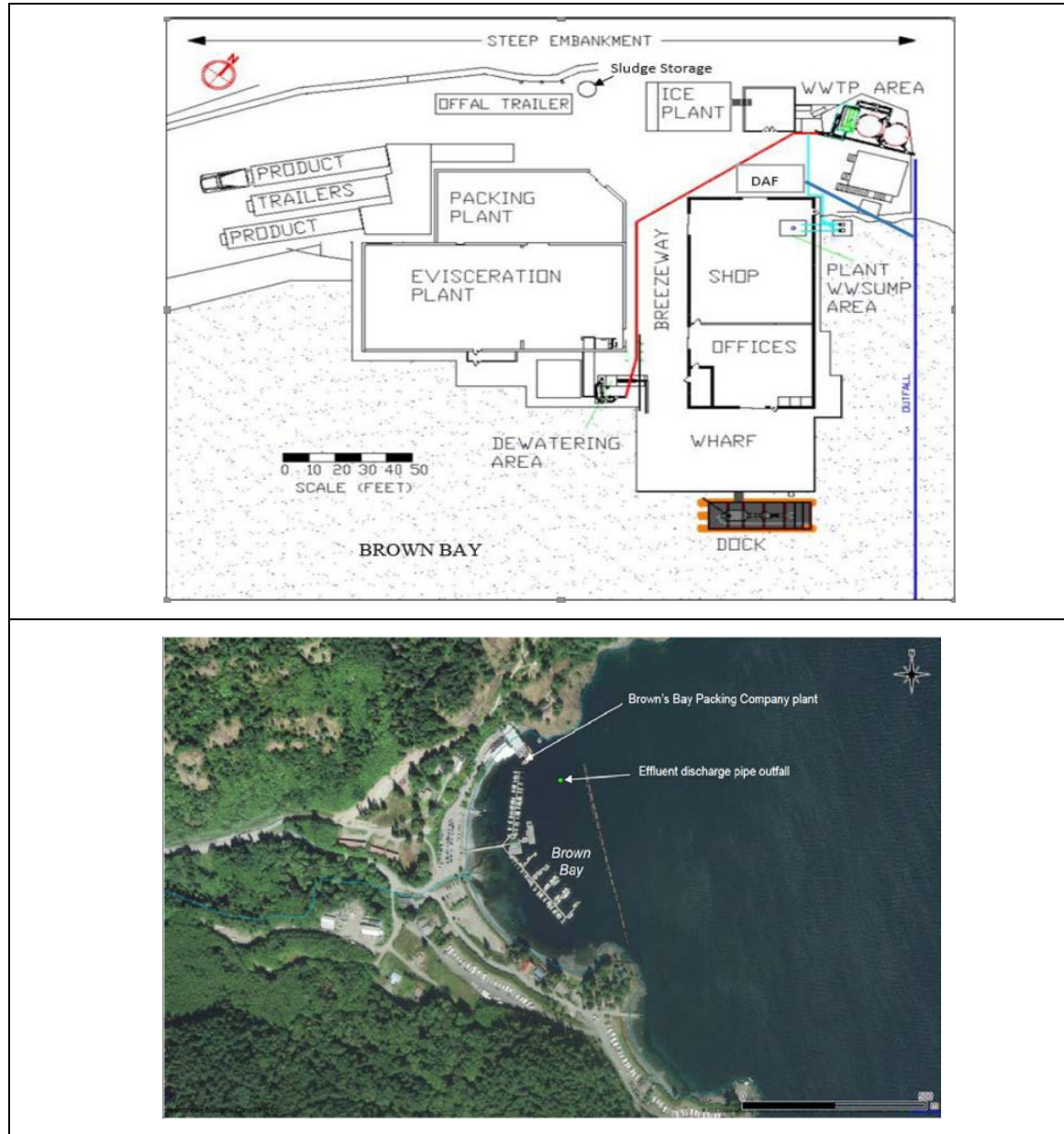
"Water Quality Guidelines (WQGs)" means British Columbia Approved Water Quality Guidelines for the protection of marine aquatic life and recreation as published on the Government of British Columbia website at <https://www2.gov.bc.ca/gov/content?id=044DD64C7E24415D83D07430964113C9>.

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SITE PLAN

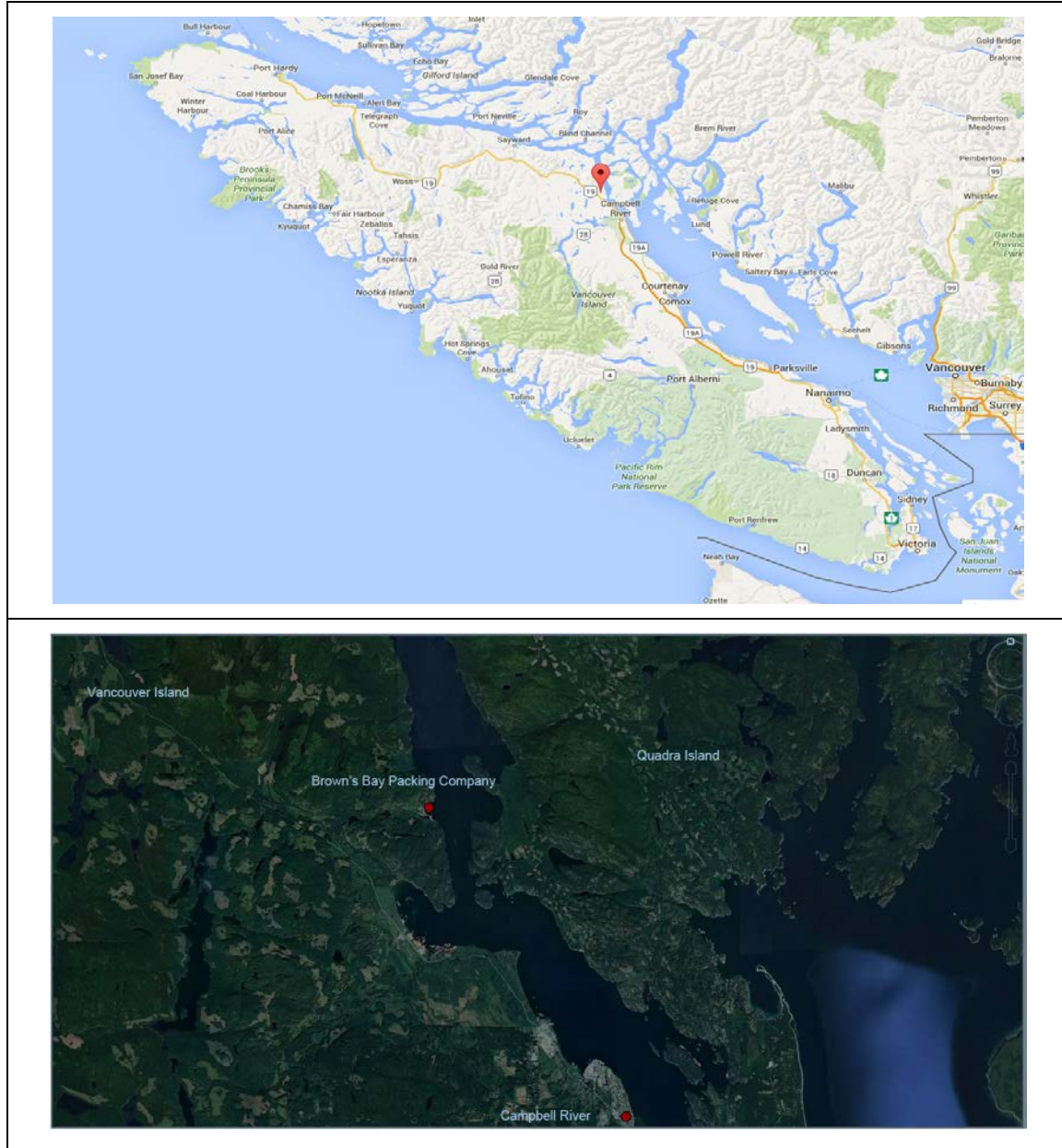


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LOCATION MAP

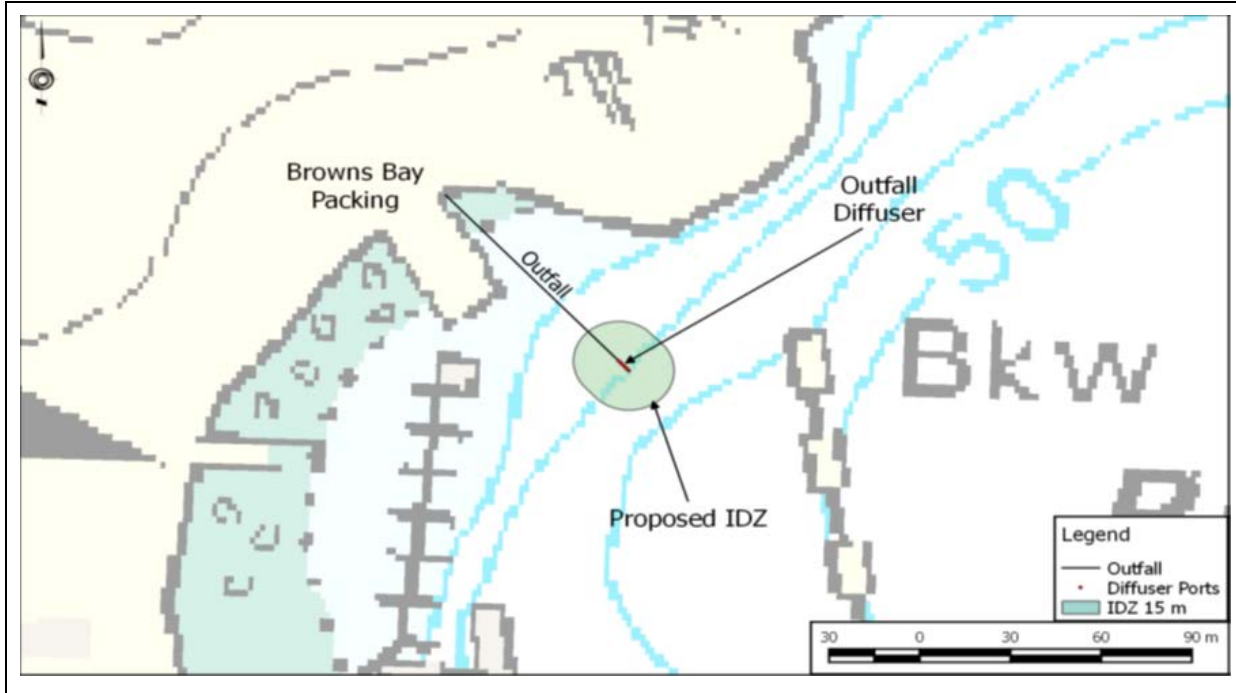


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15 M INITIAL DILUTION ZONE MAP

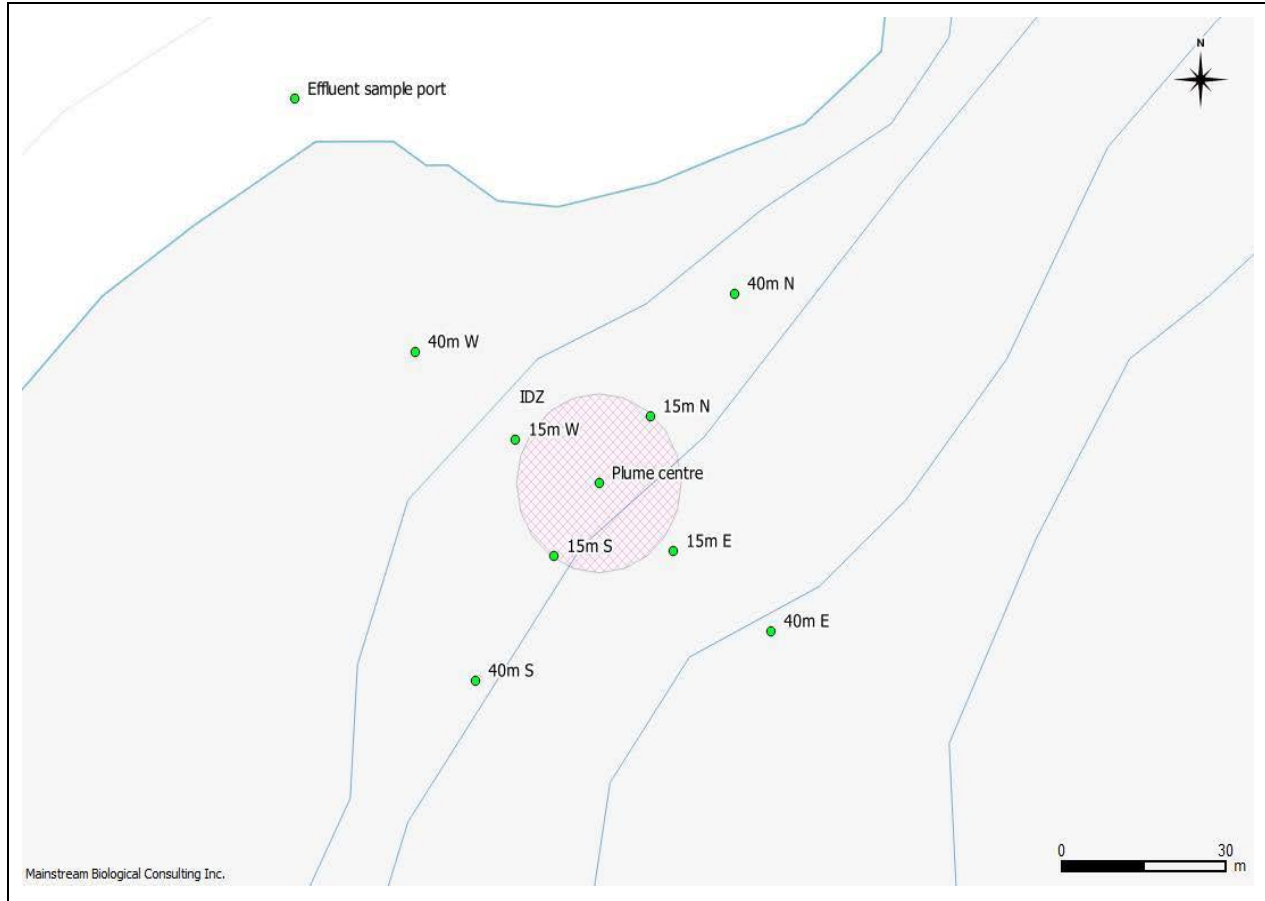


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INITIAL DILUTION ZONE AND RECEIVING ENVIRONMENT MONITORING LOCATION MAP



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