

Appendix I:

Operational Certificates



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DUKE POINT OPERATIONAL CERTIFICATE ME-05989

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File: ME-05989

Date: **AUG 12 2004**

REGISTERED MAIL

Regional District of Nanaimo
6300 Hammond Bay Rd
Nanaimo BC V9T 6N2

Dear Regional District of Nanaimo:

Enclosed is **Operational Certificate ME-05989** issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the Operational Certificate. An annual fee will be determined according to the Waste Management Permit Fees Regulation.

This Operational Certificate 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 rests with the Operational Certificate Holder. It is also the responsibility of the Operational Certificate Holder to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

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.

.../2

**Ministry of Water, Land
and Air Protection**

Regional Operations
Vancouver Island Region

Mailing/Location Address:
2080 Labieux Rd
Nanaimo BC V9T 6J9

Telephone: (250) 751-3100
Facsimile: (250) 751-3103
<http://www.gov.bc.ca/>
<http://www.gov.bc.ca/wlap/>

Administration of this Operational Certificate will be carried out by staff from the Vancouver Island Region office. **Plans, data and reports pertinent to the Operational Certificate are to be submitted to the Regional Environmental Protection Manager at Ministry of Water, Land and Air Protection, Regional Operations, Vancouver Island Region, 2080 Labieux Road, Nanaimo, British Columbia, V9T 6J9.**

Yours truly,



R. Alexander
for Director, *Environmental Management Act*
Vancouver Island Region

cc: Environment Canada
Ministry of Health
Land and Water British Columbia Inc., Victoria

Enclosure

AOR July 29/04
ACL 2004/06/04



MINISTRY OF WATER, LAND AND AIR PROTECTION

Vancouver Island Region
Environmental Protection
2080-A Labieux Road
Nanaimo, British Columbia
V9T 6J9
Telephone: 250 751-3100
Fax: 250 751-3103

ME-05989

Under the Provisions of the Environmental Management Act

Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, British Columbia
V9T 6N2

is authorised to discharge effluent to Northumberland Channel from a municipal sewage treatment facility located at Duke Point, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

1. AUTHORISED DISCHARGES

1.1 This subsection applies to the discharge of effluent from a **MUNICIPAL SEWAGE TREATMENT FACILITY**. The rate and characteristics of the discharge apply to the last accessible point prior to connection to the outfall. The site reference number for this discharge is E254792.

1.1.1 The maximum authorised rate of discharge is 1,800 m³/d.

1.1.2 The average daily rate of discharge based on an annual averaging period is as follows:

Average daily flow = 250 m³/d + 50 m³/d * (calendar year – 2003) to a maximum of 950 m³/d in the year 2017.

1.1.3 The characteristics of the discharge shall not exceed:

5-day Biochemical Oxygen Demand	30 mg/L
Total Suspended Solids	30 mg/L
Fecal Coliform	1,000 colonies/100 mL
pH	6 to 9

1.1.4 The authorised works are mechanical screens, secondary treatment plant, ultra violet disinfection, aerated sludge holding tank, a connection line to the outfall, an outfall (with diffuser) extending approximately 282 m from mean low water to a depth of approximately 40 m below mean low water, and related appurtenances approximately located as shown on attached Site Plan A.

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R. Alexander
for Director, *Environmental Management Act*

OPERATIONAL CERTIFICATE: ME-05989

ACL 2004/08/05

- 1.1.5 The authorised works must be complete and in operation on and from the date of this operational certificate.
- 1.1.6 The location of the facilities from which the discharge originates is Lot 15, Section 3, Range 8, Nanaimo District Plan VIP63717.
- 1.1.7 The location of the point of discharge is Northumberland Channel.

2. **GENERAL REQUIREMENTS**

2.1 **Maintenance of Works and Emergency Procedures**

The Regional District of Nanaimo shall inspect the authorised works regularly and maintain them in good working order. In the event of an emergency or condition beyond the control of the Regional District of Nanaimo which prevents effective operation of the approved method of pollution control, the Regional District of Nanaimo shall notify the Director immediately and take appropriate remedial action. The Director may reduce or suspend the operation of the Regional District of Nanaimo to protect the environment until the approved method of pollution control has been restored.

2.2 **Bypasses**

The Regional District of Nanaimo shall ensure that no waste is discharged without being processed through the authorised works unless prior written approval is received from the Director.

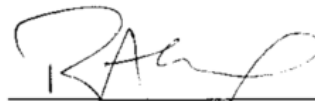
2.3 **Plans - New Works**

Plans and specifications for expanding the works authorised in Subsection 1.1.4 shall be certified by a qualified professional, and submitted to the Regional Manager, Environmental Protection for review prior to the start of construction. A qualified professional must certify that the works have been constructed in accordance with such plans.

2.4 **Posting of Outfall**

The Regional District of Nanaimo 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 requires the approval of the Director.

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R. Alexander
for Director, *Environmental Management Act*

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2.5 Outfall Inspection

The Regional District of Nanaimo shall conduct an inspection of the outfall line every 5 years, or as may otherwise be required by the Director. An outfall inspection report shall be submitted to the Regional Manager, Environmental Protection within 60 days from the date of the inspection.

2.6 Sludge Management

Sludge generated from the treatment plant shall be managed in a manner approved by the Director.

2.7 Effluent Upgrading

Based on receiving environment monitoring data and/or other information obtained in connection with this discharge, the Regional District of Nanaimo may be required to provide additional treatment facilities.

2.8 Odour Control

Should objectionable odours, attributable to the operation of the sewage treatment plant, occur beyond the property boundary, as determined by the Director, measures or additional works will be required to reduce odour to acceptable levels.

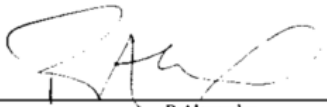
2.9 Operating Plan

The Regional District of Nanaimo shall develop an Operating Plan, as per Section 16 of the Municipal Sewage Regulation. The plan shall be submitted to the Regional Manager, Environmental Protection by December 31, 2004.

2.10 Facility Classification and Operator Certification

The Regional District of Nanaimo shall have the works authorised by this operational certificate classified (and the classification shall be maintained) by the Environmental Operators Certification Program Society (Society). The works shall be operated and maintained by persons certified within and according to the program provided by the Society. Certification must be completed to the satisfaction of the Director. In addition, the Director shall be notified of the classification level of the facility and certification level of the operators, and changes of operators and/or operator certification levels within 30 days of any change.

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for Director, *Environmental Management Act*

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Alternatively, the works authorised by this operational certificate shall be operated and maintained by persons who the Regional District of Nanaimo can demonstrate to the satisfaction of the Director, are qualified in the safe and proper operation of the facility for the protection of the environment.

3. **MONITORING AND REPORTING REQUIREMENTS**

3.1 **Discharge Monitoring**

3.1.1 **Flow Measurement**

Provide and maintain a suitable flow measuring device and record twice per week the effluent volume discharged over a 24-hour period.

3.1.2 **Sampling and Analysis**

The Regional District of Nanaimo shall install a suitable sampling facility and obtain samples of the effluent in accordance with the following schedule:


<u>Parameter</u>	<u>Frequency (type)</u>
5-day Biochemical Oxygen Demand	monthly (grab)
Total Suspended Solids	monthly (grab)
NH ₄ -N	quarterly (grab)
Fecal Coliforms	six times a year (grab)
Toxicity	once a year (grab)
pH	monthly (grab)

3.2 **Receiving Environment Monitoring**

A receiving environment monitoring program shall be established in consultation with the Director who will advise the Regional District of Nanaimo in writing of the program requirements.

The responsibility for carrying out the receiving environment monitoring program is shared jointly by the Regional District of Nanaimo and West Coast Reduction Ltd. The responsibility for the cost of the program is determined under the terms of a Joint Use Agreement between the two parties.

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R. Alexander
for Director, *Environmental Management Act*

OPERATIONAL CERTIFICATE: ME-05989

ACL 2004/08/05

3.3 Monitoring Procedures

3.3.1 Sampling and Analytical Procedures

Sampling and flow measurement shall be carried out 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, 2003 Edition (Permittee)," or most recent edition, or by suitable alternative procedures as authorised by the Director. A copy of the above manual may be purchased from the Queen's Printer Publications Centre, PO Box 9452, Stn Prov Gov't Victoria, British Columbia, V8W 9V7 (1 800 663-6105 or 250 387-6409), and is also available for inspection at all Environmental Protection offices.

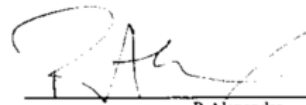
Analyses are to be carried out in accordance with procedures described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples, 2003 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as authorised by the Director. A copy of the above manual may be purchased from the Queen's Printer Publications Centre, PO Box 9452, Stn Prov Gov't Victoria, British Columbia, V8W 9V7 (1 800 663-6105 or 250 387-6409), and is also available for inspection at all Environmental Protection offices.

3.4 Reporting

Maintain data of analyses and flow measurements for inspection and every 6 months submit the data, suitably tabulated, to the Regional Manager, Environmental Protection for the previous 6 months. All reports shall be submitted within 30 days of the end of the 6 month period. Based on the results of the monitoring program, the Regional District of Nanaimo monitoring requirements may be extended or altered by the Director.

An annual report, which includes a summary and interpretation of the discharge and receiving environment monitoring results for the previous year, shall be submitted to the Regional Manager, Environmental Protection within 60 days of the end of the calendar year. The summary and interpretation of the receiving environment monitoring results obtained as required in Section 3.2 shall be prepared by an independent qualified professional. The annual report shall provide an assessment of the impact of this discharge on the receiving environment and recommend changes (if any) to the monitoring program.

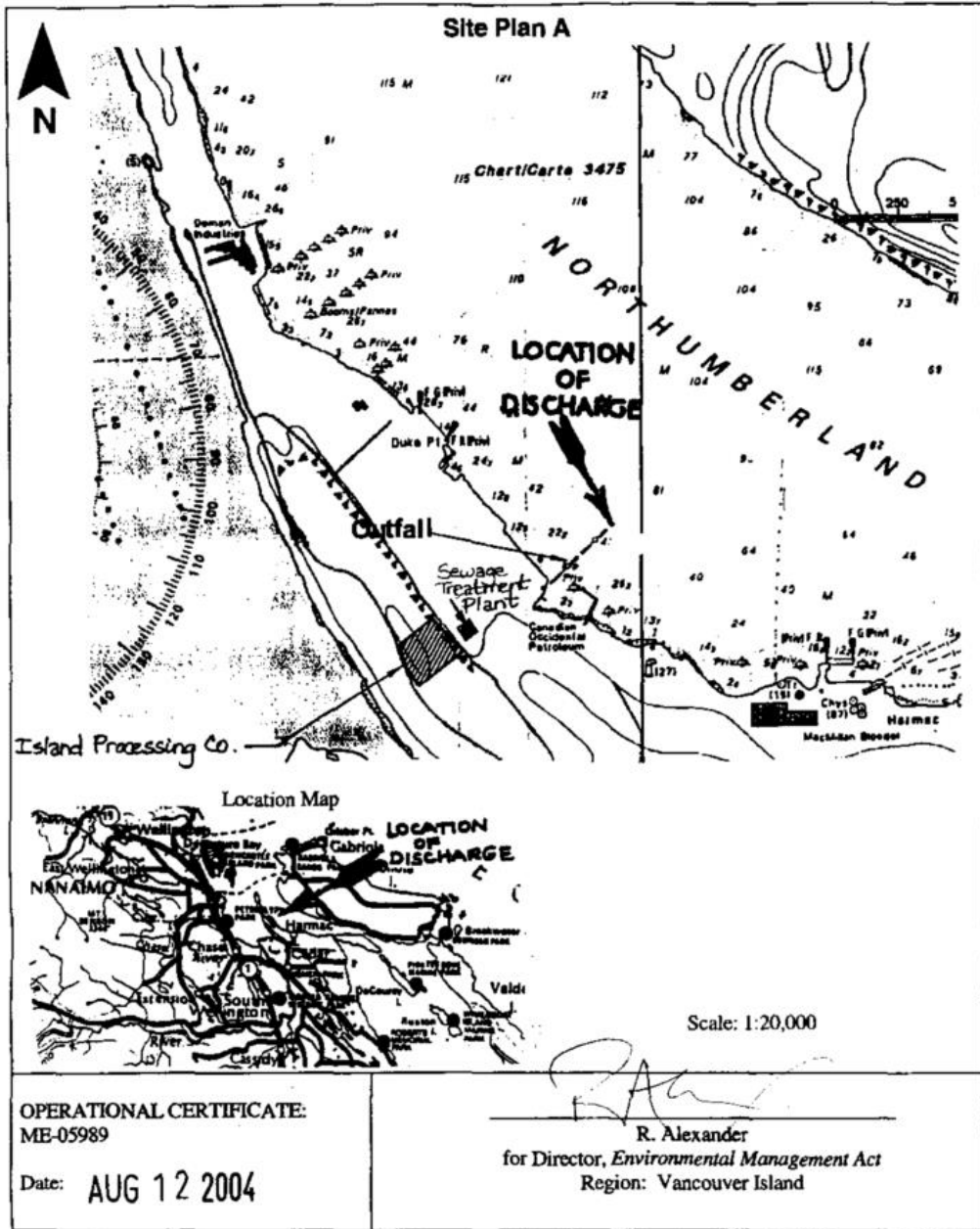
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R. Alexander
for Director, *Environmental Management Act*

OPERATIONAL CERTIFICATE: ME-05989

ACL 2004/06/05



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RECEIVED
SEP 08 2005
REGIONAL DISTRICT
of NANAIMO

August 31, 2005

File: ME-05989
PE-16725

Regional District of Nanaimo
6300 Hammond Bay Rd
Nanaimo BC V9T 6N2

West Coast Reduction Ltd.
c/o 1900-1040 W Georgia St
Vancouver BC V6E 4H3

Sean DePol

ATTENTION: ~~Dennis Trudeau, Manager, Liquid Waste~~
Regional District of Nanaimo

Ken Ingram, Environmental Coordinator
West Coast Reduction

Dear Messrs Trudeau and Ingram:

Re: Receiving Environment Monitoring for the Shared Outfall at Duke Point

In accordance with Section 3.2 of Operational Certificate ME-05989 and Section 3.2 of Waste Management Permit PE-16725, the following receiving environment monitoring program shall be conducted.

Water column profiles shall be taken quarterly at four monitoring stations, established for the baseline receiving environment monitoring study (see "Duke Point Marine Outfall Water Column Characterisation (Pre-Discharge Assessment)", September 2002, by Komex International Ltd.), shown as #1, #2, #3 and #4 on the attached Site Plan.

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Ministry of
Environment

Vancouver Island Region
Environmental Protection Division

Mailing Address:
2080A Labieux Rd
Nanaimo BC V9T 6J9

Telephone: 250 751-3100
Facsimile: 250 751-3103
Website: <http://wlapwww.gov.bc.ca>

Measurements of the following parameters shall be obtained in the water column at each monitoring station at the halocline and at depths of 0, 2, 4, 6, 8, 10, 15, 20, 25, 30, 35 and 40 metres (or to bottom, by 5 metre increments):

Dissolved Oxygen, mg/L;
Salinity, g/kg or ‰;
Temperature, °C;
pH.

Measurements of fecal coliforms and NH₃-N shall be obtained in the water column at each monitoring station at depths of 0 m and at the halocline. An additional measurement of NH₃-N shall be obtained in the water column at each monitoring station at a depth of 40 metres.

Sampling shall be carried out 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, 2003 Edition (Permittee)," or most recent edition, or by suitable alternative procedures as authorised by the Regional Waste Manager. A copy of the above manual may be purchased from the Queen's Printer Publications Centre, PO Box 9452, Stn Prov Gov't Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250 387-6409), and is also available for inspection at all Environmental Protection offices.

Analyses are to be carried out in accordance with procedures described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples, 2003 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as authorised by the Regional Waste Manager. A copy of the above manual may be purchased from the Queen's Printer Publications Centre, PO Box 9452, Stn Prov Gov't Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250 387-6409), and is also available for inspection at all Environmental Protection offices.

These monitoring requirements may be reconsidered by the Director after the second annual reports required under Section 3.4 of the Operational Certificate ME-05989 and Section 3.4 of the Waste Management Permit PE-16725 have been submitted and reviewed.

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Please attach this letter to the Operational Certificate ME-05989 and Waste Management Permit PE-16725.

Yours truly,



R. Alexander
for Director, *Environmental Management Act*

cc: West Coast Reduction

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**DRAFT OPERATIONAL CERTIFICATE
GREATER NANAIMO POLLUTION CONTROL CENTRE**

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MINISTRY OF ENVIRONMENT

OPERATIONAL CERTIFICATE

ME-338

Under the Provisions of the Environmental Management Act

**Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, B.C.
V9T 6N2**

is authorized to discharge effluent from a municipal wastewater collection and treatment system located in Nanaimo, British Columbia to the Strait of Georgia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may result in prosecution.

1. **AUTHORIZED DISCHARGES**

This section applies to the discharge of effluent from a municipal wastewater treatment system (commonly known as the Greater Nanaimo Pollution Control Centre), a **MUNICIPAL WASTEWATER TREATMENT PLANT** serving a portion of the Regional District of Nanaimo. The site reference number for this discharge is E100008.

1.1 The maximum authorized rate of discharge is 169,000 cubic metres per day.

1.2 The average dry weather flow shall not exceed 55,000 cubic metres per day.

1.3 **UNTIL DECEMBER 31, 20XX**, the characteristics of the discharge to the Strait of Georgia shall not exceed the following requirements:

Carbonaceous 5-day Biochemical Oxygen Demand	130 mg/L
Total Suspended Solids	130 mg/L
pH	6.0 – 9.0 pH units

The characteristics must be measured based on the sampling procedures and frequencies stipulated under Subsection 3.1.

1.4 **ON OR BEFORE DECEMBER 31, 20XX**, for that portion of the flow up to two times the average dry weather flow, the characteristics of the discharge to the Strait of Georgia shall not exceed the following requirements:

Carbonaceous 5-day Biochemical Oxygen Demand	45 mg/L
Total Suspended Solids	45 mg/L
pH	6.0 – 9.0 pH units

For that portion of the daily flow in excess of two times the average dry weather flow the characteristics of the discharge to the Strait of Georgia shall not exceed:

Carbonaceous 5-day Biochemical Oxygen Demand	130 mg/L
Total Suspended Solids	130 mg/L
pH	6.0 – 9.0 pH units

The characteristics must be measured based on the sampling procedures and frequencies stipulated under Subsection 3.1.

All flows shall be recombined prior to discharge through the outfall.

1.5 The authorized works must be complete and in operation as follows:

1.5.1 UNTIL DECEMBER 31, 20XX, mechanical screens, grit removal tanks, primary sedimentation tanks, odour control facilities, and an outfall with a 104 port diffuser extending 2030 m from mean low water to a depth of 70 m below mean low water, and related appurtenances approximately located as shown on attached the attached site plan (Appendix A), on and from the date of this Operational Certificate

1.5.2 ON OR BEFORE DECEMBER 31, 20XX in accordance with the following:

Wastewater Facility Component	Redundancy Requirement
mechanical screens	Multiple units, 75% of design flow when one tank is out of service
grit removal tanks	Multiple units, 75% of design flow when one tank is out of service
primary sedimentation tanks	Multiple units, 75% of design flow when one tank is out of service
biological reactors	Multiple units, 75% of design flow when one tank is out of service
secondary clarifiers	Multiple units, 75% of design flow when one tank is out of service
anaerobic digesters	2 digesters, 50% of maximum design when one digester is out of service
biosolids thickening and dewatering facilities	Multiple units, 75% of design flow when one unit is out of service

and OUTFALL SPECIFICATIONS TO FOLLOW, and related appurtenances.

1.6 The location of the facilities from which the effluent originates is legally described as,

- Lot 1, District Lot 51, Wellington District, Plan 26263 (4600 Hammond Bay Road)
- Lot 2, District Lot 51, Plan 7504 EXC Plans 23005 & 26263 (4520 Hammond Bay Road)
- Lot 1, District Lot 51, Wellington District, Plan 23005 (4500 Hammond Bay Road)
- Lot 1, District Lot 41, Wellington District Plan 32351 (4470 Hammond Bay Road)
- Lot 1, District Lot 41, Wellington District, Plan VIP63399 (3075 Shores

- Drive)
- Lot A, District Lot 41, Wellington District, Plan 48249 (3025 Shores Drive)

The location of the point of discharge is in the Strait of Georgia at 49.236°N, 123.940°W (Seaconsult, 1999), as approximately shown on the attached site plan.

2. GENERAL REQUIREMENTS

2.1 Maintenance of Works

The Regional District of Nanaimo must inspect the authorized works regularly and maintain them in good working order.

2.2 Bypasses

The Regional District of Nanaimo shall ensure that no waste is discharged without being processed through the authorized works unless prior written approval is received from the Director.

2.3 Process Modifications

The Director must be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, authorized discharge rates and characteristics must not be exceeded.

2.4 Plans – New Works

Plans and specifications of new works authorised in subsection 1.5 must be certified and sealed by a qualified professional licensed to practice in the Province of British Columbia, and submitted to the Director before construction. Prior to the commencement of discharge, a qualified professional licensed to practice in the Province of British Columbia must certify that the works have been constructed in accordance with the submitted plans and a copy of final design drawings reflecting the actual construction of authorized works, certified as correct and sealed by a qualified professional, must be provided to the Director.

2.5 Future Upgrading of Works

Based on receiving environment monitoring data and/or other information obtained in connection with this discharge, the Regional District of Nanaimo may be required to provide additional treatment facilities.

The Director may require repair, alteration, removal, improvement or addition to works or construction of new or existing works, and submission of plans and specifications for works specified in this Operational Certificate.

2.6 Posting of Outfall

The Regional District of Nanaimo shall erect a sign on shore 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 must be acceptable to the Director.

2.7 Outfall Inspection

The outfall must be inspected by a qualified professional once every 5 years, or as may otherwise be required by the Director, to ensure it is in good working condition. The inspection must include examination of the entire length of the pipe and diffuser for leaks, breaks and blockages. An inspection report must be submitted to the Director, Environmental Protection, within 60 days after the inspection date. Outfall inspections shall continue as per existing 5 year schedule..

2.8 Odour Control

Should objectionable odours attributable to the operation of the authorized works occur, measures or additional works will be required to reduce odours to acceptable levels.

2.9 Biosolids Treatment, Disposal and Reuse

Biosolids generated by the treatment plant shall be managed in a manner approved by the Director and in accordance with the biosolids management strategies developed in the Regional District of Nanaimo Liquid Waste Management Plan.

2.10 Operating Plan, Including Commissioning and Emergency Procedures

The Regional District of Nanaimo must prepare an Operating Plan that provides for proper operation, maintenance and monitoring of the sewage conveyance, wastewater treatment and disposal facilities, and biosolids management, including monitoring details, emergency procedures and staff education and certification.

The Operating Plan must also include a commissioning plan that addresses operational procedures required to commission the authorized works identified in subsection 1.5, including the monitoring required to demonstrate that no adverse environmental impacts result from commissioning.

The Operating Plan must include a contingency plan that describes emergency procedures for the wastewater facility, including lift stations; procedures for notifying the Director and a health officer; and, actions to be taken if the discharge fails to meet the authorized discharge requirements.

The Director may reduce or suspend the operations to protect the environment until the approved method of pollution control has been restored, and/or corrective steps taken to prevent unauthorized discharge.

The Operating Plan must be submitted to the Director, Environmental Protection within 60 days from Operational Certificate's approval date. The Regional District of Nanaimo must notify the Director of any changes to the Operating Plan within 30 days of implementation.

2.11 Facility Classification and Operator Certification

The Regional District of Nanaimo must have the works authorized by this Operational Certificate classified (and the classification must be maintained) by the Environmental Operators Certification Program Society (Society). The works must be operated and maintained by persons certified within and according to the program provided by the Society. Certification must be completed to the satisfaction of the Director. In addition, the Director must be notified of the classification level of the facility and certification level of the operators and changes of operators and/or operator certification levels within 30 days of any change.

2.12 Qualified Professional

All information including plans, drawings, assessments, investigations, surveys, programs and reports, must be certified by a qualified professional. As-built plans and drawings of the facilities and works must be certified by a qualified professional, as defined in the Municipal Wastewater Regulation (507/99).

3. MONITORING REQUIREMENTS

3.1 Discharge Monitoring

3.1.1 Flow Measurement

(a) This section applies to the discharge authorized in Subsection 1.3.

Provide and maintain a suitable flow measuring device and record once per day the effluent volume discharged over a 24-hour period from the municipal wastewater treatment plant to the outfall.

(b) This section applies to the discharge authorized in Subsection 1.4.

ON OR BEFORE DECEMBER 31, 20XX provide and maintain a suitable flow measuring device and record once per day the effluent volume discharged over a 24-hour period for the following:

- The volume of the flow which receives secondary treatment and which is up to no less than two times the average dry weather flow discharged from the municipal wastewater treatment plant to the outfall; and,
- The volume of the flow, at no less than the excess of two times the average dry weather flow, which bypasses secondary treatment and is discharged from the municipal wastewater treatment plant to the outfall.

3.1.2 Sampling and Analysis

Effluent samples shall be collected as follows:

(a) **UNTIL DECEMBER 31, 20XX** the Regional District of Nanaimo shall maintain a suitable sampling facility and obtain samples of the discharge from the municipal wastewater treatment plant.

(b) **ON OR BEFORE DECEMBER 31, 20XX** the Regional District of Nanaimo shall install suitable sampling facilities and obtain samples of the discharges from the municipal wastewater treatment plant at the following locations:

- A sampling location representing the portion of the daily discharge which receives secondary treatment, which is no less than two times the average dry weather flow;
- A sampling location representing the portion of the daily discharge which bypasses secondary treatment, which is no less than the excess of two times the average dry weather flow; and
- A sampling location at a point after which the above two discharges are recombined, as authorized in Subsection 1.4.

Analyses of effluent samples shall be carried out in accordance with the following schedule:

<u>Parameter</u>	<u>Frequency</u>	<u>Type</u>
Carbonaceous 5-day	twice/week	24-hour composite
Biochemical Oxygen Demand	twice/week	24-hour composite
Total Suspended Solids	twice/week	24-hour composite
Total Phosphorus	monthly	24-hour composite
Phosphate Phosphorus	monthly	24-hour composite
Fecal Coliform	twice/month	grab

The composite samples are to consist of samples taken over a 24-hour period in proportion to flow and mixed to form a single sample. There must be at least 10 days between samples for monthly samples, and 7 days between samples if required to sample twice per month.

Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.

3.2 Biosolids Monitoring

A biosolids monitoring program shall be carried out by the Regional District of Nanaimo. The program shall be established in consultation with the Regional Waste Manager.

3.3 Receiving Environment Monitoring

A receiving environment monitoring program shall be carried out by the Regional District of Nanaimo. The program shall be developed in consultation with the Vancouver Island Health Authority, First Nations and the Director.

The proposed monitoring program shall be developed in accordance with the goals and commitments in the approved Regional District of Nanaimo Liquid Waste Management Plan and shall be submitted to the Director for review on or before December 31, 20XX.

Based on the results of this monitoring program, the monitoring requirements may be extended or altered by the Director, who will advise the Regional District of Nanaimo in writing of the altered program requirements.

3.4 Monitoring Procedures

3.4.1 Sampling and Analytical Procedures

Sampling and flow measurement must be carried out in accordance with the procedures described in “BRITISH COLUMBIA FIELD SAMPLING MANUAL for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples, 2003 Edition”, or most recent edition, or by suitable alternative procedures as authorized by the Director.

Analyses are to be carried out in accordance with procedures described in the latest version of BRITISH COLUMBIA ENVIRONMENTAL LABORATORY MANUAL (2009 Edition)", or the most recent edition, or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-6409) or via the internet at www.crownpub.bc.ca. A copy of the manual is also available for review at all Environmental Protection offices.

4. REPORTING REQUIREMENTS

4.1 Discharge Reporting

Maintain data of analyses and flow measurements for inspection and submit the data, suitably tabulated, to the Director, Environmental Protection for the previous quarter. With prior written authorization from the Director, Environmental Protection, data may be submitted, suitably formatted on a computer storage media, or with prior arrangement, be electronically transmitted directly to the Ministry of Environment central computer system. Such data must be transmitted quarterly (within 31 days of the end of the quarter) with an annual report completed once per year (within 120 days of the end of the calendar year).

4.2 Receiving Environment Reporting

Receiving environment monitoring results and reports must be submitted to the Director, Environmental Protection in accordance with Subsection 3.3 and must be made available by the Regional District of Nanaimo to the public on request. The report on the receiving environment monitoring results must provide an assessment of the impacts of this discharge on the receiving environment and recommend changes, if any, to the monitoring program. The first report must be submitted on or before April 30th, 20XX.

4.3 Annual Report

An Annual Report, suitable for public review, must be submitted to the Director, Environmental Protection by April 30th of each year, for the preceding calendar year. The Annual Report must include a summary and interpretation, by a qualified professional, of the discharge monitoring results for the preceding calendar year. The Annual Report must include an evaluation of the performance of the treatment works and identify any necessary changes. The Annual Report must include an implementation schedule for any alterations to the treatment and disposal works.

APPENDIX A (SITE PLAN)

DRAFT

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**DRAFT OPERATIONAL CERTIFICATE
FRENCH CREEK POLLUTION CONTROL CENTRE**

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MINISTRY OF ENVIRONMENT

OPERATIONAL CERTIFICATE

ME-4200

Under the Provisions of the Environmental Management Act

**Regional District of Nanaimo
6300 Hammond Bay Road
Nanaimo, B.C.
V9T 6N2**

is authorized to discharge effluent from a municipal wastewater collection and treatment system located at French Creek, British Columbia, to the Strait of Georgia and to storage ponds at Morningstar Golf Course, subject to the conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may result in prosecution.

1. AUTHORIZED DISCHARGES

This section applies to the discharge of effluent from a municipal wastewater treatment system (commonly known as the French Creek Pollution Control Centre), a **MUNICIPAL WASTEWATER TREATMENT PLANT** serving a portion of the Regional District of Nanaimo. The site reference number for this discharge is E241709.

- 1.1** The maximum authorized rate of discharge is 46,100 cubic metres per day to the Strait of Georgia. The maximum authorized rate of discharge is 1,370 cubic metres per day to the Morningstar Golf Course storage ponds.
- 1.2** The average dry weather flow shall not exceed 14,900 cubic metres per day.
- 1.3** The characteristics of the discharge to the Strait of Georgia shall not exceed the following requirements:

Carbonaceous 5-day Biochemical Oxygen Demand	45 mg/L
Total Suspended Solids	45 mg/L
pH	6.0 – 9.0 pH units
Ammonia	As per RDN back calculation following EIS)

The characteristics must be measured based on the sampling procedures and frequencies stipulated under Subsection 3.1.

For that portion of the daily flow in excess of two times the average dry weather flow the characteristics of the discharge to the Strait of Georgia shall not exceed:

Carbonaceous 5-day Biochemical Oxygen Demand	130 mg/L
Total Suspended Solids	130 mg/L
pH	6.0 – 9.0 pH units

The characteristics must be measured based on the sampling procedures and frequencies stipulated under Subsection 3.1.

All flows shall be recombined prior to discharge through the outfall.

- 1.4** The characteristics of the discharge to the Morningstar Golf Course storage ponds shall not exceed the following requirements:

Carbonaceous 5-day Biochemical Oxygen Demand	20 mg/L
Total Suspended Solids	30 mg/L
pH	6.5 – 9.0 pH units

The characteristics must be measured based on the sampling procedures and frequencies stipulated under Subsection 3.1.

- 1.5** The authorized works are as follows:

Wastewater Facility Component	Redundancy Requirement
mechanical screens	Multiple units, 75% of design flow when one tank is out of service
grit removal tanks	Multiple units, 75% of design flow when one tank is out of service
primary sedimentation tanks	Multiple units, 75% of design flow when one tank is out of service
biological reactors	Multiple units, 75% of design flow when one tank is out of service
secondary clarifiers	Multiple units, 75% of design flow when one tank is out of service
auto-thermal aerobic digesters	4 digesters, 75% of maximum design when one digester is out of service
biosolids thickening and dewatering facilities	2 centrifuges, 75% of maximum design when one centrifuge is out of service.

an outfall with a multiple port diffuser extending 2,440 m from mean low water to a depth of 61 m below mean low water, an effluent pumping station and pipeline to convey effluent to the storage ponds at Morningstar Golf course, and related appurtenances approximately located as shown on attached the attached site plan Appendix A).

- 1.6 The location of the facilities from which the effluent originates is legally described as Lot 2, District Lot 28, Nanoose District, Plan 2570 as shown on the attached site plan (Appendix A).
- 1.7 The location of the point of discharge is in the Strait of Georgia 2,440 m off shore at 49°22.007 N, 124°21.319X W, and Morningstar Golf Course storage ponds located in the northern half of Lot A, District Lots 29, 81, 83 and 126, Nanoose District, Plan 49145, except parts in plans VIP51714, VIP52613, VIP76030 and VIP76051 all located approximately as shown on the attached site plan.

2. GENERAL REQUIREMENTS

2.1 Maintenance of Works

The Regional District of Nanaimo must inspect the authorized works regularly and maintain them in good working order.

2.2 Bypasses

The Regional District of Nanaimo shall ensure that no waste is discharged without being processed through the authorized works unless prior written approval is received from the Director.

2.3 Process Modifications

The Director must be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, authorized discharge rates and characteristics must not be exceeded.

2.4 Plans – New Works

Plans and specifications of new works authorised in subsection 1.5 must be certified and sealed by a qualified professional licensed to practice in the Province of British Columbia, and submitted to the Director before construction. Prior to the commencement of discharge, a qualified professional licensed to practice in the Province of British Columbia must certify that the works have been constructed in accordance with the submitted plans and a copy of final design drawings reflecting the actual construction of authorized works, certified as correct and sealed by a qualified professional, must be provided to the Director.

2.5 Future Upgrading of Works

Based on receiving environment monitoring data and/or other information obtained in connection with this discharge, the Regional District of Nanaimo may be required to provide additional treatment facilities.

The Director may require repair, alteration, removal, improvement or addition to works or construction of new or existing works, and submission of plans and specifications for works specified in this Operational Certificate.

2.6 Posting of Outfall

The Regional District of Nanaimo shall erect a sign on shore 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 must be acceptable to the Director.

2.7 Outfall Inspection

The outfall must be inspected by a qualified professional once every 5 years, or as may otherwise be required by the Director, to ensure it is in good working condition. The inspection must include examination of the entire length of the pipe and diffuser for leaks, breaks and blockages. An inspection report must be submitted to the Director, Environmental Protection, within 60 days after the inspection date. Inspections shall be completed as per existing program.

2.8 Odour Control

Should objectionable odours attributable to the operation of the authorized works occur, measures or additional works will be required to reduce odours to acceptable levels.

Existing odour control facilities shall be maintained in good working order.

2.9 Biosolids Treatment, Disposal and Reuse

Sludge generated by the treatment plant shall be managed in a manner approved by the Director and in accordance with the biosolids management strategies developed in the Regional District of Nanaimo Liquid Waste Management Plan.

2.10 Operating Plan, Including Commissioning and Emergency Procedures

The Regional District of Nanaimo must prepare an Operating Plan that provides for proper operation, maintenance and monitoring of the sewage conveyance, wastewater treatment and disposal facilities, and biosolids management, including monitoring details, emergency procedures and staff education and certification.

The Operating Plan must also include a commissioning plan that addresses operational procedures required to commission the authorized works identified in subsection 1.5, including the monitoring required to demonstrate that no adverse environmental impacts result from commissioning.

The Operating Plan must include a contingency plan that describes emergency procedures for the wastewater facility, including lift stations; procedures for notifying the Director and a health officer; and, actions to be taken if the discharge fails to meet the authorized discharge requirements.

The Director may reduce or suspend the operations to protect the environment until the approved method of pollution control has been restored, and/or corrective steps taken to prevent unauthorized discharge.

The Operating Plan must be submitted to the Director, Environmental Protection within 60 days from Operational Certificate's approval date. The Regional District of Nanaimo must notify the Director of any changes to the Operating Plan within 30 days of implementation.

2.11 Facility Classification and Operator Certification

The Regional District of Nanaimo must have the works authorized by this Operational Certificate classified (and the classification must be maintained) by the Environmental Operators Certification Program Society (Society). The works must be operated and maintained by persons certified within and according to the program provided by the Society. Certification must be completed to the satisfaction of the Director. In addition, the Director must be notified of the classification level of the facility and certification level of the operators and changes of operators and/or operator certification levels within 30 days of any change.

2.12 Qualified Professional

All information including plans, drawings, assessments, investigations, surveys, programs and reports, must be certified by a qualified professional. As-built plans and drawings of the facilities and works must be certified by a qualified professional, as defined in the Municipal Wastewater Regulation (507/99).

3. MONITORING REQUIREMENTS

3.1 Discharge Monitoring

3.1.1 Flow Measurement

Provide and maintain a suitable flow measuring device and record once per day the effluent volume discharged over a 24-hour period for the following:

- The volume of the flow which receives secondary treatment and which is up to no less than two times the average dry weather flow discharged from the municipal wastewater treatment plant to the outfall;

- The volume of the flow, at no less than the excess of two times the average dry weather flow, which bypasses secondary treatment and is discharged from the municipal wastewater treatment plant to the outfall.
- The volume of flow up discharged from the municipal wastewater treatment plant to the storage ponds at Morningstar Golf Course.

3.1.2 Sampling and Analysis

The Regional District of Nanaimo shall install suitable sampling facilities and obtain samples of the discharges from the municipal wastewater treatment plant at the following locations:

- A sampling location representing the portion of the daily discharge which receives secondary treatment, which is no less than two times the average dry weather flow;
- A sampling location representing the portion of the daily discharge which bypasses secondary treatment, which is no less than the excess of two times the average dry weather flow; and
- A sampling location at a point after which the above two discharges are recombined, as authorized in Subsection 1.4.
- A sampling location representing the discharge to the storage ponds at Morningstar Golf Course.

Analyses of effluent samples shall be carried out in accordance with the following schedule:

<u>Parameter</u>	<u>Frequency</u>	<u>Type</u>
Carbonaceous 5-day Biochemical Oxygen Demand	1 times per week	grab
Total Suspended Solids	1 times per week	grab
Ammonia Nitrogen	6 times/year	grab
Fecal Coliform	once monthly	grab
Total Phosphorus	6 times/year	grab
Phosphate Phosphorus	6 times/year	grab

There must be at least 10 days between samples for bi-monthly and monthly samples, and 5 days between samples if required for weekly samples.

Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.

3.2 Biosolids Monitoring

A biosolids monitoring program shall be carried out by the Regional District of Nanaimo. The program shall be established in consultation with the Regional Waste Manager.

3.3 Receiving Environment Monitoring

A receiving environment monitoring program shall be carried out by the Regional District of Nanaimo. The program shall be developed in consultation with the Vancouver Island Health Authority, First Nations and the Director.

The proposed monitoring program shall be developed in accordance with the goals and commitments in the approved Regional District of Nanaimo Liquid Waste Management Plan and shall be submitted to the Director for review on or before December 31, 2015.

Based on the results of this monitoring program, the monitoring requirements may be extended or altered by the Director, who will advise the Regional District of Nanaimo in writing of the altered program requirements.

3.4 Monitoring Procedures

3.4.1 Sampling and Analytical Procedures

Sampling and flow measurement must be carried out in accordance with the procedures described in "BRITISH COLUMBIA FIELD SAMPLING MANUAL for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples, 2003 Edition", or most recent edition, or by suitable alternative procedures as authorized by the Director.

Analyses are to be carried out in accordance with procedures described in the latest version of BRITISH COLUMBIA ENVIRONMENTAL LABORATORY MANUAL (2009 Edition)", or the most recent edition, or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-6409) or via the internet at www.crownpub.bc.ca. A copy of the manual is also available for review at all Environmental Protection offices.

4. REPORTING REQUIREMENTS

4.1 Discharge Reporting

Maintain data of analyses and flow measurements for inspection and submit the data, suitably tabulated, to the Director, Environmental Protection for the previous six months. With prior written authorization from the Director, Environmental Protection, data may be submitted, suitably formatted on a computer storage media, or with prior arrangement, be electronically transmitted directly to the Ministry of Environment central computer system. Such data must be transmitted twice per year (within 31 days of the end of the half) with an annual report completed once per year (within 120 days of the end of the calendar year).

4.2 Receiving Environment Reporting

Receiving environment monitoring results and reports must be submitted to the Director, Environmental Protection by April 30th of the year following receiving environment sampling and must be made available by the Regional District of Nanaimo to the public on request. The report on the receiving environment monitoring results must provide an assessment of the impacts of this discharge on the receiving environment and recommend changes, if any, to the monitoring program. The first report must be submitted on or before April 30th, 20XX..

4.3 Annual Report

An Annual Report, suitable for public review, must be submitted to the Director, Environmental Protection by April 30th of each year, for the preceding calendar year. The Annual Report must include a summary and interpretation, by a qualified professional, of the discharge monitoring results for the preceding calendar year.

APPENDIX A (SITE PLAN)

DRAFT

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**DRAFT OPERATIONAL CERTIFICATE
NANOOSE BAY POLLUTION CONTROL CENTRE**

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MINISTRY OF ENVIRONMENT

OPERATIONAL CERTIFICATE

ME-XXXX

Under the Provisions of the Environmental Management Act

Regional District of Nanaimo

6300 Hammond Bay Road

Nanaimo, B.C.

V9T 6N2

is authorized to discharge effluent from a municipal wastewater collection and treatment system located on the Nanoose Peninsula, British Columbia to the Strait of Georgia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

1. AUTHORIZED DISCHARGES

This section applies to the discharge of effluent from a municipal wastewater treatment system (commonly known as the Nanoose Bay Pollution Control Centre), a **MUNICIPAL WASTEWATER TREATMENT PLANT** serving a portion of the Regional District of Nanaimo. The site reference number for this discharge is EXXXXX.

- 1.1 The maximum authorized rate of discharge is 2,760 cubic metres per day.
- 1.2 The average dry weather flow shall not exceed 530 cubic metres per day.
- 1.3 **UNTIL DECEMBER 31, 20XX**, the characteristics of the discharge to the Strait of Georgia shall not exceed the following requirements:

Carbonaceous 5-day Biochemical Oxygen Demand	100 mg/L
Total Suspended Solids	100 mg/L
pH	6.0 – 9.0 pH units
Ammonia	(As per RDN back calculation following EIS)

The characteristics must be measured based on the sampling procedures and frequencies stipulated under Subsection 3.1.

- 1.4 **ON OR BEFORE DECEMBER 31, 20XX**, for that portion of the flow up to two times the average dry weather flow, the characteristics of the discharge to the Strait of Georgia shall not exceed the following requirements:

Carbonaceous 5-day Biochemical Oxygen Demand	45 mg/L
Total Suspended Solids	45 mg/L
pH	6.0 – 9.0 pH units
Ammonia	As per RDN back calculation following EIS

For that portion of the daily flow in excess of two times the average dry weather flow the characteristics of the discharge to the Strait of Georgia shall not exceed:

Carbonaceous 5-day Biochemical Oxygen Demand	130 mg/L
Total Suspended Solids	130 mg/L
pH	6.0 – 9.0 pH units

The characteristics must be measured based on the sampling procedures and frequencies stipulated under Subsection 3.1.

All flows shall be recombined prior to discharge through the outfall.

1.5 The authorized works must be complete and in operation as follows:

1.5.1 UNTIL DECEMBER 31, 20XX, mechanical screens, grit removal tanks, primary sedimentation tanks, odour control facilities, and an outfall with a x port diffuser extending approximately 450 metres m from mean low water to a depth of 39 m below mean low water, and related appurtenances approximately located as shown on attached the attached site plan (Appendix A), on and from the date of this Operational Certificate

ON OR BEFORE DECEMBER 31, 20XX the design of the wastewater facility meets the requirements of section 1.4 and the components each meet 75% of design flow when one unit in that component is out of service and an outfall with multiple port diffuser extending approximately 450 m from mean low water to a depth of 39 m below mean low water.

1.6 The location of the facilities from which the effluent originates is legally described as Lot A, District Lot 30, Nanoose District, Plan 52451, as shown on the attached site plans (Appendix A).

1.7 The location of the point of discharge is in the Strait of Georgia at 49.291° N, 124.129 W, as approximately shown on the attached site plan.

2. GENERAL REQUIREMENTS

2.1 Maintenance of Works

The Regional District of Nanaimo must inspect the authorized works regularly and maintain them in good working order.

2.2 Bypasses

The Regional District of Nanaimo shall ensure that no waste is discharged without being processed through the authorized works unless prior written approval is received from the Director.

2.3 Process Modifications

The Director must be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, authorized discharge rates and characteristics must not be exceeded.

2.4 Plans – New Works

Plans and specifications of new works authorised in subsection 1.5 must be certified and sealed by a qualified professional licensed to practice in the Province of British Columbia, and submitted to the Director before construction. Prior to the commencement of discharge, a qualified professional licensed to practice in the Province of British Columbia must certify that the works have been constructed in accordance with the submitted plans and a copy of final design drawings reflecting the actual construction of authorized works, certified as correct and sealed by a qualified professional, must be provided to the Director.

2.5 Future Upgrading of Works

Based on receiving environment monitoring data and/or other information obtained in connection with this discharge, the Regional District of Nanaimo may be required to provide additional treatment facilities.

The Director may require repair, alteration, removal, improvement or addition to works or construction of new or existing works, and submission of plans and specifications for works specified in this Operational Certificate.

2.6 Disinfection (to be determined by EIS)

Although disinfection of the effluent is not required at this time, suitable provisions should be made to include disinfection facilities in the future. Disinfection by chlorination is not permitted; other methods such as ultra violet and ozone shall be used.

2.7 Posting of Outfall

The Regional District of Nanaimo shall erect a sign on shore 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 must be acceptable to the Director.

2.8 Outfall Inspection

The outfall must be inspected by a qualified professional once every 5 years, or as

may otherwise be required by the Director, to ensure it is in good working condition. The inspection must include examination of the entire length of the pipe and diffuser for leaks, breaks and blockages. An inspection report must be submitted to the Director, Environmental Protection, within 60 days after the inspection date. Inspections shall be completed as per existing program..

2.9 Odour Control

Should objectionable odours attributable to the operation of the authorized works occur, measures or additional works will be required to reduce odours to acceptable levels.

2.10 Treatment Plant Sludge Wasting and Disposal

Sludge generated by the treatment plant shall be managed in a manner approved by the Director and in accordance with the biosolids management strategies developed in the Regional District of Nanaimo Liquid Waste Management Plan.

2.11 Operating Plan, Including Commissioning and Emergency Procedures

The Regional District of Nanaimo must prepare an Operating Plan that provides for proper operation, maintenance and monitoring of the sewage conveyance, wastewater treatment and disposal facilities, and biosolids management, including monitoring details, emergency procedures and staff education and certification.

The Operating Plan must also include a commissioning plan that addresses operational procedures required to commission the authorized works identified in subsection 1.5, including the monitoring required to demonstrate that no adverse environmental impacts result from commissioning.

The Operating Plan must include a contingency plan that describes emergency procedures for the wastewater facility, including lift stations; procedures for notifying the Director and a health officer; and, actions to be taken if the discharge fails to meet the authorized discharge requirements.

The Director may reduce or suspend the operations to protect the environment until the approved method of pollution control has been restored, and/or corrective steps taken to prevent unauthorized discharge.

The Operating Plan must be submitted to the Director, Environmental Protection within 60 days from Operational Certificate's approval date. The Regional District of Nanaimo must notify the Director of any changes to the Operating Plan within 30 days of implementation.

2.12 Facility Classification and Operator Certification

The Regional District of Nanaimo must have the works authorized by this Operational Certificate classified (and the classification must be maintained) by the Environmental Operators Certification Program Society (Society). The works must be

operated and maintained by persons certified within and according to the program provided by the Society. Certification must be completed to the satisfaction of the Director. In addition, the Director must be notified of the classification level of the facility and certification level of the operators and changes of operators and/or operator certification levels within 30 days of any change.

2.13 Qualified Professional

All information including plans, drawings, assessments, investigations, surveys, programs and reports, must be certified by a qualified professional. As-built plans and drawings of the facilities and works must be certified by a qualified professional, as defined in the Municipal Wastewater Regulation (507/99).

3. MONITORING REQUIREMENTS

3.1 Discharge Monitoring

3.1.1 Flow Measurement

(a) This section applies to the discharge authorized in Subsection 1.3.

Provide and maintain a suitable flow measuring device and record once per day the effluent volume discharged over a 24-hour period from the municipal wastewater treatment plant to the outfall.

(b) This section applies to the discharge authorized in Subsection 1.4.

ON OR BEFORE DECEMBER 31, 20XX provide and maintain a suitable flow measuring device and record once per day the effluent volume discharged over a 24-hour period for the following:

- The volume of the flow which receives secondary treatment and which is up to no less than two times the average dry weather flow discharged from the municipal wastewater treatment plant to the outfall; and,
- The volume of the flow, at no less than the excess of two times the average dry weather flow, which bypasses secondary treatment and is discharged from the municipal wastewater treatment plant to the outfall.

3.1.2 Sampling and Analysis

Effluent samples shall be collected as follows:

(a) **UNTIL DECEMBER 31, 20XX** the Regional District of Nanaimo shall maintain a suitable sampling facility and obtain samples of the discharge from the municipal wastewater treatment plant.

(b) **ON OR BEFORE DECEMBER 31, 20XX** the Regional District of

Nanaimo shall install suitable sampling facilities and obtain samples of the discharges from the municipal wastewater treatment plant at the following locations:

- A sampling location representing the portion of the daily discharge which receives secondary treatment, which is no less than two times the average dry weather flow;
- A sampling location representing the portion of the daily discharge which bypasses secondary treatment, which is no less than the excess of two times the average dry weather flow; and
- A sampling location at a point after which the above two discharges are recombined, as authorized in Subsection 1.4.

Analyses of effluent samples shall be carried out in accordance with the following schedule:

<u>Parameter</u>	<u>Frequency</u>	<u>Type</u>
Carbonaceous 5-day Biochemical Oxygen Demand	monthly	grab
Total Suspended Solids	monthly	grab
Ammonia Nitrogen	quarterly	grab
Phosphate Phosphorus	quarterly	grab
Total Phosphorus	quarterly	grab
Fecal Coliform	6 times/year	grab

There must be at least 2 months between samples for quarterly samples, and 10 days between samples for monthly samples

Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.

3.2 Biosolids Monitoring

A biosolids monitoring program shall be carried out by the Regional District of Nanaimo. The program shall be established in consultation with the Regional Waste Manager.

3.3 Receiving Environment Monitoring

A receiving environment monitoring program shall be carried out by the Regional District of Nanaimo. The program shall be developed in consultation with the Vancouver Island Health Authority, First Nations and the Director.

The proposed monitoring program shall be developed in accordance with the goals and commitments in the approved Regional District of Nanaimo Liquid Waste Management Plan and shall be submitted to the Director for review on or before December 31, 20XX.

Based on the results of this monitoring program, the monitoring requirements may be extended or altered by the Director, who will advise the Regional District of Nanaimo in writing of the altered program requirements.

3.4 Monitoring Procedures

3.4.1 Sampling and Analytical Procedures

Sampling and flow measurement must be carried out in accordance with the procedures described in "BRITISH COLUMBIA FIELD SAMPLING MANUAL for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples, 2003 Edition", or most recent edition, or by suitable alternative procedures as authorized by the Director.

Analyses are to be carried out in accordance with procedures described in the latest version of BRITISH COLUMBIA ENVIRONMENTAL LABORATORY MANUAL (2009 Edition)", or the most recent edition, or by suitable alternative procedures as authorized by the Director.

A copy of the above manual may be purchased from the Queen's Printer Publications Centre, P. O. Box 9452, Stn. Prov. Gov't. Victoria, British Columbia, V8W 9V7 (1-800-663-6105 or 250-387-6409) or via the internet at www.crownpub.bc.ca. A copy of the manual is also available for review at all Environmental Protection offices.

4. REPORTING REQUIREMENTS

4.1 Discharge Reporting

Maintain data of analyses and flow measurements for inspection and submit the data, suitably tabulated, to the Director, Environmental Protection for the previous six months. With prior written authorization from the Director, Environmental Protection, data may be submitted, suitably formatted on a computer storage media, or with prior arrangement, be electronically transmitted directly to the Ministry of Environment central computer system. Such data must be transmitted semi-annually (within 31 days of the end of the half year).

4.2 Receiving Environment Reporting

Receiving environment monitoring results and reports must be submitted to the Director, Environmental Protection by April 30th of the year following receiving environment sampling and must be made available by the Regional District of Nanaimo to the public on request. The report on the receiving environment monitoring results must provide an assessment of the impacts of this discharge on the receiving environment and recommend changes, if any, to the monitoring program. The first report must be submitted on or before April 30th, 20XX.

APPENDIX A (SITE PLAN)

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