BRITISH COLUMBIA

December 3, 2020

Tracking Number: 381434
Authorization Number: 107051

REGISTERED MAIL

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT
4730 Kingsway, 27th Floor, Metrotower III
Burnaby, BC V5H 0C6

Dear Operational Certificate Holder:

Enclosed is Amended Operational Certificate 107051 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 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.

Administration of this operational certificate will be carried out by staff from the Authorizations - South Region. Plans, data and reports pertinent to the operational certificate are to be submitted to the Regional Manager, Environmental Protection, at Ministry of Environment and Climate Change Strategy, Regional Operations, Authorizations - South Region, 1259 Dalhousie Dr., Kamloops BC V2C 5Z5.

Yours truly,

Luc Lachance, P.Eng
for Director, *Environmental Management Act*
Authorizations - South Region

BRITISH COLUMBIA

MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE STRATEGY

OPERATIONAL CERTIFICATE

107051

Under the Provisions of the Environmental Management Act

GREATER VANCOUVER SEWERAGE AND DRAINAGE DISTRICT

4730 Kingsway, 27th Floor, Metrotower III
Burnaby, BC V5H 0C6

is authorized to discharge contaminants to the air from a waste to energy facility located at 5150 Riverbend Drive, Burnaby, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may lead to prosecution.

1. AUTHORIZED DISCHARGES

1.1 Mass Burn Incinerator/Boilers

This section applies to the discharge of air contaminants from three separate **Mass Burn Incinerators/Boilers** from a common support stack containing three individual flues. The site reference number for this discharge is E300670.

1.1.1 The maximum combined rate of discharge is 72 cubic metres per second, resulting from the combustion of a maximum of 310,000 tonnes per year (moist weight as received) of waste.

1.1.2 The authorized discharge period is continuous.

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

Parameter	Units[1]	Interim Discharge Limits[2][3]			Discharge Limits[3]		Response Limits[4]
		24-hr average[5]	4-hr average[6]	1-hr average	24-hr average[5]	Approved Test Method[7]	1/2-hr average[8]
Total Particulate Matter[9]	mg/dscm	-	-	-	-	9	-
Opacity	%	-	-	5	-	-	5
Carbon Monoxide (CO)	mg/dscm	-	55	-	50	-	100
Hydrogen Chloride (HCl)	mg/dscm	-	-	55[10]	10	-	60
Hydrogen Fluoride (HF)	mg/dscm	-	-	-	-	1.0	-
Sulphur Dioxide (SO_2)	mg/dscm	200	-	-	50	-	190
Nitrogen Oxides (NO_x)	mg/dscm	350	-	-	190	-	350
Total Hydrocarbons (THC)	mg/dscm	-	-	Manual Stack Test limit of 40[11]	10	-	20
Total Dioxins and Furans (as PCDD/F TEQ)[12]	ng/dscm	-	-	-	-	0.08	-
Cadmium (Cd)	µg/dscm	-	-	-	-	7	-
Mercury (Hg)[13]	µg/dscm	-	-	-	-	20	-
Sum of Lead (Pb), Arsenic (As), Chromium (Cr)	µg/dscm	-	-	-	-	64	-
Chlorophenols	µg/dscm	-	-	-	-	1	-
Chlorobenzenes	µg/dscm	-	-	-	-	1	-

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Polycyclic Aromatic Hydrocarbons (PAHs)	µg/dscm	-	-	-	-	5	-
Polychlorinated Biphenyls (PCBs)	µg/dscm	-	-	-	-	1	-

1. dscm = dry standard cubic metre, corrected to 11% oxygen
2. Interim Discharge Limits will apply until and including the following dates, at which point the Discharge Limits and Response Limits will apply:
    a. Opacity – December 31, 2017
    b. CO – December 31, 2016 (Discharge Limit) and December 31, 2018 (Response Limit)
    c. HCl – March 3, 2025 (Discharge and Response Limits)
    d. SO2 – March 3, 2025 (Discharge and Response Limits)
    e. NOx – December 31, 2017 (Response Limit)
    f. THC – December 31, 2018 (Discharge and Response Limits)
3. Discharge Limits are the criteria for compliance determination of each discharge parameter listed in the column, subject to Note 2 above.
4. Response limits are the threshold requiring the Operational Certificate Holder to take immediate action to bring down the discharge levels to the applicable discharge limits specified in this section. The response limits are expressed as ½ hour (block) average values measured by approved continuous emission monitors. The Operational Certificate Holder is required to demonstrate the response action(s) implemented by record keeping.
5. Interim Discharge Limits are daily average values, calculated as the arithmetic average of valid continuous emissions monitoring system (CEMS) data. Discharge Limits are 24-hour (daily block) averages.
6. Calculated as the arithmetic average of 4 hours of data from a CEMS.
7. Determined by a test method approved by the Director. A single manual stack test result is the average of a minimum of three test runs.
8. Calculated as the arithmetic average of ½ hour block of data from a CEMS.
9. Total particulate matter (filterable portion only) is determined by EPA Test Method 5 or an alternative method approved by the Director.
10. Continuous monitoring of SO_2 will be used as a surrogate for emission monitoring of acid gases, such as HCl and HF.
11. Monitored as total hydrocarbons (measured as methane).
12. PCDD (polychlorinated dibenzo-p-dioxins) & PCDF (polychlorinated dibenzofurans) will be expressed in dioxin toxicity equivalent value (dioxin TEQ) as defined in the *Hazardous Waste Regulation*.
13. Mercury determined by EPA Test Method 29 or an alternative method approved by the Director.

1.1.4 Notwithstanding the requirements of 1.1.3, the emission standards specified in 1.1.3 are not applicable to start up and shut down periods as defined by section 3.6.

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1.1.5 The authorized works are a refuse bunker, three mass burn incinerators/boilers each equipped with an independent feed chute, integrated furnace/boiler, Covanta Low NO_x System, selective non-catalytic NO_x reduction system, lime scrubber, activated carbon injection system and three baghouses, fans, heaters, ash handling and treatment systems, turbo generator, air cooled condenser or steam vent, a common support stack (with three individual flues), and related appurtenances approximately located as shown on the attached Site Plan.

1.1.6 The authorized works must be complete and in operation while discharging.

1.1.7 The location of the facilities from which the discharge originates, and the point of discharge is Lot 1, District Lot 167, Group 1, New Westminster District, Plan 72187.

1.1.8 A furnace temperature of 980 degrees Celsius must be maintained for a minimum residence time of one second when unburned solid waste is present in a combustion chamber. The secondary combustion zone temperature for each incinerator unit must be monitored and reported for compliance purposes based on a minimum one-hour average reference temperature of 800 degrees Celsius, which correlates to a combustion zone temperature of 980 degrees Celsius.

1.1.9 The Operational Certificate Holder must ensure that under no circumstances solid waste is continued to be fed to an incinerator/boiler when an authorized parameter response limit is exceeded for a period of more than 4 hours uninterrupted per parameter per unit; moreover, the cumulative duration of operation in such conditions over one calendar year must be less than 60 hours per parameter per unit.

1.1.10 The Operational Certificate Holder must continuously monitor additional discharge parameters including, but not limited to, volumetric flowrate, oxygen, and carbon dioxide in the flue gases for operational and emissions reporting purposes.

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1.2 Closed-Circuit Cooling Tower

This section applies to the discharge of air contaminants from a Closed-Circuit Cooling Tower. The site reference number for this discharge is E300671.

1.2.1 The maximum rate of discharge is 70 m^3/s.

1.2.2 The authorized discharge period is continuous.

1.2.3 The characteristics of the discharge must be equivalent to or better than typical air discharge from a closed-circuit cooling tower including water vapour and mist containing dissolved minerals naturally present in water and water conditioning additives for pH and algae growth control.

1.2.4 The authorized works are a closed-circuit cooling tower, exhaust vents, and related appurtenances approximately located as shown on the attached Site Plan.

1.2.5 The authorized works must be complete and in operation while discharging.

1.2.6 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1.7 above.

1.3 Lime Silo

This section applies to the discharge of air contaminants from a Lime Silo. The site reference number for this discharge is E300672.

1.3.1 The maximum rate of discharge is 1.0 m^3/s.

1.3.2 The authorized discharge period is intermittent.

1.3.3 The characteristics of the discharge must be equivalent to or better than:

Total particulate matter,
maximum (estimated): 0.012 tonnes per year

1.3.4 The authorized works are a lime silo, a dust collector, and related appurtenances approximately located as shown on the attached Site Plan.

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1.3.5 The authorized works must be complete and in operation while discharging.

1.3.6 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1.7 above.

1.4 **Activated Carbon Silo**

This section applies to the discharge of air contaminants from an Activated Carbon Silo. The site reference number for this discharge is E300673.

1.4.1 The maximum rate of discharge is 1.0 m^3/s.

1.4.2 The authorized discharge period is intermittent.

1.4.3 The characteristics of the discharge must be equivalent to or better than:

Total particulate matter,
maximum (estimated): 0.00035 tonnes per year

1.4.4 The authorized works are an activated carbon silo, a filter vent, and related appurtenances approximately located as shown on the attached Site Plan.

1.4.5 The authorized works must be complete and in operation while discharging.

1.4.6 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1.7 above.

1.5 **Fly Ash Silo**

This section applies to the discharge of air contaminants from a Fly Ash Silo. The site reference number for this discharge is E300674.

1.5.1 The maximum rate of discharge is 2.0 m^3/s.

1.5.2 The authorized discharge period is continuous.

1.5.3 The characteristics of the discharge must be equivalent to or better than:

Total particulate matter,
maximum (estimated): 0.098 tonnes per year

1.5.4 The authorized works are a fly ash silo, dust collector, and related appurtenances approximately located as shown on the attached Site Plan.

1.5.5 The authorized works must be complete and in operation while discharging.

1.5.6 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1.7 above.

1.6 **Emergency Power Generator**

This section applies to the discharge of air contaminants from a standby Emergency Power Generator. The site reference number for this discharge is E300675.

1.6.1 The maximum rate of discharge is 2.0 m^3/s.

1.6.2 The authorized discharge period is limited to necessary emergency and maintenance operation.

1.6.3 The characteristics of the discharge must be equivalent to or better than typical emissions from an emergency power generator utilizing low sulphur diesel fuel.

1.6.4 The authorized works are a standby emergency power generator and related appurtenances approximately located as shown on the attached Site Plan.

1.6.5 The authorized works must be complete and in operation while discharging.

1.6.6 The location of the facilities from which the discharge originates and the point of discharge is the same as Section 1.1.7 above.

2. GENERAL REQUIREMENTS

2.1 Maintenance of Works and Emergency Procedures

The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the Operational Certificate Holder which prevents effective operation of the authorized works or leads to an unauthorized discharge, the Operational Certificate Holder must take appropriate remedial action and notify the Director immediately. The Director may reduce or suspend operations to protect the environment until the authorized works have been restored and/or corrective steps taken to prevent unauthorized discharges.

2.2 Bypasses

Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.

2.3 Plans - Works

Plans and specifications of the works authorized in Sections 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6 must be submitted to the Director upon request. For any material modifications to the authorized works, a qualified professional must certify that the works have been constructed in accordance with the certified design before discharge commences.

2.4 Process Modifications

The Director must be notified prior to implementing material changes to any process that adversely affects the quality and/or quantity of the discharge from the facility to a material extent. Despite notification under this section, permitted levels must not be exceeded.

2.5 Non-compliance Response and Reporting

Unless otherwise instructed in writing by the Director, the Operational Certificate Holder must immediately notify the Director or designate of any non-compliance with the requirements of this Operational Certificate and take appropriate remedial action.

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Written reporting of non-compliance events must be included in the monthly reports and must include, but not necessarily be limited to:

- all relevant test results, operational data, etc. related to the noncompliance;
- an explanation of the most probable cause(s) of the noncompliance; and
- remedial action planned and/or taken to prevent similar noncompliance(s) in the future.

A summary of non-compliance events for the calendar year must be included in the annual reports.

2.6 General Notification

Any notifications to the Director or designate must be by email, and accompanied by phone (currently Surrey regional office, 604-582-5200) for incidents that occur during normal business hours (typically Monday to Friday, between 08:30 and 16:30). Email acknowledgement or personal phone contact with ministry staff is required for notification to be considered to have occurred.

2.7 Standard Conditions

For the administration of this Operational Certificate all gaseous volumes must be converted to standard conditions of 293.15 K and 101.325 kPa with zero percent moisture and 11% oxygen.

2.8 Authorized Fuels and Wastes

The authorized wastes for the Mass Burn Incinerators/Boilers are municipal solid waste authorized by an approved waste management plan pursuant to Section 24 of the Environmental Management Act and any wastes authorized prior to January 1, 2015. Natural gas may be used as an auxiliary fuel as required.

Other wastes may be authorized as fuel subject to management of the waste not conflicting with any regulation. Such wastes may be approved or prohibited in writing by the Director, or approved pursuant to the following protocol:

1. Prior to usage of the proposed waste, submit written notification to the Director identifying the proposed material. A report must accompany this notification which must contain the following:

   a. records detailing analyses and written descriptions establishing the composition, source, and quality of the proposed waste;
   b. proposed feed rate of the waste in tonnes per hour with a maximum daily feed quantity; and
   c. documentation supporting that disposal of the proposed waste does not conflict with requirements of any regulation.

2. No earlier than ten business days after submitting the report required by (1) above, the Operational Certificate Holder must conduct a demonstration trial utilizing the proposed waste at the maximum proposed feed rate. The demonstration trial must meet the following requirements:
   a. site storage and handling of the proposed waste must be conducted in such a manner so as to effectively control fugitive emissions;
   b. the duration of the demonstration trial must be a maximum of 96 hours;
   c. emissions monitoring must be conducted to determine the concentration of the parameters listed in Section 1.1.3. Emissions monitoring results must show that processing of the proposed waste does not cause a statistically significant increase in emissions concentrations for the parameters listed in Section 1.1.3;
   d. fly ash and bottom ash monitoring must be conducted to determine the concentrations of the parameters included in the fly ash and bottom ash management plans. Fly ash and bottom ash monitoring results must show that processing the proposed waste does not cause statistically significant increase in concentrations of parameters listed in fly ash and bottom ash management plans; and
   e. following completion of the trial, all information collected during the trial including all field data, calculations, operating parameters, measurements, etc., must be submitted to the Director. The submission must include a thorough evaluation of the trial data in a report prepared by a qualified professional.

   The Director may at any time request additional information if warranted for the protection of human health or the environment.

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Considering this protocol and any other relevant information, the Director may provide authorization for the Operational Certificate Holder to commence utilization of the proposed waste up to the maximum tested feed rate.

2.9 Waste Handling and Storage

Waste must be protected against weather elements to prevent pollution from leachate, odour, litter, or dust emissions during handling and storage.

The Operational Certificate Holder must implement necessary housekeeping procedures to eliminate sources and potential sources of attraction for vermin and vectors.

Waste delivered to the facility by truck must be discharged directly into the refuse bunker. Waste loads delivered to the facility by truck may be periodically discharged onto a dedicated paved area adjacent to the refuse bunker to facilitate waste load inspections and waste audits.

Unloading and storage of bulk waste delivered by trucks must be managed in an area with appropriate ventilation and odour control.

2.10 Future Recycling or Beneficial Use

The Director may require an evaluation of the potential to:

- recycle or beneficially use certain residues from the combustion process; or
- re-use, recycle, or recover certain resources.

2.11 Fugitive Emission Control

Fugitive odour, particulate, etc. emissions created within the facility must be suppressed. If air quality becomes a concern, the Director may require additional control measures on emission sources.

2.12 Ash Management

2.12.1 Fly ash and bottom ash must be managed and disposed of at a facility acceptable to the Director, or beneficially used as acceptable to the

Director. Recoverable materials such as ferrous metal pieces should be recovered from bottom ash.

2.12.2 A Fly Ash Management Plan must be submitted by August 15, 2017. The Fly Ash Management Plan must be acceptable to the Director and may be amended in writing by the Director. The Fly Ash Management Plan must include proposed sampling and analytical protocols, sampling frequency, results interpretation process, protocols for interpreting anomalous data, and other related information. Fly ash management must be conducted according to the Fly Ash Management Plan.

2.12.3 A Bottom Ash Management Plan must be submitted by August 15, 2017. The Bottom Ash Management Plan must be acceptable to the Director and may be amended in writing by the Director. The Bottom Ash Management Plan must include proposed sampling and analytical protocols, sampling frequency, results interpretation process, protocols for interpreting anomalous data, and other related information. Bottom ash management must be conducted according to the Bottom Ash Management Plan.

2.13 Action Plan Review and Update

The Operational Certificate Holder must conduct a review acceptable to the Director of an Action Plan for Review of Environmental Performance of the Metro Vancouver Waste to Energy Facility (Action Plan) to assess current environmental technology using principles outlined in the ministry Determining Best Achievable Technology Standards policy. The Action Plan must be reviewed and updated at least each 5 years from issuance of this Operational Certificate, with the next review and update required by December 15, 2021. Actions recommended as part of each review must be incorporated into the Action Plan.

2.14 Environmental Management System

The Operational Certificate Holder must ensure that an Environmental Management System (EMS) equivalent to or exceeding ISO 14001 continues to be implemented to ensure continual environmental improvement and compliance with discharge requirements through the use of effective operating procedures, training, and maintenance practices. This system must include: operating the equipment within its designed capabilities; preventing occurrences of abnormal operating conditions in

all areas of the facility; and enhancing the capabilities to manage or mitigate/correct such abnormal operating conditions for the protection of the environment and human health. The Operational Certificate Holder must ensure the EMS is updated annually and kept available for inspection.

2.15 Emergency Response Plan

The Operational Certificate Holder must ensure that an Emergency Response Plan is maintained that describes the procedures to be taken to prevent or mitigate any spills, unauthorized discharge of contaminants to the air, or deposit of deleterious substance to the receiving environment. The Emergency Response Plan must be immediately implemented if there is a discharge/deposit, or any risk of a discharge/deposit, of a deleterious substance to the receiving environment. The Operational Certificate Holder must ensure that the Emergency Response Plan is updated annually and kept available for inspection.

2.16 Start Up / Shut Down Evaluation

The Operational Certificate Holder must undertake an Evaluation of emissions that occur during facility start up and shut down events. The Evaluation should characterize contaminant emissions, including emissions of trace organics, through emissions monitoring and any other relevant sources of information to quantify or predict emissions occurring during start up and shut down conditions. The Evaluation must be completed and a report acceptable to the Director submitted by June 15, 2018.

2.17 Evaluation of Contaminant Dispersion and Public Health Risk Assessment

The Operational Certificate Holder must retain an independent qualified professional to undertake an evaluation of the potential surface deposition of contaminants from the operation of the facility. The Evaluation must include:

- characterization of contaminant emissions using site specific monitoring data, scientific literature review, and any other relevant sources of information, to determine potential environmental and health effects for all air contaminants of potential concern including dioxins and furans;

- updated and comprehensive site-specific air dispersion modelling to evaluate potential impacts on the local and regional air quality, and the potential for atmospheric deposition of air contaminants;
- a comprehensive public health risk assessment that takes into consideration multiple pathways of exposure and potentially sensitive receptors within the area of impact, and that covers long-term normal operation of the facility as well as short-term conditions anticipated at start up, shutdown, or during an upset;
- an assessment of the existing regional air quality monitoring network and program to confirm its appropriateness and effectiveness in assessing potential impacts from facility emissions; and
- based on the preceding, an assessment of the effectiveness of the monitoring requirements made in this Operational Certificate, and recommendations for sampling or evaluation of receptors such as soil, vegetation, or other media.

The independent qualified professional must have expertise in air quality, air dispersion modelling, and human health risk assessment. Input from the provincial health authorities must be solicited, and the final report must be provided to them for informational purposes. The Evaluation must be completed and a report acceptable to the Director submitted by December 15, 2018.

3. MONITORING AND REPORTING REQUIREMENTS

3.1 Waste and Ash Monitoring

In a manner acceptable to the Director, the Operational Certificate Holder must ensure the following are monitored and recorded:

3.1.1 Record measured weight of waste received, waste processed, and natural gas burned per day, per month, and per year.

3.1.2 Record estimated bulk weight (and estimated % moisture) of treated bottom ash and treated fly ash destined for disposal or beneficial use per month and per year.

3.2 Spill Reporting

All spills to the environment (as defined in the Spill Reporting Regulation) must be reported immediately in accordance with the Spill Reporting

Regulation. Notification must be via the Provincial Emergency Program, currently at 1-800-663-3456.

3.3 Discharge Monitoring for Section 1.1

The Operational Certificate Holder must ensure the discharge is monitored as follows:

Parameter for Stack E300670	Sampling and Analysis Frequency[1]
Rate of Discharge[2], m^3/s	Continuous & Four times per year
Total Particulate Matter, mg/m^3	Four times per year
Opacity[3], %	Continuous[3,4] & record one minute average values for inspections
Oxygen[6], % of dry air	Continuous[3,4] & record ½ hr average values for concentration adjustments
Carbon Monoxide (CO) , mg/m^3	Continuous[3,4] & record ½ hr and 24 hour average values
Hydrogen Chloride (HCl), mg/m^3	Continuous[3,4] & record ½ hr and 24 hour average values
Hydrogen Fluoride (HF), mg/m^3	Four times per year
Sulphur Dioxide (SO_2), mg/m^3	Continuous[3,4] & record ½ hr and 24 hour average values
Nitrogen Oxides (NOx), mg/m^3	Continuous[3,4] & record ½ hr and 24 hour average values
Total Hydrocarbons (THC), mg/m^3	Continuous[3,4] & record ½ hr and 24 hour average values
PCDD & PCDF TEQ, pg/m^3	Annually[5]
Total Mercury, mg/m^3	Four times per year
Polychlorinated Biphenyls (PCBs), mg/m^3	Annually[5]
Chlorophenols, mg/m^3	Annually[5]
Chlorobenzene, mg/m^3	Annually[5]
Lead, mg/m^3	Four times per year
Arsenic, mg/m^3	Four times per year
Cadmium, mg/m^3	Four times per year
Chromium, mg/m^3	Four times per year
Polycyclic Aromatic Hydrocarbons (PAH) , mg/m^3	Annually[5]

1. For those parameters with continuous monitoring requirements, compliance with Section 1.1 discharge requirements must be verified with continuous monitoring data (with a QA/QC program satisfactory to the Director) collected during normal operating periods, excluding start up and shut down periods described in Section 3.6. Other than instrument

errors, all collected data admissible under a QA/QC program must be recorded and reported. The Director may amend the above monitoring requirements when the Operational Certificate Holder is able to demonstrate to the Director that an alternative compliance monitoring method/requirement is equal to or better than the above requirements.

2. The rate of flue gas discharge must be adjusted to dry standard conditions. The rate of flue gas discharge must be reported as daily average values, calculated as the arithmetic average of valid CEMS data.
3. The required data capture rate for (CEMS) specified above must be 90% of the operating hours per quarter and 95% of the operating hours per annum. The monthly CEMS compliance data report must include % up time for CEMS. The statistic must be extended to annual reports.
4. The CEMS data (½ hour and 24 hour averages) for the above parameters must include maximum, minimum and average for the day, month and year and % of time out of compliance. The specified CEMS data may not be available for all parameters prior to December 31, 2017.
5. Monitoring conducted once per year on one incinerator/boiler.

3.4 Emission Control Device Record Keeping

The Operational Certificate Holder must ensure performance records are maintained for all emission control devices in conjunction with manufacturer specifications. The records must include inspection and maintenance records, amounts of reagents such as lime, carbon, ammonia, phosphoric acid, etc. used, and frequency and duration of any period when an emission control device is not fully operational, along with appropriate description of each malfunction, and the corrective measure(s) taken in each case.

3.5 Secondary Combustion Zone Temperature Monitoring Requirements

In a manner acceptable to the Director, the Operational Certificate Holder must ensure the secondary combustion zone temperature (or equivalent surrogate temperature) is monitored and recorded continuously in degrees Celsius at a suitable location in the secondary combustion zone of the incinerator.

3.6 Start Up and Shut Down Period

The start up and shut down period for the incinerator/boilers must be no more than 5 hours each. During this period, emission data recorded by

CEMS may be excluded from regulatory emission calculations. Start up periods may exclude times when the auxiliary burners are in service but waste has not yet been introduced into the boiler. The start up period commences when the feed chute damper is open and waste is charged to the stoker. The start up period will be deemed to be over when the boiler steam flow is greater than 30 tonnes per hour for at least 15 minutes but in any case not longer than five hours. After the start up period, all air emission discharge requirements specified in Section 1.1 are applicable even during periods when feed rates are being adjusted for any reasons other than start up or shut down. Auxiliary burner(s) are to be used during start-up, shutdown, upset conditions, and at any other times as necessary to maintain the secondary combustion zone temperature. Instances in which the auxiliary burner(s) availability impacts the secondary combustion zone temperature must be noted in the monthly operating report. The shut down period commences when waste is no longer being charged to the stoker. The shut down period will be deemed to be over when the auxiliary gas burners are shut down after combustion of waste is complete or when the facility has transitioned back to a start up period.

The Director may amend the exclusion of CEMS emission data based upon a review of discharge data and actual start up and shut down operations of the incinerator/boilers.

3.7 Modification of Monitoring Requirements and/or Treatment Works

Based on monitoring results and any other pertinent information obtained in connection with the discharges, the Director may amend the monitoring requirements, and/or require the Operational Certificate Holder to take additional measures, and/or provide additional treatment works to reduce the impact on the environment and human health from discharges to the receiving environment.

3.8 Sampling Location and Techniques

All sampling and monitoring locations, techniques, and equipment must be acceptable to the Director. Sampling and monitoring data, including the stack flow rate, must be accompanied by process data relevant to the operation of the source of the emissions and the performance of the pollution abatement equipment involved in the testing.

Discrete stack sampling must be done under actual operating conditions

when the Operational Certificate Holder is able to properly document that these conditions represent a period of normal operation. The following parameters must be reported for the test period:

a. boiler steam production expressed as kg/h or kJ/h;
b. boiler secondary combustion zone temperature or an appropriate surrogate expressed in degrees Celsius; and
c. the estimated rates of waste and fuels, as-fired into the boiler during each compliance test period.

3.9 Continuous Emission Monitoring Systems

Continuous emission monitoring systems (CEMS) must be installed, operated, and maintained according to applicable standards. The Operational Certificate Holder must record and maintain for each CEMS information including: performance range, specifications, and calibration data; availability (expressed as a monthly percentage of facility operating hours); maintenance and calibration work performed; and results of any independent audits and responses to such audits.

3.10 Sampling and Analytical Procedures

Sampling is to be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual", 2013 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 "British Columbia Laboratory Manual (2015 Edition)", or the most recent edition, or by suitable alternative procedures as authorized by the Director.

Copies of the above manuals are currently available on the Ministry web page at https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance.

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for Director, *Environmental Management Act*
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3.11 Reporting Requirements

3.11.1 Source Testing Reporting

The Operational Certificate Holder must submit a report in electronic format to the Director, within 60 days of the completion of the actual source testing, with the exception of testing for chlorophenols, chlorobenzenes, polycyclic aromatic hydrocarbons, hydrocarbons, polychlorinated biphenyls, and/or total dioxins and furans, in which case source testing results must be submitted within 90 days of the actual source testing. In addition to the contaminants specified in Section 3.3, the Operational Certificate Holder must report all individual metals that are part of the metals analytical methodology.

3.11.2 Monthly Report

The Operational Certificate Holder must publish a Monthly Report and notify the Director of the publication within 45 days following each month end. The Monthly Report must, at a minimum, include:

- CEMS data tabulations;
- CEMS performance data;
- identification and responses to discharge contaminant exceedances and response limits;
- instances of the combustion temperature falling below the required minimum, and responses;
- identification and any responses to start up, shut down, process upset, bypass, and emergency/spill events;
- identification of instances in which the auxiliary burner(s) availability impacts the secondary combustion zone; and
- any complaints received and responses.

A detailed plan for, and example of, the proposed contents of the Monthly Report identifying and illustrating the minimum information to be included must be submitted to the Director by June 15, 2017. The plan for the Monthly Report must be acceptable to and may be amended in writing by the Director, and must be implemented by the Operational Certificate Holder. The existing format for the monthly report must continue to be used until such time that the plan for the Monthly Report is implemented.

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3.11.3 **Annual Report**

The Operational Certificate Holder must publish an Annual Report for the preceding calendar year and notify the Director of the publication by March 31 of each year. The Annual Report must, at a minimum, include:

- summaries, in general, of information contained in the Monthly Reports;
- summaries of CEMS and manual stack test emissions data;
- CEMS calibration data;
- summaries/interpretation of compliance and complaints information;
- overview of plant performance;
- operational information such as quantities of waste processed, estimated amounts of fly ash and bottom ash or other residues generated and their processing or disposal method;
- summary of operation, performance, and maintenance of emissions control devices; and
- evaluation of monitoring programs.

A detailed plan for the proposed contents of the Annual Report identifying the minimum information to be included must be submitted to the Director by June 15, 2017. The plan for the Annual Report must be acceptable to and may be amended in writing by the Director, and must be implemented by the Operational Certificate Holder.

3.11.4 **Upgrade Implementation Report**

The Operational Certificate Holder must publish an annual report outlining the status of facility upgrades to meet interim discharge limits as specified in Section 1.1.3. The report must be submitted to the Director by March 1 of each year and may be included in the Annual Report. The Upgrade Implementation Report must, at a minimum, include:

- detailed description of the facility upgrades project planned activities and deliverables for the entire project presented in a Gantt chart format or in another format acceptable to the Director;
- detailed description of activities completed, and deliverables achieved in the previous 12 months;
- detailed description of planned activities presented in monthly increments for the next 12 months;

- identification of any project risk(s) or project change(s) that could negatively impact the upgrades project completion and meeting of interim discharge limits, including supporting rationale and proposed mitigating and/or corrective actions, as applicable.

3.11.5 **Internet Publication Plan**

A public internet website must be established for the facility that must include, at a minimum:

- manual stack test emissions data;
- real-time CEMS data relative to the emissions limits included in Section 1.1.3 of this Operational Certificate;
- fly ash and bottom ash analytical data;
- links to facility National Pollutant Release Inventory and Greenhouse Gas data published by the associated regulatory agency;
- compliance and complaints information and response;
- relevant operational and incident information and response;
- additional opportunities for dialogue with the community where appropriate;
- the Fly Ash Management Plan and Bottom Ash Management Plan submitted in accordance with Section 2.12, the Start Up/Shut Down Evaluation submitted in accordance with Section 2.16, the Contaminant Dispersion Evaluation and Health Risk Assessment submitted in accordance with Section 2.17; and
- any other relevant additional information such as reports, documents, plans, links, etc. concerning the facility.

An Internet Publication Plan for the website must be submitted to the Director by June 15, 2017. The plan should identify the minimum information and required timelines, retention, etc. for publication and should consider the interests of the public, agencies, and concerned stakeholders. The plan must be acceptable to and may be amended in writing by the Director, and must be implemented by the Operational Certificate Holder.

The Operational Certificate Holder must track and consider all stakeholder feedback received following implementation of the Internet Publication Plan. The feedback, the Operational Certificate Holder's response to the

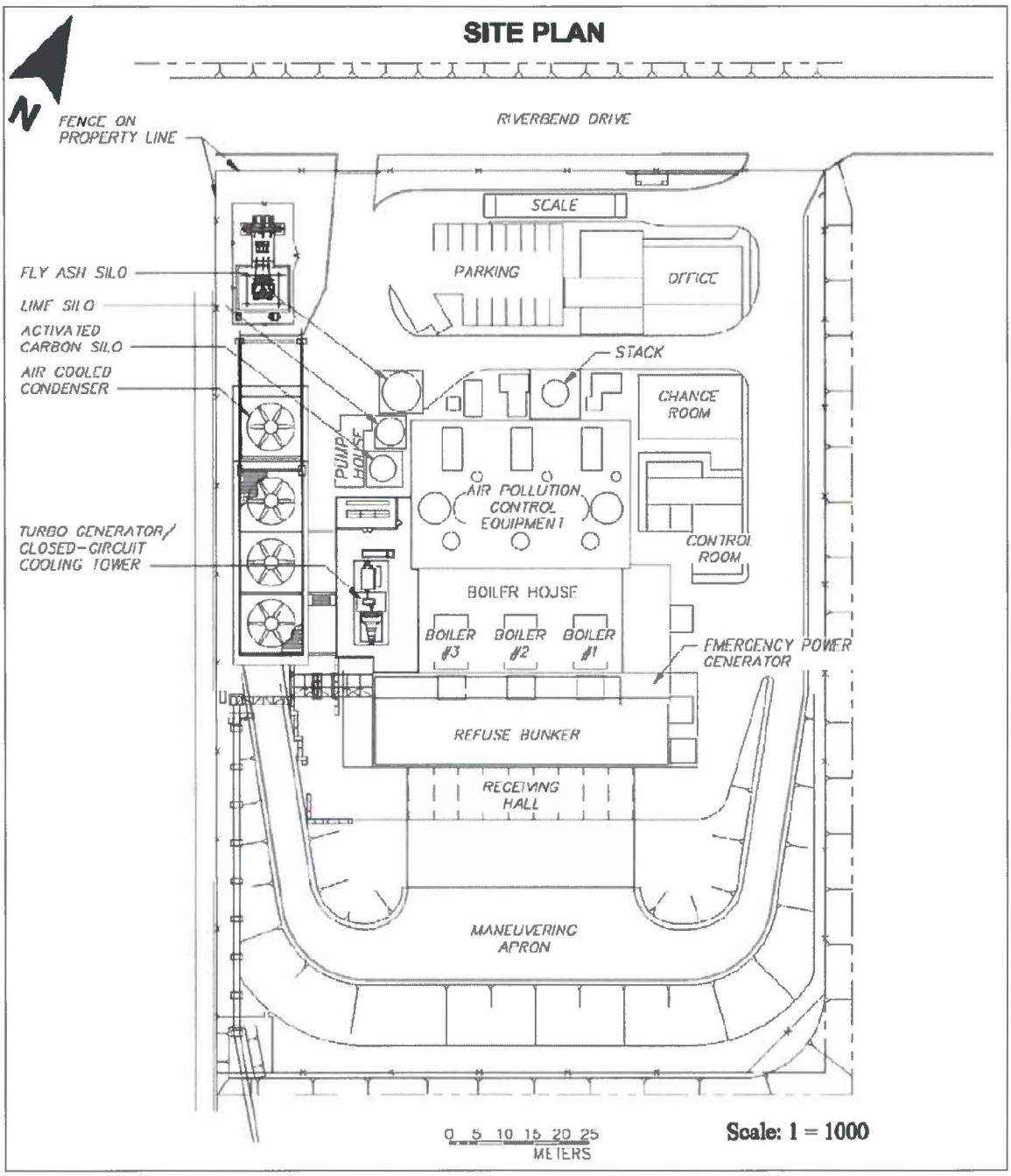
feedback, and any changes to the Internet Publication Plan must be included in the Annual Report.

3.11.6 Stakeholder Comments

The Operational Certificate Holder must record and consider all stakeholder comments on the publication of operational data and the content, structure, and publication of reports, plans, etc. The comments and Operational Certificate Holder's response must be included in publicly available content.

3.11.7 Record Keeping Requirements

Maintain all records including emission testing results, data of analysis, reports, and continuous emission results and calibration records for continuous monitors required under this Operational Certificate as long as reasonably practical. Data published according to the requirements of this Operational Certificate must be retained for a minimum of 20 years from the date of publishing.



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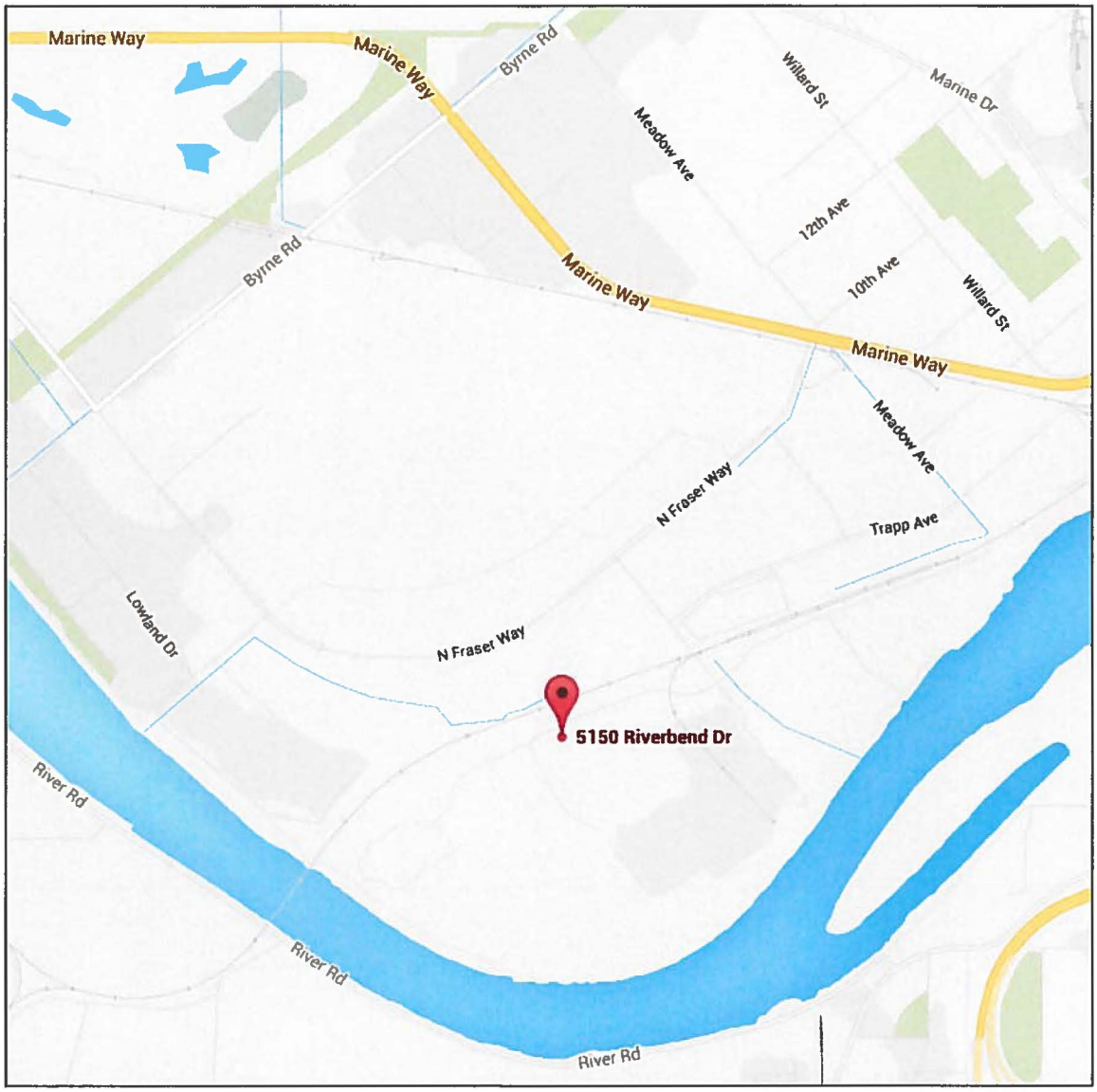
LOCATION MAP



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