



June 27, 2024

Tracking Number: 413286

Authorization Number: 111155

REGISTERED MAIL

Arbios Biotech Canada (GP 1) Ltd. and Arbios Biotech Canada (GP 2) Ltd.
doing business as
Arbios Biotech Canada LP
2800 Park Place
666 Burrard St.
Vancouver BC V6C 2Z7

Dear Permittee:

Enclosed is Permit 111155 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the permit. An annual fee will be determined according to the Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the permittee. This permit is issued pursuant to the provisions of the *Environmental Management Act* to ensure compliance with Section 120(3) of that statute, which makes it an offence to discharge waste, from a prescribed industry or activity, without proper authorization. It is also the responsibility of the permittee 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.

When a spill or the risk of a spill occurs, the responsible person (spiller) must report it immediately by calling 1-800-663-3456 in accordance with the Spill Reporting Regulation. More information is available at:

<https://www2.gov.bc.ca/gov/content?id=1EAB9109A9E9407EA646050A9D431C41>

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 permit will be carried out by staff from the Environmental Protection Division's Authorizations and Remediation Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director, designated Officer, or as further instructed.

Please be reminded that the director may, for the protection of the environment in accordance with Section 16 of the *Environmental Management Act*, require the permittee to do one or more of the following at any time:

- repair, alter, remove, improve or add to existing works, or construct new works, and submit plans and specifications for works specified in this authorization.
- conduct monitoring, and may specify procedures for monitoring and analysis, and procedures or requirements respecting the handling, treatment, transportation, discharge or storage of waste.
- provide security in the amount and form, and subject to the conditions, specified by the director.
- conduct studies and report information in accordance with the specifications of the director.
- recycle certain wastes and recover certain reusable resources, including energy potential from wastes, in accordance with the specifications of the director.
- submit copies of reports and notifications to specified Indigenous Groups, within specified timelines, in accordance with the specifications of the director.

For more information about how the Ministry will assess compliance with your permit please refer to gov.bc.ca/environmentalcompliance.

For more information about how to make changes to your permit and to access waste discharge amendment forms and guidance, please refer to gov.bc.ca/wastedischarge-authorizations.

Yours truly,



Adriana Almeida Rodriguez
for Director, *Environmental Management Act*
Authorizations



PERMIT

111155

Under the Provisions of the Environmental Management Act

Arbios Biotech Canada (GP 1) Ltd. and Arbios Biotech Canada (GP 2) Ltd.
doing business as

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2800 Park Place
666 Burrard St.
Vancouver BC V6C 2Z7

Is authorized to discharge contaminants to air from a bio-hydrocarbon facility located at 2233 Prince George Pulp Mill Road in Prince George, British Columbia, subject to the requirements listed below.

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

GLOSSARY

“**Authorized Works**” means the Authorized Works as stated in Section 1.

“**BCFSM**” means British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples, 2013 Edition or most recent edition. A copy of the manual is available [B.C. Field Sampling Manual - Province of British Columbia \(gov.bc.ca\)](http://www.gov.bc.ca)

“**CO₂**” means carbon dioxide.

“**EMS ID**” means the unique identifying number associated with the discharge, monitoring or sampling location in EMS; also known as a site identification number. This includes any updated and/or subsequent versions of the unique identifying

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numbers for any updated and/or subsequent versions of the Ministry's electronic environmental data repository.

“Environmental Monitoring System” or **“EMS”** means the Ministry's electronic data repository of environmental monitoring data, or its successor. Data are linked to unique site identification numbers, also known as EMS IDs. This includes any updated or subsequent versions of the Ministry's electronic environmental data repository.

“Facility” means the Arbios Biotech Chuntoh Ghuna Facility located at 2233 Prince George Pulp Mill Road in Prince George, British Columbia.

“Fugitive Dust” means dust (airborne particulate matter) that is generated by the Facility's activities or operations, that leaves the Facility boundaries. For the purpose of this rule, Fugitive Dust does not include particulate matter directly emitted from Authorized Works.

“Line 1” means the equipment listed in the Authorized Works listed in Sections 1.1, 1.3, 1.4, 1.5, 1.8 and 1.9.

“Line 2” includes the Authorized Works listed in Sections 1.2, 1.6 and 1.7. The permittee will be invoiced for fees associated with Line 2 when the Authorized Works are installed and operational.

“NO_x, NO, NO₂” means oxides of nitrogen (NO_x), nitric oxide (NO) and nitrogen dioxide (NO₂) and calculated as NO₂.

“Province” means His Majesty the King in Right of British Columbia.

“PM” means the filterable (front half) particulate matter concentration as sampled according to the BCFSM, EPA method 5, or equivalent method approved by the director.

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

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

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All documents submitted to the Director by a Qualified Professional must be signed by the author(s). In addition, a completed Declaration of Competency and Conflict of Interest Disclosure Statement must accompany documents submitted to the director by a Qualified Professional.

“**Regulatory Document**” means any document that the permittee is required to provide to the director or the Province pursuant to: (i) this Authorization, (ii) any regulation made under the *Environmental Management Act* that regulates the Facility described in this authorization or the discharge of waste from that Facility or (iii) any order issued under the *Environmental Management Act* directed against the permittee that is related to the Facility described in this authorization or discharge of waste from that Facility.

“**SCWB**” means supercritical water boiler.

“**SO₂**” means sulphur dioxide.

“**TPM**” means total particulate matter, a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments and solid cores with liquid coatings and include both PM10: particles with a diameter of 10 µm or less and PM2.5: particles with a diameter of 2.5 µm or less.

1. **AUTHORIZED DISCHARGES**

The location of the facilities from which the discharges in Section 1 are authorized to originate is PARCEL B (98037M), DISTRICT LOT 2061, CARIBOO LAND DISTRICT, EXCEPT PLAN 16574, 33603 and BCP23480.

1.1 **Authorized Source**

This section applies to the discharge of air from **BIOMASS DRYER 1**. The EMS ID for this discharge is E333431.

1.1.1 The maximum rate of discharge is 1800 m³/min (cubic metres per minute).

1.1.2 The authorized discharge period is continuous, 7 days per week, 52 weeks per year.

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- 1.1.3 The characteristics of the discharge must not exceed the following parameters:
- (a) TPM – maximum concentration 15 mg/m³ (milligrams per cubic meter).
- 1.1.4 The Authorized Works associated with the discharge are one single pass STELA, direct contact biomass belt dryer discharging to the air through stack 1, ducting, fans, vents and related appurtenances approximately located as shown on Site Plan ****A****.
- 1.1.5 The location of the point where the discharge is authorized to occur is through stack 1 located at 53.9252 N, 122.7058 W.

1.2 **Authorized Source**

This section applies to the discharge of air from **BIOMASS DRYER 2**. The EMS ID for this discharge is E333432.

- 1.2.1 The maximum rate of discharge is 1800 m³/min.
- 1.2.2 The authorized discharge period is continuous, 7 days per week, 52 weeks per year.
- 1.2.3 The characteristics of the discharge must not exceed the following parameters:
- (a) TPM – maximum concentration 15 mg/m³.
- 1.2.4 The Authorized Works associated with the discharge are one single pass STELA, direct contact biomass belt dryer discharging to the air through stack 2, ducting, fans, vents and related appurtenances approximately located as shown on Site Plan ****A****.
- 1.2.5 The location of the point where the discharge is authorized to occur is through stack 2 located at 53.9253N, 122.7057 W.
- 1.2.6 Discharge from the Authorized Works included in this section must be installed and operational by December 31, 2028. If the Authorized

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Works are not installed and operational by December 31, 2028,
discharge is not authorized.

1.3 Authorized Source

This section applies to the discharge of air from a **BAGHOUSE**. The EMS ID for this discharge is E333433.

2.3.1 The maximum rate of discharge is 460 m³/min.

2.3.2 The authorized discharge period is continuous, 7 days per week, 52 weeks per year.

2.3.3 The characteristics of the discharge must not exceed the following parameters:

(a) TPM– Maximum concentration 20 mg/m³

2.3.4 The Authorized Works associated with the discharge are one Allied Blower and Sheet Metal baghouse treating particulate discharges from the vibrating screen, biomass shredder infeed, biomass shredder outfeed/metering bin infeed, dryer infeed chute, dryer discharge conveyor, air density separator, air density separator discharge/biomass conversion feed bin infeed conveyor. The baghouse is equipped with fans and ducting, differential pressure measuring system and gauge, reverse pulse jet bag filter system and explosion relief panels and related appurtenances. The discharge is to air through stack 3 and is approximately located as shown on Site Plan ****A****.

2.3.5 The location of the point where the discharge is authorized to occur is through stack 3, located at 53.9254 N, 122.7055 W.

1.4 Authorized Source

This section applies to the discharge of air from a **VAPOR COMBUSTOR**.

1.4.1 The characteristics of the discharge are the products of combustion of natural gas. Specific emissions limits are:

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	Vapour Combustor EMS ID: E333434 Stack 4
Maximum discharge rate (m ³ /min)	405
SO ₂ maximum (mg/m ³)	22.2
NO _x maximum (mg/m ³)	83.3

1.4.2 The authorized discharge period is continuous, 7 days per week, 52 weeks per year.

1.4.3 Emergency releases from the Facility, treated by the Vapor Combustor may occur a maximum of 4 times per year for a period of 1 hour per event. During emergency releases, specific emission limits are:

	Vapour Combustor EMS ID: E333434 Stack 4
Maximum discharge rate (m ³ /min)	1350
SO ₂ maximum (mg/m ³)	22.2
NO _x maximum (mg/m ³)	127.8

1.4.4 The Authorized Works associated with the discharge is one Zeeco enclosed ground flare chamber combustor system equipped with low-NO_x burner discharging through stack 4, ducting and related appurtenances approximately located as shown on Site Plan **A**.

1.4.5 The location of the point where the discharge is authorized to occur is through stack 4 located at 53.9254 N, 122.7038 W.

1.5 **Authorized Source**

This section applies to the discharge of air from the Line 1 **SUPERCRITICAL WATER BOILERS (SCWB).**

1.5.1 The characteristics of the discharge are the products of combustion of natural gas. Specific emissions limits are:

	SCWB 1 EMS ID: E333435 Stack 5	SCWB 2 EMS ID: E333436 Stack 6
Maximum discharge rate (m ³ /min)	53.6	53.6

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SO ₂ maximum (mg/m ³)	0.7	0.7
NO ₂ maximum (mg/m ³)	472.7	472.7
PM maximum (mg/m ³)	7.3	7.3

- 1.5.2 The authorized discharge period is continuous, 7 days per week, 52 weeks per year.
- 1.5.3 The Authorized Works associated with the discharge are two natural gas-fired supercritical water boilers discharging through stacks 5 and 6, fans and related appurtenances approximately located as shown on Site Plan ****A****.
- 1.5.4 The location of the point where the discharge is authorized to occur is through stack 5 located at 53.9255 N, 122.7045 W and stack 6 located at 53.9255 N, 122.7044 W.
- 1.5.5 The permittee must use natural gas as the authorized fuel source.

1.6 **Authorized Source**

This section applies to the discharge of air from Line 2 **SUPERCritical WATER BOILERS**.

- 1.6.1. The characteristics of the discharge are the products of combustion of natural gas. Specific emissions limits are:

	SCWB 3 EMS ID: E333437 Stack 7	SCWB 4 EMS ID: E333438 Stack 8
Maximum discharge rate (m ³ /min)	53.6	53.6
SO ₂ maximum (mg/m ³)	0.7	0.7
NO ₂ maximum (mg/m ³)	472.7	472.7
PM maximum (mg/m ³)	7.3	7.3

- 1.6.2. The authorized discharge period is continuous, 7 days per week, 52 weeks per year.

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- 1.6.3. The Authorized Works associated with the discharge are two natural gas-fired supercritical water boilers discharging through stacks 7 and 8, fans and related appurtenances approximately located as shown on Site Plan **A**.
- 1.6.4. The location of the point where the discharge is authorized to occur is through stack 7 located at 53.9255 N, 122.7042 W and stack 8 located at 53.9254 N, 122.7042 W.
- 1.6.5. The permittee must use natural gas as the authorized fuel source.
- 1.6.6. Discharge from the Authorized Works included in this section must be installed and operational by December 31, 2028. If the Authorized Works are not installed and operational by December 31, 2028, discharge is not authorized.

1.7 **Authorized Source**

This section applies to the discharge of air from a **VACUUM COLUMN HEATER**.

- 1.7.1 The characteristics of the discharge are the products of combustion of natural gas. Specific emissions limits are:

	Vacuum Column Heater EMS ID: E333439 Stack 9
Maximum discharge rate (m ³ /min)	9.2
SO ₂ maximum (mg/m ³)	0.4
NO ₂ maximum (mg/m ³)	71.4
PM maximum (mg/m ³)	7.1

- 1.7.2 The authorized discharge period is continuous, 7 days per week, 52 weeks per year.
- 1.7.3 The Authorized Works associated with the discharge is one vacuum column heater discharging to air through stack 9 and related appurtenances approximately located as shown on Site Plan **A**.

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- 1.7.4 The location of the point where the discharge is authorized to occur is through stack 9 and is located at 53.9252 N, 122.7042W.
- 1.7.5 Discharge from the Authorized Works included in this section must be installed and operational by December 31, 2028. If the Authorized Works are not installed and operational by December 31, 2028, discharge is not authorized.

1.8 **Authorized Source**

This section applies to the discharge to air from the **WATER TREATMENT PLANT**.

- 1.8.1 The maximum authorized rate of discharge is that associated with a wastewater throughput of up to 400 m³/day (cubic metres per day).
- 1.8.2 The authorized discharge period is continuous, 7 days per week, 52 weeks per year.
- 1.8.3 The characteristics of the discharge are fugitive gaseous emissions, including CO₂ and VOC.
- 1.8.4 The Authorized Works associated with the discharge are a wastewater treatment plant including a conditioning tank, anaerobic bioreactor, aeration tank, flotation cell and related appurtenances. Gases from the anaerobic bioreactor are treated in the vapour combustor listed in section 1.4.

1.9 **Miscellaneous Sources**

- 1.9.1 Indeterminate flow from trace contaminant discharges from maintenance shops, works, tanks and process and quality testing facilities.

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2. GENERAL REQUIREMENTS

2.1 Standard Conditions

For the administration of this permit for reporting all air monitoring results, all gaseous volumes must be converted to standard conditions of 293.15 K and 101.325 kPa with zero percent moisture.

2.2 Authorized Feed

Authorized feed to the Facility is biomass and includes wood or wood products, manufactured wood or hog, logging residues that may contain dirt, residual soil and road-based contamination, and any bio-solids approved by the director.

Authorized feed does not include any paper or paper product, wood or wood product that has been treated with glue, paint or preservative or that contains a foreign substance harmful to humans, animals or plants when combusted, municipal solid waste, plastics or construction debris.

2.3 Publication of Documents

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

2.4 Maintenance of Works

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The permittee must regularly inspect the Authorized Works and maintain them in good working order.

If components of the Authorized Works have a manufacturer's recommended maintenance schedule, then those components must, at a minimum, be maintained in accordance with that schedule.

The permittee must maintain a record of inspections and maintenance and any shut down periods of the Authorized Works and make the record available to an officer upon request.

2.5 Emergency Procedures

In the event of an emergency or other condition which prevents normal operation of the Authorized Works or leads to an unauthorized discharge, the permittee must take remedial action immediately to restore the normal operation of the Authorized Works and to prevent any unauthorized discharges. The permittee must immediately report the emergency or other condition and the remedial action that has and will be taken to the EnvironmentalCompliance@gov.bc.ca email address or as otherwise instructed by the director.

2.6 Bypasses

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

2.6.1 For the authorized works in section 1.3 Baghouse: two bypasses of six hour duration each are permitted per calendar year for maintenance activities without prior approval of the director.

2.7 Plans – Works

The permittee must ensure a Qualified Professional certifies that the Authorized Works in section 1 have been constructed in accordance with the stack heights, inside diameters as specified in the Air Quality Technical Report (2023) before commencement of discharge. The stack locations are located as per site Plan A.

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The permittee must submit the Qualified Professional certification by email to ENVAuthorizationsReporting@gov.bc.ca and specify the date of completion of construction. The submission must include the permit number, clause reference and stack identification.

2.8 **Liquid Effluent Discharges**

Effluent from the water treatment plant and stormwater that has the potential for contamination with bio-oil or other contaminants must only be discharged to a facility authorized under the *Environmental Management Act* and approved by the director.

The permittee must prepare a contingency plan in the event that the primary authorized facility receiver of the effluent is no longer able to accept effluent. The contingency plan must be made available to the director upon request.

By August 31, 2024, the permittee must submit an effluent flow diagram illustrating how the Facility effluent is managed.

2.9 **Air Episode Management Plan**

The Air Episode Management Plan must be submitted for approval by the director by March 31, 2025.

The Air Episode Management Plan is to ensure that there are no extraneous emissions during poor air quality days. The permittee must take into account the Facility operations during air quality advisories in the Prince George air shed and take reasonable measures to reduce emissions, and record mitigation measures taken to reduce emissions during air quality advisories including date, time and duration of the mitigation activities.

In the Air Episode Management Plan, the permittee must specify the roles and responsibilities of Facility personnel, and the operational steps to be taken if an air quality advisory is issued for the local airshed. This may include temporary process changes or reductions in production levels, scheduling changes to start-up/shut-downs or maintenance procedures,

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controlling fugitive dust emissions, or reducing heavy diesel truck traffic and related idling activities.

The Air Episode Management Plan must be reviewed each calendar year with Facility personnel.

2.10 **Baghouse Operation**

The BAGHOUSE authorized in section 1.3 must be operated and maintained in accordance with the manufacturer's specifications or other criteria approved by the director.

The operating pressure drop must be maintained within the design conditions specified by the manufacturer's performance warranty. The baghouse must be equipped with a gauge or meter, which measures the pressure drop across the control device. If the manufacturer's specifications are unavailable, then the pressure drop must not be less than 1.0 inches of water column or more than 10.0 inches of water column.

The filters must be made of fibres appropriate for operating conditions expected to occur including, but not limited to, operating temperature limits.

The permittee must maintain an operating and maintenance log of monitoring, inspection and maintenance activities, including:

- a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions;
- b) Maintenance activities, repair actions and replacements, dates etc.;
- c) Pressure drop (at least once daily);
- d) Visible emissions: If visible emissions exist, inspect equipment for evidence of malfunction, including broken bags. Also, record any corrective action taken;
- e) Dust removal (as needed); and,
- f) Make the record available to an officer upon request.

2.11 **Fugitive Dust Management Plan**

The permittee must suppress fugitive dust from the entire site through the implementation of the Fugitive Dust Management Plan. The Plan must be reviewed with Facility personnel annually. If fugitive dust becomes a concern, the director may require the permittee to implement additional

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measures to control, monitor or assess fugitive dust emitting from the Facility. A copy of the Fugitive Dust Management Plan must be immediately available, upon request, by an officer or the director.

The Fugitive Dust Management Plan must include:

- identification of all potential sources of fugitive dust emissions associated with the Facility (i.e., material handling areas, storage areas, vehicle traffic),
- a description of how fugitive dust will be controlled from each source including all fugitive dust control procedures and practices,
- a description of how the Plan will be implemented, including the training of Facility personnel,
- a description of methods of monitoring and record-keeping to verify and document ongoing compliance with the Plan, including dust control activity non-conformance occurrences; and
- a description of the reactive action applied to prevent fugitive dust emissions if and once it occurs.

A copy of guidance for developing a Fugitive Dust Management Plan is available on the Ministry web page at https://www2.gov.bc.ca/assets/gov/environment/waste-management/waste-discharge-authorization/guides/templates/gui-tec-031_fugitive_dust_mgmt_plan_guidance.pdf)

The Fugitive Dust Management Plan must be submitted to the director for approval by March 31, 2025.

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3. SAMPLING AND MONITORING

The permittee must maintain information, measurements and analytical data, for inspection by the Ministry. The monitoring records must be maintained for a period of five (5) years.

3.1 Stack Sampling Facilities

The permittee must provide sampling ports with nearby electrical outlets and, where required, WorkSafeBC approved access ladders and adequately sized platforms for sampling activities, for the Authorized Works in Section 1.1, and 1.2.

The sampling ports must be installed in a location and of a size approved by a qualified person.

The director may require the permittee to do one or more of the following:

- a) Install sampling ports to stacks 3, 4, 5, 6, 7, 8, 9 for the Authorized Works in sections 1.3, 1.4, 1.5, 1.6, 1.7.
- b) Install Continuous Emission Monitors (CEMS) to stacks 1,2,3,4,5,6,7,8,9 for the Authorized Works in sections 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7.

3.2 Sampling Procedures

The permittee must carry out sampling in accordance with the procedures described in the "British Columbia Field Sampling Manual Part B: Air and Air Emissions Testing (2020)" or most recent edition, or by alternative procedures as authorized by the director.

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A copy of the above manual is available on the ministry web page at <https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance/bc-field-sampling-manual>.

3.3 Analytical Procedures

The permittee must carry out analyses in accordance with procedures described in the "British Columbia Environmental Laboratory Manual (2023)", or the most recent edition or by alternative procedures as authorized by the director.

A copy of the above manual is available on the ministry web page at <https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance/bc-environmental-laboratory-manual>.

3.4 Quality Assurance

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

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

3.5 Biomass Dryer Monitoring Requirements

The permittee must conduct emission monitoring as follows:

Source of Discharge	Sampling / Analysis (*) Frequency	Conditions
Stack 1 E333431	a) Once every 3 months for a period of 24 consecutive months.	- The first test must be completed within the first 60 calendar days from the date the belt dryer is entered into full commercial operation ⁺⁺ .
Stack 2 E333432	b) After the 24-month period, and once 4 consecutive tests	

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	<p>have met the specified limits, the permittee may request that the testing frequency be reduced to once annually.</p>	<ul style="list-style-type: none"> - If the belt dryer test result exceeds the authorized limits, then re-testing of the belt dryer stacks according to section 4.1 and 4.2 must be applied and frequency is changed to quarterly until 4 consecutive test results satisfy the authorized limit. - When two stacks are in use, tests must be conducted as per BCFSM.
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(*) The analyses must include the following information (each stack):

(**) commercial operation is defined as 80% of design production throughput for two consecutive weeks.

- a) average hourly dryer exit gas temperature during testing;
- b) average hourly dryer throughput (dry tonnes) for the biomass dryer system for the previous month;
- c) average hourly throughput (dry tonnes) for the biomass dryer system during stack testing;
- d) volumetric emission flow rates, (m³/min); and
- e) total particulate matter (mg/m³).

On the day of the stack tests, permittee must also record and report:

- a) Feed stock moisture;
- b) Facility biomass throughput
- c) Operating capacity (as a % full capacity);
- d) Ambient weather conditions;
- e) Operating conditions and how they relate to the stack results;
- f) Trends over time of previous stack tests.

Depending on the results of the discharge monitoring program, the director may change the sampling frequency.

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3.6 Routine Monitoring Requirements

Authorized Works	Frequency of Test	Parameter
Baghouse	Daily when operating	Pressure Drop
SCWB1 – stack 5 SCWB2 – stack 6 Vacuum Column Heater – stack 9 Vapour Combustor – stack 10	Daily when operating	Stack Temperature
SCWB3 – stack 7 (when installed and operational) SCWB4 – stack 8 (when installed and operational)	Monthly	Monthly Fuel Consumption

3.7 Monitoring Group Participation

The permittee must participate in a joint air quality monitoring program as established in the City of Prince George and approved by the director.

3.8 Leak Detection and Repair (LDAR) Program

The permittee must develop and maintain a LDAR Program. The program must be made available to the director upon request.

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The Program must contain at a minimum:

- a) Up to date inventory of equipment components that contain gases or high pressure volatile liquids;
- b) Schedule of leak detection surveys of components that contain gases or high pressure volatile liquids;

The monitoring results and analysis must be included in the annual report as required in section 4.

4. REPORTING REQUIREMENTS

Data and report submissions in this section must be in a format that is suitable for review by the public or other government agencies.

4.1 Non-Compliance Notification

The permittee must submit all non-compliance reporting required under this section by email to the Ministry's Compliance Reporting Submission Mailbox (CRSM) at EnvironmentalCompliance@gov.bc.ca or as otherwise instructed by the director.

For guidelines on how to report a non-compliance or for more information visit the Ministry's Comply with a waste discharge authorization website. <https://www2.gov.bc.ca/gov/content?id=AE34D00F776742D78C54F942877560C5>

If any stack test result is found to exceed the applicable authorized limit, then the permittee must immediately notify the Ministry and re-test the same stack as soon as practicable and within 30 (thirty) calendar days of receipt of the failed test result.

If the result of the re-test of the stack exceeds the applicable authorized limit, then the permittee must curtail production to reduce emissions unless otherwise authorized in writing by the director. The permittee must then conduct a third confirmation test as soon as practicable to ensure the stack emissions meet the authorized limit.

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4.2 Non-Compliance Reports

The permittee must, within 30 days of any non-compliance event, submit to the director a written report that includes, but is not necessarily limited to, the following:

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

4.3 Veracity of Data

The permittee must ensure all information submitted as a requirement of this authorization is accurate and free from mistakes or misleading statements. The permittee must include in any submission required under this authorization an explanation for any data that:

- a) is required under this authorization but is missing from the submission; and
- b) the permittee considers to be not representative of the actual discharge, conditions or other circumstances the data are intended to measure.

4.4 Electronic Upload of Data to Ministry Database

Without limiting any requirement under this permit to report information to the director, the permittee must upload the laboratory results and field measurements of air emissions specified in Section 3.5 to the Ministry's environmental monitoring results database using the EMS ID for the discharge. The permittee must upload data to the database within 60 calendar days of the end of the stack tests. [EMS Web Reporting Main Menu](#)

4.5 Annual Report Components

The permittee must submit all reports required by this section by March 31 of each year to the Ministry's Authorizations Submission Mailbox (EASM) at EnvAuthorizationsReporting@gov.bc.ca, or as otherwise instructed by the director.

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For guidelines on how to properly name the files and email subject lines or for more information visit the Ministry website:

https://www2.gov.bc.ca/assets/gov/environment/waste-management/waste-discharge-authorization/datamart/rersm_naming_convention.pdf

The permittee must submit to the director an annual report that includes, but is not limited to:

- a) a summary of non-compliance events in the preceding calendar year (including corrective actions taken);
- b) the dates and number of occurrences of emergency releases as per section 1.4.3;
- c) date and time of bypass events as per section 2.6;
- d) natural gas fuel consumption and resulting emissions calculations;
- e) a summary of any issues related to liquid effluent discharges as per section 2.8;
- f) actions taken for air quality advisory events as per section 2.9;
- g) a summary of baghouse operation as per section 2.10;
- h) a summary of the monitoring results as per section 3.5;
- i) a summary of any trends in monitoring results from section 3.6;
 - include a review and interpretation of testing/monitoring data/estimated emissions suitably tabulated for the preceding calendar year;
 - data must be corrected to STP and 8% oxygen.
- j) records of leak detection survey measurement results and repairs from section 3.8;
- k) an evaluation of the performance of the treatment works and identification of any changes to the operation or physical equipment made during the year;

In the first annual report submitted by March 31, 2025, the permittee must include the methodology for calculating the emissions associated with the fuel consumption for all natural gas fuel equipment in section 1.

4.5.1 Fugitive Dust Management Reporting

A summary of the observations, triggers, and mitigation measures for reduction of Fugitive Dust, and the proposed modification for improvement and reduction of Fugitive Dust.

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The summary report is to include, but not limited to a summary of any complaints as well as review of the Fugitive Dust triggers, actions and mitigation measures that is supported with observations any other component as required in writing by the director.

4.6 Air Discharge Comparison Report

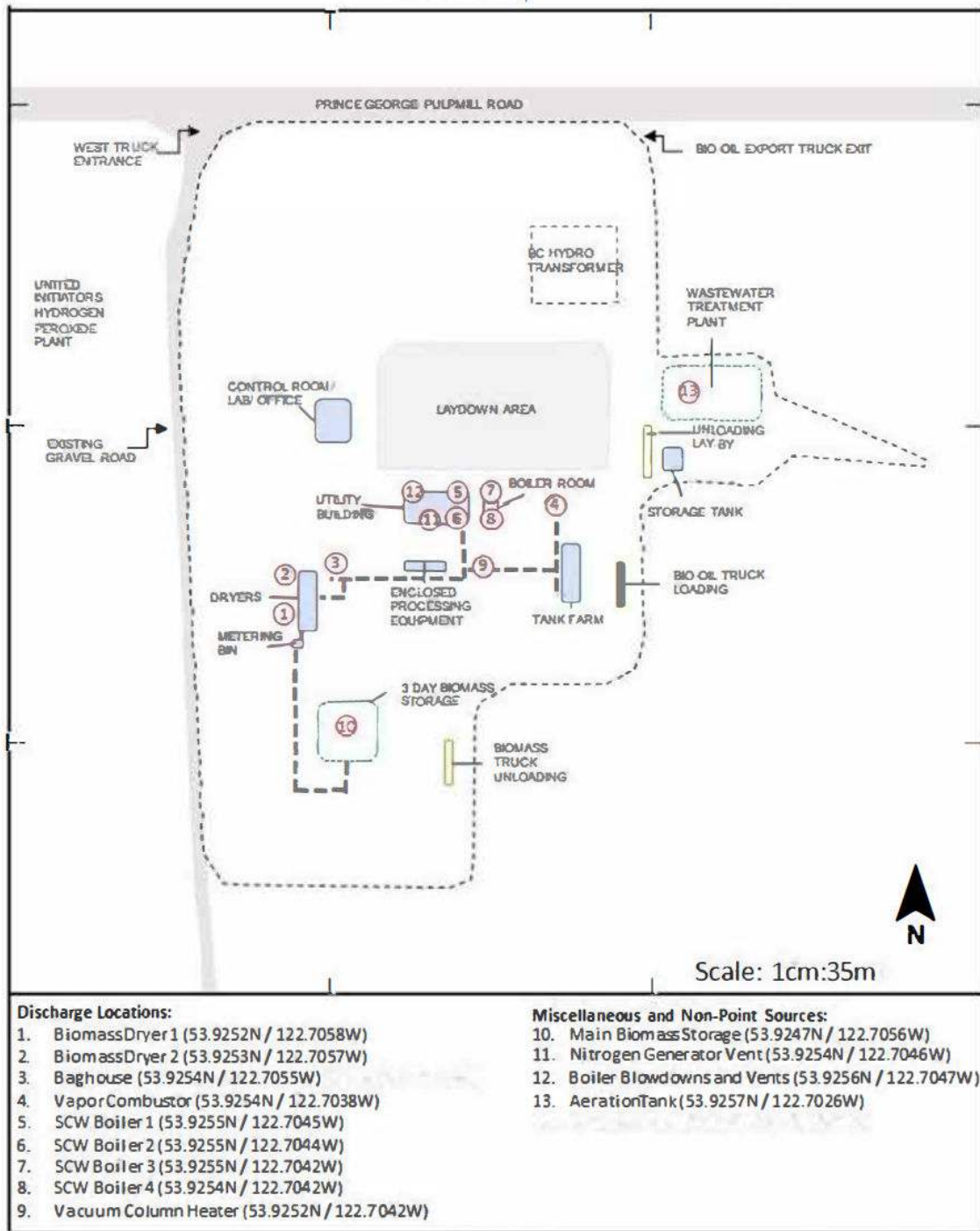
The permittee to prepare a report that analyses the correlation between the actual emissions from the Facility against the Chuntoh Ghuna Facility Air Quality Technical Report dated May 4, 2023. This report must include three years of operating data and be submitted no later than June 30, 2029.

Site Plan A

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