



January 24, 2023

Tracking Number: 416260
Authorization Number: 17557

REGISTERED MAIL

Pinnacle Renewable Energy Inc.
#1100 - 543 Granville St,
Vancouver, B.C. V6C 1X8

Dear Permittee:

Enclosed is Amended Permit 16502 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.

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 Regional Operations Branch. Plans, data and reports pertinent to the permit are to be submitted by email or electronic transfer to the Director, designated Officer, or as further instructed.

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.
- provide a permitted emission offset for any new discharge to the environment.

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,



Peter D. Lawrie
for Director, *Environmental Management Act*
Authorizations - North Region



MINISTRY OF ENVIRONMENT
AND CLIMATE CHANGE
STRATEGY

PERMIT

17557

Under the Provisions of the Environmental Management Act

Pinnacle Renewable Energy Inc.

**1160 South Lakeside Drive
Williams Lake BC V2G 3A6**

Is Authorized to discharge contaminants to air from a wood pellet manufacturing facility located in Williams Lake, British Columbia, subject to the requirements listed below.

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

This Authorization supersedes and replaces all previous versions of Permit 17557 issued under Section 14 of the *Environmental Management Act*.

DEFINITIONS

For the purposes of this Permit the following definitions apply:

“Biomass” means:

- wood or wood products,
- manufactured wood fuel, or
- logging residue, or
- any biomass-based fuels approved by the Director.

but 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, or municipal solid waste or construction debris.

“Condensable PM” means:

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the particulate matter collected in the impinger portion of a particulate matter sampling train (EPA method 202).

“Fugitive Dust” means:

dust (airborne particulate matter) that is generated by 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 permitted sources that are subject to this Permit.

“Manufactured wood fuel” means:

wood pellets or wood pucks.

“ODt” means:

Oven dried metric tonnes of wood material at 0% moisture content.

“Particulate Matter” (PM) means:

the filterable (front half) particulate matter concentration as sampled according to the British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples (EPA method 5 or equivalent method approved by the Director).

“PM2.5” means:

particles with a diameter of 2.5 micrometers or less.

“Qualified Professional” in relation to this authorization, means:

an applied scientist or technologist specializing in an applied science or technology including, agronomy, biology, chemistry, engineering, geology or hydrogeology, who is:

- i. registered in British Columbia with the professional organization responsible for his or her area of expertise, acting under that professional association’s code of ethics, and is subject to disciplinary action by that association; and,
- ii. who, through suitable education, experience, accreditation and knowledge, is acceptable to the director as being reasonably relied on to provide advice within his or her area of expertise as it relates to this Permit, or,
- iii. other appropriately qualified person who is acceptable to the director. Provides the completed Declaration of Competency and Conflict of Interest Disclosure Statements.

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

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“Total Particulate Matter” (TPM) means:

the particulate and condensable organics matter concentration as sampled according to the British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples (EPA Method 202, Oregon Method 7 or equivalent method as approved by the director)

“Wood product” includes:

manufactured wood fuel, hog fuel, mill ends, wood chips, bark, shavings, sawdust, wood bark and firewood.

“Opacity ” means:

is defined as the percentage of the background that is obscured by visible stack emissions, (i.e., the plume's ability to obscure the background). A higher opacity value in a visible emission observation means there is more particulate matter in the emission, and less of the background is seen. (EPA Method 9 or equivalent method as approved by the director).

1. **AUTHORIZED DISCHARGES**

1.1 **Plant Equipment Baghouse**

This section applies to the discharge of air from a PLANT EQUIPMENT BAGHOUSE. The site reference number for this discharge is E317110.

- 1.1.1 The maximum rate of discharge is 30 cubic metres per second.
- 1.1.2 The authorized discharge period is continuous
- 1.1.3 The characteristics of the discharge must not exceed 8 mg/m³ of total particulate matter.
- 1.1.4 The authorized works are one Allied Blower & Sheet Metal Ltd. fabric filter baghouse treating particulate discharges from the one wet, two dry hammers mills, and pelletizers. The baghouse is equipped with differential pressure measuring system and gauge, automatic compressed air cleaning system, and explosion relief panels, fans, ducts, and related appurtenances and related appurtenances approximately located as shown on the Site Plan.

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- 1.1.5 The location of the facilities from which the discharge originates, and the point of discharge is Lot 2, District Lot 71 and 7046, Cariboo District Plan BCP19091 (Parcel Identifier: 026-419-394).

1.2 **Shavings Deck Baghouse**

This section applies to the discharge of air from a BAGHOUSE STACK. The site reference number for this discharge is E330631.

- 1.2.1 The maximum rate of discharge is 5 cubic metres per second.
- 1.2.2 The authorized discharge period is continuous.
- 1.2.3 The characteristics of the discharge must not exceed 10 mg/m³ of total particulate matter.
- 1.2.4 The authorized works are one fabric filter baghouse equipped with differential pressure measuring system and gauge, automatic compressed air cleaning system, and explosion relief panels, fans, ducts, and related appurtenances and related appurtenances approximately located as shown on the Site Plan
- 1.2.5 The location of the facilities from which the discharge is authorized to originate is Lot 2 District Lot 71 and 7046 Cariboo District Plan BCP19091.

1.3 **Biomass Belt Dryer**

This section applies to the discharge of air from four BIOMASS BELT DRYER STACKS. The site reference number for this discharge is E317090.

- 1.3.1 The maximum rate of discharge of each stack must not exceed 33 cubic metres per second.
- 1.3.2 The authorized discharge period is continuous.
- 1.3.3 The characteristics of the discharge must not exceed a maximum:
- i. combined mass discharge from four dryer stacks of 7.67 kg/hour TPM.

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- ii. weighted average stack concentration from four dryer stacks of 15 mg/m³ TPM.
 - iii. 20% visible opacity per stack.
- 1.3.4 The authorized works are one single-pass STELA natural gas fired, direct contact, biomass belt dryer discharging to the air through four stacks identified as stacks A1, A2, A3 and A4, two natural gas burners with a maximum combined natural gas consumption rate of 41 MMBtu/hr, ducting, fans, vents, and related appurtenances approximately located as shown on the Site Plan.
- 1.3.5 The location of the facilities from which the discharge is authorized to originate and the point where the discharge is authorized to occur is Lot 2 District Lot 71 and 7046 Cariboo District Plan BCP19091.

2. GENERAL REQUIREMENTS

2.1 Standard Conditions

For the purpose of any required reporting or submission of data to the Ministry, the permittee must convert all measurements of gaseous volumes to standard conditions of 293.15 K and 101.325 kPa with zero percent moisture.

2.2 Maintenance of Authorized Works and Emergency Procedures

2.2.1 Maintenance of Works

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 manufacturer's recommended maintenance schedule must be made available to an officer upon request.

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

2.2.2 Emergency Procedures

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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.

2.3 **Baghouse Operations**

The baghouses authorized in section 1.1 and 1.2 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 baghouses must be equipped with a gauge or meter, which indicates 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 permittee must comply with the manufacturers recommended schedule for inspecting and maintaining control equipment. If the inspection frequency is not specified by the manufacturer, recommended inspection and maintenance activities must be conducted at least once per calendar quarter.

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 all monitoring, inspection, and maintenance activities, including:

- i. Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions.
- ii. Maintenance activities, with inspection schedule, repair actions, and replacements, lock out times etc.
- iii. Pressure drop (at least once daily).

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- iv. Opacity. If visible emissions exist, inspect equipment for evidence of malfunction, including broken bags. Also, record any corrective action taken.
- v. Dust removal (as needed).
- vi. The operating and maintenance log must be made available to an officer upon request.
- vii. Pressure differential operating limit.

2.4 **Fugitive Emission Control**

The permittee must suppress fugitive dust from the entire site through the implementation of the Fugitive Dust Management Plan. The Plan must be reviewed annually and submitted to the director.

The permittee must also pave all surfaces, as per the attached paving plan to control fugitive emissions caused by vehicle traffic involved with the delivery and handling of biomass materials.

If fugitive dust becomes a concern, the director may require the permittee to implement additional measures to control, monitor or assess fugitive dust emitting from the facility. A copy of the Fugitive Management Plan must be made immediately available upon request by an officer or the director.

2.4.1. The Fugitive Dust Management Plan must include:

- i. Identification of all potential sources of fugitive dust emissions associated with the facility (i.e., material handling areas, storage areas, vehicle traffic).
- ii. Description of how fugitive dust will be controlled from each source including all fugitive dust control procedures and practices.
- iii. Description of how the Plan will be implemented, including the training of personnel.
- iv. A description of the methods of monitoring and record-keeping that verify and document ongoing compliance with the Plan, including dust control activity non-conformance occurrences.
- v. A description of the reactive measure(s) that will be applied to prevent and control fugitive dust emissions.

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- 2.4.2. The Fugitive Dust Management Plan must be reviewed and submitted annually to the director as per section 4.1 reporting requirements, including:
- i. A summary report of the observations, triggers, and mitigation measures for reduction of fugitive dust, and the proposed modification for improvement and reduction of fugitive dust is to be submitted quarterly or at a frequency upon the written direction of the director.
 - ii. 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 mitigations measures that is supported with observations, and meteorological data and any other component as required in writing by the director.

2.5 **Ambient Monitoring**

The permittee must participate, along with other stakeholders in the airshed, in an ambient monitoring programme acceptable to the director to:

- i. Investigate the spatial variability of PM 2.5 in the airshed; and
- ii. Confirm that the emissions of PM 2.5 from their facility do not cause air quality in the airshed to exceed the 24 hour and the annual provincial AAQOs.

2.6 **Complete and Accurate Information**

Any information that the permittee is required under this permit to submit to the director must ensure that, at the time the information is submitted, the information is complete and accurate.

2.7 **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.

2.8 **Biomass Belt Dryer Foundation**

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The permittee must ensure that the foundation of the of the Biomass Belt Dryer authorized in Section 1.3 can accommodate and withstand the additional weight and or changes to the height and/or dimensions of dryer stacks up to 25 metres in height.

2.9 **Air Episode Management Plan**

The permittee must prepare an Air Episode Management Plan to ensure that there are no extraneous emissions during poor air quality days.

The plan will specify the operational steps to be taken in the event that that an air quality advisory is issued for the local airshed.

The Air Episode Management Plan must be reviewed and submitted annually to the director as per section 4.1 reporting requirements. The permittee must immediately provide to a director or an officer, upon request, a copy of that Plan.

The director may require the permittee to implement additional measures to be taken during air quality advisory.

2.10 **Visible Emission Reduction Plan**

The permittee must prepare, implement, and maintain a Visible Emission Reduction Plan for the belt dryer

The plan must specify the operational steps and strategies that will be taken to reduce or eliminate visible particulate emissions from the dryer stacks. The permittee must install, operate and maintain an electronic visual monitoring system (camera) of the plant plume discharges that is visible to the plant control room operator and acceptable to the director. Real time imagery from this system must be made accessible to the director upon request.

The Visible Emission Reduction Plan must be reviewed and submitted annually to the director as per section 4.1 reporting requirements. The permittee must immediately provide to the director or an officer, upon request, a copy of that Plan.

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2.11. Modifications to Processes and Authorized Works

The permittee must notify the director in advance and submit plans for additional works or changes prior to implementing changes to the authorized works or any process that may adversely affect the quality and/or quantity of the discharge.

The director may require additional information including further environmental assessment. Despite notification under this section, permitted levels must not be exceeded.

3. MONITORING AND REPORTING REQUIREMENTS

3.1 Sampling Location and Techniques

The permittee must use sampling locations, techniques, and equipment that are acceptable to the director.

3.2 Analytical Procedures

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

A copy of the above manual is available on the Ministry 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 Sampling Procedures

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

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

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[reporting/monitoring/laboratory-standards-quality-assurance/bc-field-sampling-manual](#)

3.4 **Source Monitoring**

The Permittee must conduct emission monitoring as follows:

Source of Discharge	Sampling/Analysis (*) Frequency	Conditions
Biomass Belt Dryer (E315390) Stacks A1, A2, A3, A4	Once every 3 months for a period of 12 consecutive months. After the 12-month period, once 4 consecutive source tests have met the specified limits, the permittee may request that the testing frequency be reduced or discontinued.	If any test result exceeds the authorized limit, then retesting according to Section 5.3 must be applied. Testing frequency will resume at once every 3 months for a period of 12 consecutive months During any testing event, the interval between testing dryer stacks must be as brief as is practicable.

(*) The analyses must include the following information (each stack):

- i. Average hourly dryer exit gas temperature during testing.
- ii. Average hourly dryer ODT for the biomass dryer system for the previous month.
- iii. 90th percentile hourly ODT throughput for the biomass.
- iv. Average hourly throughput ODT for the biomass dryer system during stack testing.
- v. Volumetric emission flow rates, m³/hour.
- vi. TPM, mg/m³.
- vii. PM, mg/m³.

Unless otherwise specified by the director, sampling must be performed at a throughput that is at or above average for that of the previous calendar month and as close as practicable to the 90th percentile

4. **REPORTING REQUIREMENTS**

4.1 **Reporting**

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The permittee must collect and maintain data of analyses and flow measurements required under Section 3 of this Authorization for inspection when requested by Ministry staff in a form and manner acceptable to the director.

The permittee must submit a copy of all source sampling reports along with a copy of all other data/analysis required by subsection 3.4 to the director within 45 days of the end of the month in which the stack test occurred. The permittee must also post a copy of their source sampling reports on their company website, within one week of submission to the director, which is available to the public to view and to download. The reports must be available to the public on the permittee's public website for no less than two years.

The permittee must submit a copy of their Fugitive Dust Management Plan required in section 2.4, the Air Episode Management Plan required in section 2.9, and the Visible Emission Reduction Plan required under section 2.10 to the director (via the Ministry's Routine Environmental Reporting Submission Mailbox) within 30 days of the end of the month in which the plans are completed and/or updated.

The permittee must submit all data required to be submitted under this section by email to the Ministry's Routine Environmental Reporting Submission Mailbox (RERSM) at envauthorizationsreporting@gov.bc.ca or as otherwise instructed by the director. 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/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox>

5. **NON-COMPLIANCE REPORTING**

5.1 **Non-compliance Notification**

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

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5.2 Non-compliance Reporting

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

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

The permittee must submit all non-compliance reporting required to be submitted under this section by email to the Ministry's Compliance Reporting Mailbox (CRM) 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 website:

<https://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/comply>

5.3 Non-compliance source testing

If any sampling event is found to exceed the limits identified in this Authorization, then the permittee must immediately notify the director as per section 5.1 and re-test the non-compliant emission source within 30 calendar days of receipt of the failed test result. The director may provide additional direction on the timing of the follow-up tests.

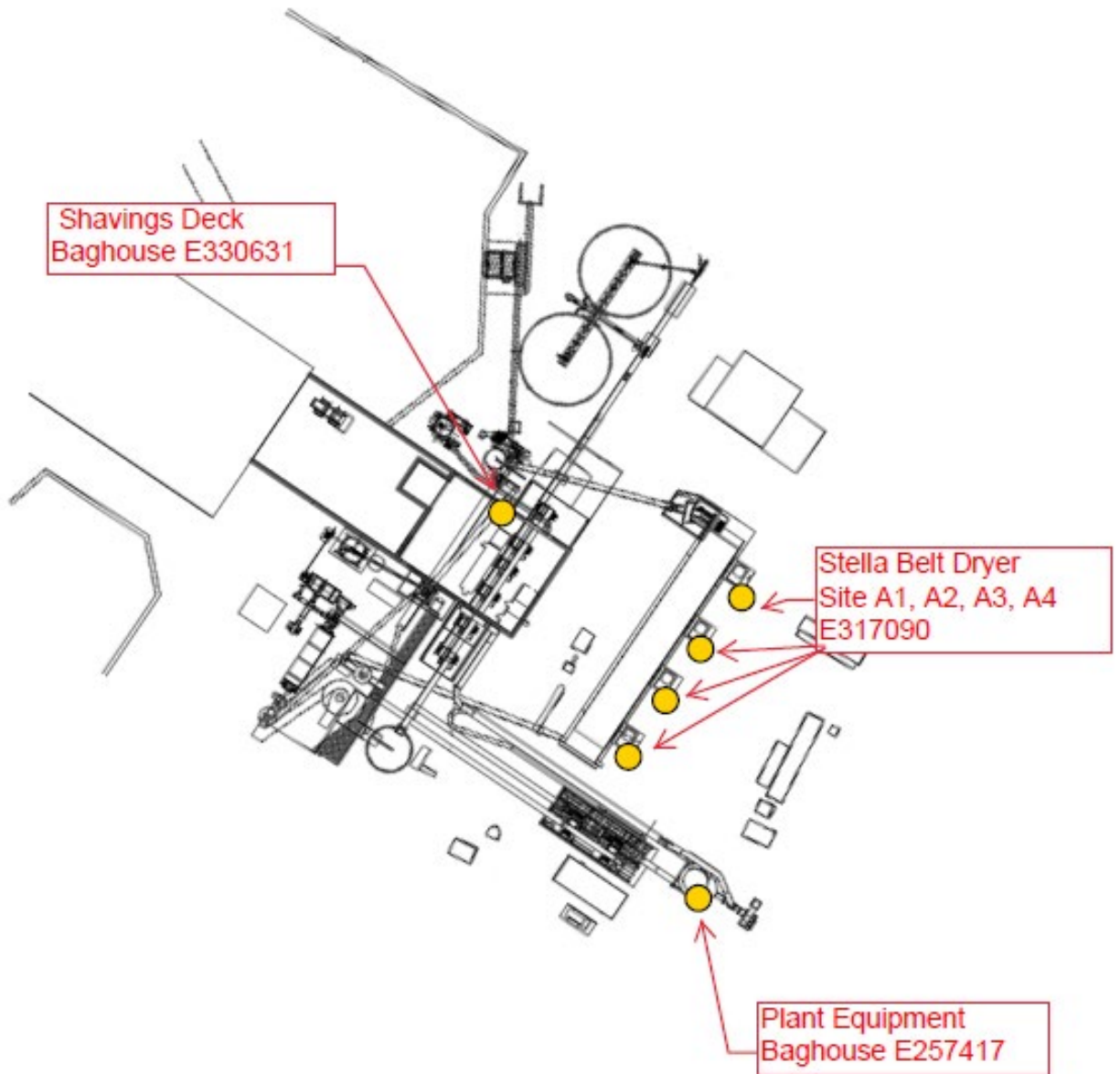
If the results of the re-test exceed any of the limits in Section 1, then the discharge from the non-compliant emission source must cease until the problem has been corrected, unless authorized in writing, by the director. Upon completion of the corrective action, the permittee may resume operation of the authorized works. However, a third confirmation test must be conducted as soon as practicable to ensure the works meet the allowable limits. This additional testing and verification does not grant an allowance to exceed the Authorization limits.


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Site Plan

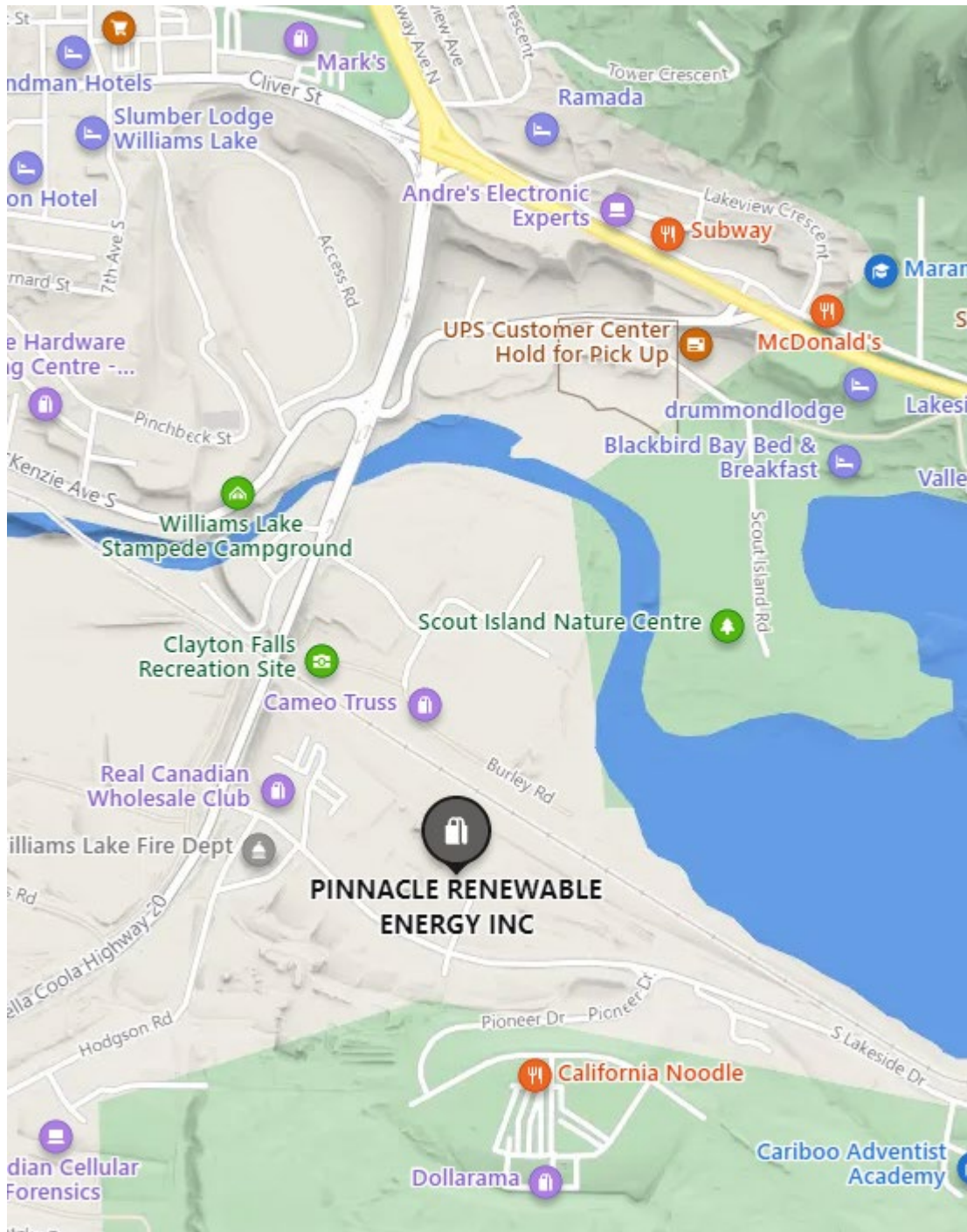


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Location Map



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