

## PERMIT GVA0113

**Pursuant to:**

Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008  
and the BC Environmental Management Act, S.B.C 2003, c.53

**Issued to:**

Chemtrade Chemicals Canada Ltd.  
(the "Permittee")

**To Authorize:**

the discharge of air contaminants to the air from  
an aluminum sulphate manufacturing plant

**Located at:**

8655 Barnet Highway, Burnaby, BC V5A 4V5


**Effective Period:**

The terms and conditions set out in the Permit apply to the existing or planned works as of  
October 27, 2021 and this Permit will expire on May 31, 2036.

All previous versions of this Permit are invalid.

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Issued: November 30, 1992  
Amended: October 27, 2021

  
Kathy Preston, Ph.D., P.Eng.  
Assistant District Director

**METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT**

**SECTION 1 – AUTHORIZED EMISSION SOURCES**

Authorization to discharge air contaminants from the authorized Emission Sources and Works listed below is subject to the specified terms and conditions.

Approximate locations of the emission sources are shown on the Site Plan in section 4.

**EMISSION SOURCE 01: Aluminum sulphate mixing tank discharging through a Stack(s).**

**MAXIMUM EMISSION FLOW RATE: The authorized maximum rate of discharge is that resulting from the chemical reaction and natural draft within the mixing tank.**

**MAXIMUM ANNUAL OPERATING HOURS: 4160 h/y**

**MAXIMUM EMISSION QUANTITY:**

1. 0.04 t/y Sulphur Oxides
2. 0.06 t/y Sulphuric Acid
3. 0.45 t/y Particulate Matter

**MAXIMUM EMISSION QUALITY:**

1. 20% Opacity

**WORKS AND PROCEDURES:**

Good operating practices.

Maximum annual production of aluminum sulphate is not to exceed 5000 tonnes/year.

Stack height\* = 16.2 m

Stack diameter = 0.97 m

\*Stack is 7.39 m high on top of the building which is 8.84 m high.

**EMISSION SOURCE 04: Sulphuric acid storage tank discharging through a Vent(s).**

**MAXIMUM EMISSION FLOW RATE: The authorized maximum rate of discharge is that resulting from vapour venting during tank filling and breathing.**

**MAXIMUM ANNUAL OPERATING HOURS: 8760 h/y**

**MAXIMUM EMISSION QUALITY:**

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**WORKS AND PROCEDURES:**

Good operating practices.

Tank dimensions (height x diameter): 4.88 m x 5.64 m

**EMISSION SOURCE 06: Ventilation of the transfer of aluminum bearing raw material with one transfer point discharging from railcar unloading area.**

**MAXIMUM EMISSION FLOW RATE: The authorized maximum rate of discharge is that due to natural ventilation associated with the transfer operation.**

**MAXIMUM ANNUAL OPERATING HOURS: 936 h/y**

**MAXIMUM EMISSION QUALITY:**

**WORKS AND PROCEDURES:**

Good operating practices and proper maintenance of related transfer equipment.

**EMISSION SOURCE 07: Four aluminum sulphate storage tanks discharging through a Vent(s).**

**MAXIMUM EMISSION FLOW RATE: The authorized maximum rate of discharge is that resulting from vapour venting during tank filing and breathing.**

**MAXIMUM ANNUAL OPERATING HOURS: 8760 h/y**

**MAXIMUM EMISSION QUALITY:**

**WORKS AND PROCEDURES:**

Good operating practices.

Tank dimensions (height x diameter):

Tank 1 = 4.11 m x 4.27 m

Tank 2 = 5.23 m x 4.57 m

Tank 3 = 3.73 m x 4.42 m

Tank 4 = 3.96 m x 4.50 m

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**EMISSION SOURCE 08: Two weak acid tanks discharging through a Vent(s).**

**MAXIMUM EMISSION FLOW RATE: The authorized maximum rate of discharge is that resulting from vapour venting during tank filling and breathing.**

**MAXIMUM ANNUAL OPERATING HOURS: 8760 h/y**

**MAXIMUM EMISSION QUALITY:**

**WORKS AND PROCEDURES:**

Good operating practices.

Tank dimensions (height x diameter):

Tank 1 = 3.35 m x 2.67 m

Tank 2 = 3.35 m x 2.67 m

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**SECTION 2 – GENERAL REQUIREMENTS AND CONDITIONS**

**A. AUTHORIZED WORKS, PROCEDURES AND SOURCES**

Works and procedures, which this permit authorizes in order to control the discharge of air contaminants, must be employed during all operating periods of the related sources. The Permittee must regularly inspect and maintain all such works, procedures and sources.

The District Director must be provided with reasonable notice of any changes to or replacement of authorized works, procedures or sources. Any changes to or replacement of authorized works, procedures or sources must be approved by the District Director in advance of operation. For certainty, this does not include routine maintenance or repair.

The discharge criteria described in Section 1 of this permit are applicable on the issued or last amended date of this permit unless specified otherwise. If a date different to the issued or last amended date is specified, the existing works, procedures and sources must be maintained in good operating condition and operated in a manner to minimize emissions.

**B. NOTIFICATION OF MONITORING NON-COMPLIANCE**

The District Director must be notified immediately of any emission monitoring results, whether from a continuous emissions monitor or periodic testing, which exceed the quantity or quality authorized in Section 1 of this permit. Notification must be made to Metro Vancouver's 24-hour number: 604-436-6777, or to [regulationenforcement@metrovancouver.org](mailto:regulationenforcement@metrovancouver.org).

**C. POLLUTION NOT PERMITTED**

Notwithstanding any conditions in this permit, no person may discharge or allow or cause the discharge of any air contaminant so as to cause pollution as defined in the Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008 and the Environmental Management Act.

**D. BYPASSES**

The discharge of air contaminants that have bypassed authorized control works is prohibited unless advance approval has been obtained and confirmed in writing from the District Director.

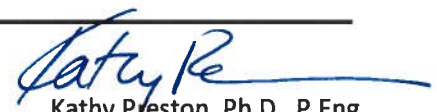
**E. EMERGENCY PROCEDURES**

In the event of an emergency or condition beyond the control of the Permittee that prevents effective operation of the authorized works or procedures or leads to unauthorized discharge, the Permittee must:

1. Comply with all applicable statutory requirements;
2. Immediately notify the District Director of the emergency or condition and of contingency actions invoked or planned to mitigate adverse impacts and restore compliance. Notification must be made to Metro Vancouver's 24-hour number: 604-436-6777; and
3. Take appropriate remedial action for the prevention or mitigation of pollution.

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The District Director may specify contingency actions to be implemented to protect human health and the environment while authorized works are being restored and/or corrective actions are being taken to prevent unauthorized discharges.

If an emergency situation results in a "spill" as defined in the Environmental Management Act Spill Reporting Regulation, the spill must also be reported immediately to the Provincial Emergency Program by telephoning 1-800-663-3456.

### **F. AMENDMENTS**

The terms and conditions of this permit may be amended, as authorized by applicable legislation. New works, procedures or sources or alterations to existing works, procedures or sources must receive authorization in advance of operation.


### **G. STANDARD CONDITIONS AND DEFINITIONS**

Unless otherwise specified, the following applies to this permit:

1. Gaseous volumes are corrected to standard conditions of 20 degrees Celsius (°C) and 101.325 kilo Pascals (kPa) with zero percent moisture.
2. Contaminant concentrations from the combustion of specific fuel types are corrected to the following Oxygen content, unless specified otherwise:
  - 3% O<sub>2</sub> for natural gas and fuel oil; or
  - 8% O<sub>2</sub> for wood fuel
3. Where compliance testing is required, each contaminant concentration limit in this permit will be assessed for compliance based on a valid test using test methods approved by the District Director.
4. Visual opacity measurements are made at the point of maximum density, nearest the discharge point and exclude the effect of condensed, uncombined water droplets. Compliance determinations are based on a six-minute average in accordance with the United States Environmental Protection Agency (US EPA) Method 9: Visual Determination of the Opacity of Emissions from Stationary Sources. Continuous Emission Monitor System (CEMS) opacity compliance determinations are based on a one-hour average (taken from the top of each hour).
5. If authorized in Section 1 of this permit, standby fuel use is restricted to a maximum of 350 hours per year and to those periods during which the primary authorized fuel is not available. Fuel oil sulphur content shall not exceed 15 milligrams per kilogram (mg/kg) and emissions during fuel oil firing shall not exceed 10% opacity.
6. Definitions in the Environmental Management Act and Air Quality Management Bylaw apply to terminology used in this permit.
7. Threshold Limit Values (TLV) refer to the Time Weighted Average (TWA) exposure limits for substances specified in the American Conference of Governmental Industrial Hygienists Threshold Limit Values handbook, current on the latest date that this permit issuance or amendment came into effect.
8. Sulphur Oxides (SO<sub>x</sub>) are expressed as Sulphur Dioxide.
9. Nitrogen Oxides (NO<sub>x</sub>) are expressed as Nitrogen Dioxide.

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10. The Canadian Council of Ministers of the Environment (CCME) "Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks (PN1180)" shall be adhered to for all applicable tanks unless otherwise stated in this permit.
11. Authorized 'Maximum Annual Operating Hours' of 8760 hours per year for an emission source is equivalent to authorization for continuous operation of the emission source for an entire calendar year, including leap years.

### **H. RECORDS RETENTION**

All records and supporting documentation relating to this permit must be kept for at least three years after the date of preparation or receipt thereof, and be made available for inspection within 48 hours of a request by an Officer.

### **I. HEATING, VENTILATION, AIR CONDITIONING AND INTERNAL COMBUSTION ENGINES**

Any natural gas-fired heating, ventilation or air conditioning system for buildings and any internal combustion engine located at the discharge site must be maintained and operated in a manner prescribed by the manufacturer to ensure good combustion of the fuel with minimum discharge of air contaminants.

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**SECTION 3 – REPORTING REQUIREMENTS**

**A. MONITORING REQUIREMENTS AND REPORTING**

Unless otherwise approved in writing by the District Director prior to any sampling or analysis, all measurements must be performed by an independent agency in accordance with Metro Vancouver Air Emissions Sampling Program Manual of Methods and Standard Operating Procedures and the BC Ministry of Environment Field Sampling Manual, as they may be amended from time to time. Any variance from these procedures must receive prior written approval from the District Director.

A minimum of 5 working days advance notice must be given prior to taking measurements required by this Monitoring and Sampling Program. Notification must be given to the Metro Vancouver Environmental Regulation & Enforcement Division (phone 604-436-6777, Fax 604-436-6707, email [regulationenforcement@metrovancover.org](mailto:regulationenforcement@metrovancover.org)).


Unless otherwise specified, sampling must be performed under operating conditions representative of the previous 90 calendar days of operation. All field data and calculations must be submitted with monitoring results and they must be reported in the metric units that are used in this permit. These submissions must include process data relevant to the operation of the source of the emissions and the performance of the emission control works.

Unless otherwise specified or approved in writing by the District Director, stack sampling must not occur more than 120 calendar days prior to the due dates specified below.

The Permittee must conduct the following monitoring and sampling and submit electronic reports of the results to the District Director by the due dates specified in the following table using a password enabled web based application provided by Metro Vancouver.

| EMISSION SOURCE | INITIAL DUE DATE | SUBSEQUENT DUE DATES | REQUIREMENT | PARAMETER(S) | TEST METHOD | REPORT TYPE/TITLE |
|-----------------|------------------|----------------------|-------------|--------------|-------------|-------------------|
| N/A             | N/A              | N/A                  | N/A         | N/A          | N/A         | N/A               |

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**B. INFORMATION REPORTING REQUIREMENTS**

The Permittee must submit electronic reports containing the required information to the District Director by the due dates specified in the following table using a password enabled web based application provided by Metro Vancouver.

| <b>EMISSION SOURCE</b> | <b>INITIAL DUE DATE</b> | <b>SUBSEQUENT DUE DATES</b>                     | <b>REQUIREMENT</b>  | <b>REPORT TYPE/<br/>TITLE</b>                             |
|------------------------|-------------------------|---|---|---|
| 01                     | March 31, 2022          | On or before March 31 for each subsequent year. | Monthly records of the number of batch mixes of aluminum sulphate produced in the preceding calendar year.  | Aluminum Sulphate Batch Report<br><br>Information - Other |
| 01, 04, 06, 07, 08     | March 31, 2022          | On or before March 31 for each subsequent year. | Written report providing details of the total number of hours and days operated in the preceding calendar year.   | Operating Period  |
| Facility               | March 31, 2022          | On or before March 31 for each subsequent year. | Written report providing details of the types and amounts of principal products produced and principal raw materials used in the preceding calendar year. | Materials and Products                                    |


**C. AMENDED OR ADDITIONAL REQUIREMENTS**

Based on the results of the monitoring program, including the stack sampling results or any other information, the District Director may:

1. Amend the monitoring and reporting requirement of any of the information required by this Permit including plans, programs and studies.
2. Require additional investigations, tests, surveys or studies.

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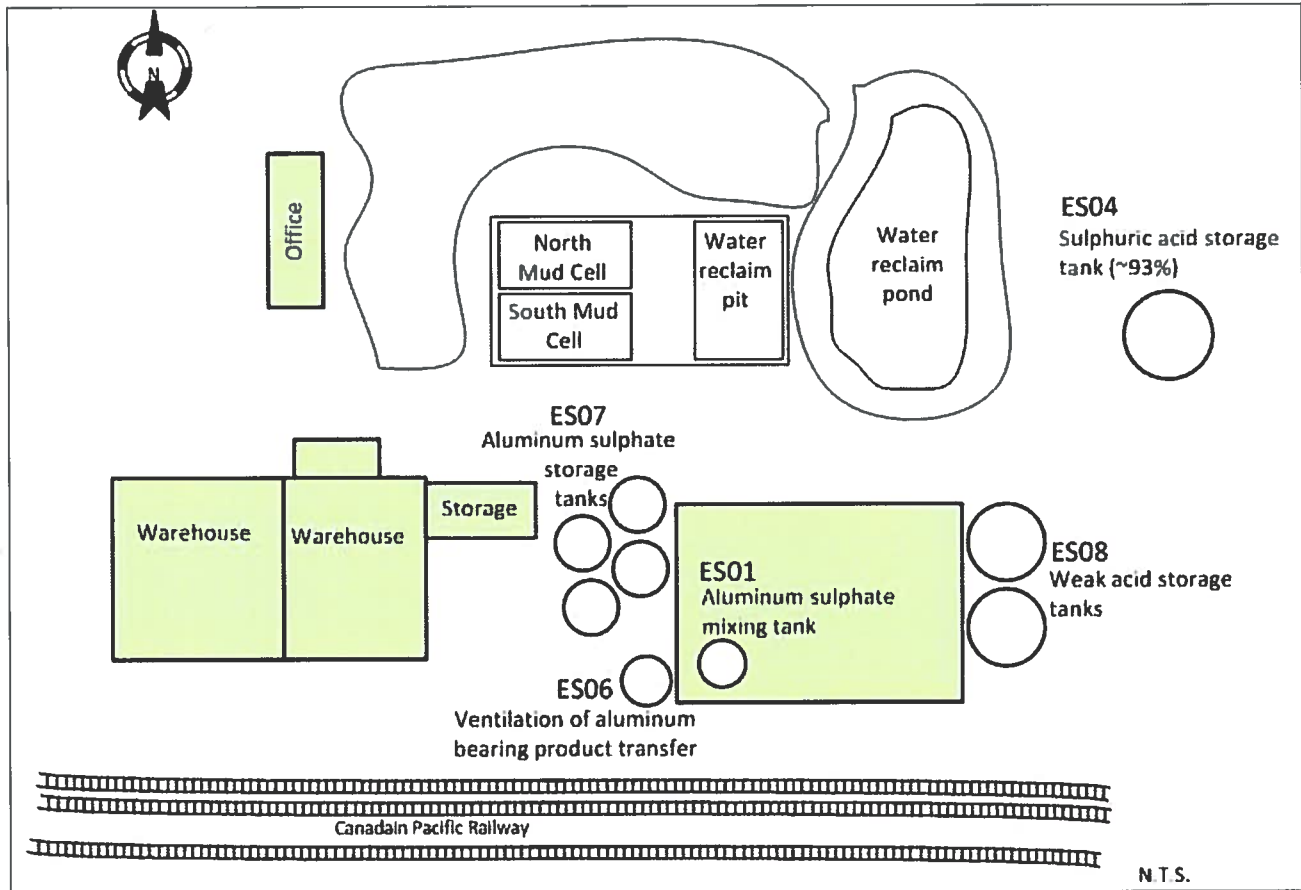
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**SECTION 4 – SITE PLAN**

LEGAL DESCRIPTION OF DISCHARGE SITE: **Municipality of Burnaby, Parcel Identifier 002-994-925 Parcel One, District Lot 212, Group 1, New Westminster District Reference Plan 58607**

The following site plan is not to scale and the locations of the discharge points are approximate.



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