Environmental Appeal Board
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Decision No: EAB-EMA-21-A013(a)

IN THE MATTER OF AN APPEAL BY WEST COAST REDUCTION LTD. OF A DECISION MADE UNDER THE PROVISIONS OF THE GREATER VANCOUVER REGIONAL DISTRICT *AIR QUALITY MANAGEMENT BYLAW NO. 1082, 2008* AND THE *ENVIRONMENTAL MANAGEMENT ACT*, S.B.C. 2003, c. 53 BY THE DISTRICT DIRECTOR, METRO VANCOUVER REGIONAL DISTRICT WITH RESPECT TO PERMIT GVA1197

BETWEEN

WEST COAST REDUCTION LTD.

APPELLANT

AND:

DISTRICT DIRECTOR, METRO VANCOUVER REGIONAL DISTRICT

RESPONDENT

CONSENT ORDER

ON THE APPLICATION of the Appellant, West Coast Reduction Ltd., and the Respondent, District Director, Metro Vancouver Regional District, and on hearing Gary A. Letcher and Andrea C. Akelaitis, counsel for the Appellant, West Coast Reduction Ltd., and Alyssa Bradley, counsel for the Respondent, District Director, Metro Vancouver Regional District;

WHEREAS the Appellant, West Coast Reduction Ltd, has filed on December 9, 2021 an appeal to the Environmental Appeal Board against the Respondent, District Director, Metro Vancouver Regional District with respect to Permit GVA1197 (the "Permit");

AND WHEREAS the Appellant and the Respondent agree that a Consent Order on the terms that follow will dispose of the appeal;

ORDER

NOW THEREFORE, pursuant to Section 16(1) of the *Administrative Tribunals Act* and Section 103 of the *Environmental Management Act*, the Environmental Appeal Board, with the consent of the Appellant and the Respondent, orders that in full resolution of the appeal and without costs the Permit is hereby amended in the form and words as set out in Schedule "1" to this Order.

Dated at Victoria, British Columbia as of the 16th day of June 2022

"David Bird"
David Bird, Vice Chair Service Delivery
Environmental Appal Board

APPROVED AS TO FORM AND CONSENTED TO AS OF
June 10, 2022

"Gary A. Letcher"
Gary A. Letcer
Counsel for the Appellant, West Coast Reduction Ltd.

APPROVED AS TO FORM AND CONSENTED TO AS OF
June 7, 2022

"Alyssa Bradley"
Alyssa Bradley
Counsel for the District Director, Metro Vancouver Regional District

SCHEDULE "1"

PROPOSED AMENDED PERMIT GVA1197

metrovancouver
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

PERMIT GVA1197

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:

West Coast Reduction Ltd.
(the "Permittee")

To Authorize:

the discharge of air contaminants to the air from
a rendering plant

Located at:

105 North Commercial Drive, Vancouver, BC V5L 4V7

Effective Period:

The terms and conditions set out in the Permit apply to the existing or planned works as of November 10, 2021 and this Permit will expire on November 10, 2031.

Issued	November 10, 2021	R.H. (Ray) Robb, P. Eng. District Director
Amended:	May 18, 2022	K. Preston, PhD, P. Eng. District Director

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 02: One 189 HP Babcock and Wilcox Boiler (No. 3) discharging through a Stack(s).

MAXIMUM EMISSION FLOW RATE: **96** m^3/min
MAXIMUM ANNUAL OPERATING HOURS: **5000** h/y
MAXIMUM PRIMARY BURNER INPUT FIRING RATE: **22.5** GJ/h

MAXIMUM EMISSION QUALITY:
1. 5% Opacity

WORKS AND PROCEDURES:
The firing of the process boilers with natural gas using good combustion practices and operating procedures. Standby fuel is authorized subject to conditions in Section 2.G.5.

EMISSION SOURCE 04: Dupps process room air, feather and blood process room air, mill room air and conveyor system air discharging through a Stack(s).

THIS EMISSION SOURCE IS AUTHORIZED UNTIL NOVEMBER 10, 2026.

MAXIMUM EMISSION FLOW RATE: **2000** m^3/min
MAXIMUM ANNUAL OPERATING HOURS: **8760** h/y

MAXIMUM EMISSION QUALITY:
1. 5.3 mg/m^3 Ammonia
2. 1.41 mg/m^3 Dimethyl Disulphide
3. 0.64 mg/m^3 Dimethyl Sulphide
4. 0.596 mg/m^3 Hydrogen Sulphide
5. 0.592 mg/m^3 Methyl Mercaptan (Methane Thiol)
6. 28.4 mg/m^3 Total Hydrocarbon (as Methane)
7. 1.0 mg/m^3 Total Reduced Sulphur Compounds
8. 15 mg/m^3 Particulate Matter
9. 5% Opacity

WORKS AND PROCEDURES:
A single-stage packed tower scrubber system using sodium hypochlorite or chlorine dioxide as the scrubbing agent.

All rooms and transfer lines associated with this source must be under negative pressure with all air to be collected and directed to the scrubber system at all times. All vents associated with rooms and transfer lines must be one way vents so as to allow air into the room or line but not out.

From May 1 to October 31 inclusive, the scrubber must be operated continuously for 24 hours per day and 7 days a week except during scrubber maintenance. From May 1 to October 31 inclusive, planned scrubber maintenance must occur only during non-operational times. For the remainder of the year, the scrubbers must be operated at all times when materials are being processed.

The Permittee must continuously monitor and record:

- Weekly, the room-to-atmosphere differential pressure in all rooms associated with this source;
- Daily, the minimum and maximum temperature of the scrubber exhaust along with the concurrent ambient temperature measured on site in a manner approved by the District Director;
- Scrubber operating parameters as approved by the District Director.

These records must be kept available for inspection by Metro Vancouver staff as required in Section 2.

Stack Information:
Height above ground level: 32.1 m
Internal diameter at stack top: 1.3 m
Raincap: No
Minimum exit temperature: 15 + 0.623 x ambient temperature (°C). This regression equation may be updated with new data when it becomes available and upon review and written approval by the District Director.

Facilitation of Stack Testing:

The Permittee will facilitate Metro Vancouver's qualified stack testing consultant accessing the facility for the time and days required to set up and conduct stack testing of Emission Sources 04 and 08, for the purposes of, and be limited to, measuring the discharge rate and concentration of the contaminants now set out in Schedule A, on up to an annual basis. All measurements must be performed by an independent agency.

Metro Vancouver will provide a minimum of 5 working days' advance written notice prior to accessing the facility for the purposes of setting up and conducting the sampling.

Issued	November 10, 2021	R.H. (Ray) Robb, P. Eng. District Director
Amended:	May 18, 2022	K. Preston, PhD, P. Eng. District Director

Unless otherwise specified, during stack testing by Metro Vancouver, the Permittee must be operating under conditions representative of the previous 90 calendar days.

All field data, laboratory reports and calculations must be provided to the Permittee with sampling results in the final stack testing report and they must be reported in the metric units that are used in this Permit. The entirety of the final stack testing report for each year of stack testing shall be provided to the Permittee at the same time as provided to Metro Vancouver.

EMISSION SOURCE 05: Thirty-two tallow and canola oil storage tanks discharging through a Vent(s).

MAXIMUM EMISSION FLOW RATE: **The rate of discharge is that resulting from venting during tank filling, withdrawing and breathing.**
MAXIMUM ANNUAL OPERATING HOURS: **8760** h/y

MAXIMUM EMISSION QUALITY:

WORKS AND PROCEDURES:
Good operating procedures.

EMISSION SOURCE 07: Tallow refinery room air, and pneumatic conveying system discharging through a Stack(s).

MAXIMUM EMISSION FLOW RATE: **1650** m^3/min
MAXIMUM ANNUAL OPERATING HOURS: **8760** h/y
MAXIMUM EMISSION QUALITY:
1. 15 mg/m^3 Particulate Matter
2. 5% Opacity

WORKS AND PROCEDURES:
One packed tower scrubber utilizing sodium hypochlorite as the scrubbing agent.

All rooms and transfer lines associated with this source must be under negative pressure with all air to be collected and directed to the scrubber system at all times. All vents associated with rooms must be one way vents so as to allow air into the room but not out.

From May 1 to October 31 inclusive, the scrubber must be operated continuously for 24 hours per day and 7 days a week except during scrubber maintenance. From May 1 to October 31 inclusive, planned

scrubber maintenance must occur only during non-operational times. For the remainder of the year, the scrubbers must be operated at all times when materials are being processed.

The Permittee must continuously monitor and record:

- Weekly, the room-to-atmosphere differential pressure in all rooms associated with this source;
- Daily, the minimum and maximum temperature of the scrubber exhaust along with the concurrent ambient temperature measured on site in a manner approved by the District Director;
- Scrubber operating parameters as approved by the District Director.

These records must be kept available for inspection by Metro Vancouver staff as required in Section 2.

Stack Information:
Height above ground level: 12.5 m
Internal diameter at stack top: 1.6 m
Raincap: No
Minimum exit temperature: 7.22 + 0.689 x ambient temperature (°C). This regression equation may be updated with new data when it becomes available and upon review and written approval by the District Director.

EMISSION SOURCE 08: Stord Bartz process room air, wastewater treatment room air, raw materials receiving room air, fish receiving tank air and conveying system air discharging through a Stack(s).

THIS EMISSION SOURCE IS AUTHORIZED UNTIL NOVEMBER 10, 2026.

MAXIMUM EMISSION FLOW RATE: **1020** m^3/min
MAXIMUM ANNUAL OPERATING HOURS: **8760** h/y
MAXIMUM EMISSION QUALITY:

1. 5.3 mg/m^3 Ammonia
2. 1.41 mg/m^3 Dimethyl Disulphide
3. 0.64 mg/m^3 Dimethyl Sulphide
4. 0.596 mg/m^3 Hydrogen Sulphide
5. 0.592 mg/m^3 Methyl Mercaptan (Methane Thiol)
6. 28.4 mg/m^3 Total Hydrocarbon (as Methane)
7. 1.0 mg/m^3 Total Reduced Sulphur Compounds
8. 15 mg/m^3 Particulate Matter
9. 5% Opacity

WORKS AND PROCEDURES:
A three stage, in series, packed tower scrubber system using sulphuric acid agent in the first stage and, sodium hypochlorite, sodium hydroxide, or chlorine dioxide as the scrubbing agents in the second and third stages.

All rooms and transfer lines associated with this source must be under negative pressure with all air to be collected and directed to the scrubber system at all times. All vents associated with rooms and transfer lines must be one way vents so as to allow air into the room or line but not out.

From May 1 to October 31 inclusive, the scrubber must be operated continuously for 24 hours per day and 7 days a week except during scrubber maintenance. From May 1 to October 31 inclusive, planned scrubber maintenance must occur only during non-operational times. For the remainder of the year, the scrubbers must be operated at all times when materials are being processed.
The Permittee must continuously monitor and record:

- Weekly, the room-to-atmosphere differential pressure in all rooms associated with this source;
- Daily, the minimum and maximum temperature of the scrubber exhaust along with the concurrent ambient temperature measured on site in a manner approved by the District Director;
- Scrubber operating parameters as approved by the District Director.

These records must be kept available for inspection by Metro Vancouver staff as required in Section 2.

Stack Information:
Height above ground level: 41.0 m
Internal diameter at stack top: 2.4 m
Raincap: No
Minimum exit temperature: 12.2 + 0.618 x ambient temperature (°C). This regression equation may be updated with new data when it becomes available and upon review and written approval by the District Director.

Facilitation of Stack Testing:

The Permittee will facilitate Metro Vancouver's qualified stack testing consultant accessing the facility for the time and days required to set up and conduct stack testing of Emission Sources 04 and 08, for the purposes of, and be limited to, measuring the discharge rate and concentration of the contaminants now set out in Schedule A, on up to an annual basis. All measurements must be performed by an independent agency.

Metro Vancouver will provide a minimum of 5 working days' advance written notice prior to accessing the facility for the purposes of setting up and conducting the sampling.

Issued	November 10, 2021	R.H. (Ray) Robb, P. Eng. District Director
Amended:	May 18, 2022	K. Preston, PhD, P. Eng. District Director

Unless otherwise specified, during stack testing by Metro Vancouver, the Permittee must be operating under conditions representative of the previous 90 calendar days.

All field data, laboratory reports and calculations must be provided to the Permittee with sampling results in the final stack testing report and they must be reported in the metric units that are used in this Permit. The entirety of the final stack testing report for each year of stack testing shall be provided to the Permittee at the same time as provided to Metro Vancouver.

EMISSION SOURCE 10: No. 1 and No. 2 process boilers discharging through a Stack(s).

MAXIMUM EMISSION FLOW RATE: **792** m^3/min
MAXIMUM ANNUAL OPERATING HOURS: **6000** h/y
MAXIMUM PRIMARY BURNER INPUT FIRING RATE: **133** GJ/h

MAXIMUM EMISSION QUALITY:
1. 5% Opacity

WORKS AND PROCEDURES:
The firing of the process boilers with natural gas using good combustion practices and operating procedures. Standby fuel is authorized subject to conditions in Section 2.G.5.

EMISSION SOURCE 12: Eleven meal storage silos discharging through a Vent(s).

MAXIMUM EMISSION FLOW RATE: **The rate of discharge is that resulting from venting during tank filling, withdrawing and breathing.**
MAXIMUM ANNUAL OPERATING HOURS: **8760** h/y

MAXIMUM EMISSION QUALITY:
1. 20% Opacity

WORKS AND PROCEDURES:
Good operating procedures.

EMISSION SOURCE 13: Meal truck loading station discharging through truck containers.

MAXIMUM EMISSION FLOW RATE: **The rate of discharge is that resulting from meal truck filling and displacement air from the truck container.**
MAXIMUM ANNUAL OPERATING HOURS: **8760** h/y

MAXIMUM EMISSION QUALITY:
1. 20% Opacity

WORKS AND PROCEDURES:
Good operating procedures.

EMISSION SOURCE 14: Stord Bartz process equipment, Dupps process equipment, feather and blood process equipment, tallow refinery process equipment discharging through a Stack(s).

MAXIMUM EMISSION FLOW RATE: **585** m^3/min
MAXIMUM ANNUAL OPERATING HOURS: **8000** h/y
MAXIMUM PRIMARY BURNER INPUT FIRING RATE: **32.7** GJ/h

MAXIMUM EMISSION QUALITY:
1. 60 mg/m^3 Carbon Monoxide
2. 15 mg/m^3 Particulate Matter
3. 5% Opacity

WORKS AND PROCEDURES:
Natural gas fired thermal oxidizer and heat recovery boiler and related appurtenances, together with good operating practices. Standby fuel is authorized subject to conditions in Section 2.G.5.

All high intensity odours from rendering processes must be ducted to this oxidizer or the oxidizer described in Emission Source 16.

The thermal oxidizer must be operated at a minimum combustion chamber operating temperature of 850°C and this temperature is to be continuously monitored and recorded in a conveniently visible location.

In addition to temperature, the Permittee shall continuously monitor and record the concentration of carbon monoxide (CO) in the discharge. The Permittee shall calibrate these temperature and carbon monoxide measurement systems at the discretion of, and in a manner acceptable to, the District Director.

These records must be kept available for inspection by Metro Vancouver staff as required in Section 2.

Stack Information:
Height above ground level: 13.4 m

Internal diameter at stack top: 0.81 m
Raincap: No
Minimum exit temperature when high intensity process air is directed to this source = 180°C

EMISSION SOURCE 15: No. 5 process boiler discharging through a Stack(s).

MAXIMUM EMISSION FLOW RATE: **87** m^3/min
MAXIMUM ANNUAL OPERATING HOURS: **6000** h/y
MAXIMUM PRIMARY BURNER INPUT FIRING RATE: **20** GJ/h
MAXIMUM EMISSION QUALITY:
1. 5% Opacity

WORKS AND PROCEDURES:
The firing of the process boilers with natural gas using good combustion practices and operating procedures. Standby fuel is authorized subject to conditions in Section 2.G.5.

EMISSION SOURCE 16: Stord Bartz process equipment, Dupps process equipment, feather and blood process equipment, tallow refinery process equipment, discharging through a Stack(s).

MAXIMUM EMISSION FLOW RATE: **585** m^3/min
MAXIMUM ANNUAL OPERATING HOURS: **8000** h/y
MAXIMUM PRIMARY BURNER INPUT FIRING RATE: **42** GJ/h

MAXIMUM EMISSION QUALITY:
1. 60 mg/m^3 Carbon Monoxide
2. 15 mg/m^3 Particulate Matter
3. 5% Opacity

WORKS AND PROCEDURES:
Natural gas fired thermal oxidizer and heat recovery boiler and related appurtenances, together with good operating practices. Standby fuel is authorized subject to conditions in Section 2.G.5.

All high intensity odours from rendering processes must be ducted to this oxidizer or the oxidizer described in Emission Source 14.

The thermal oxidizer must be operated at a minimum combustion chamber operating temperature of 850°C and this temperature is to be continuously monitored and recorded in a conveniently visible location.

In addition to temperature, the Permittee shall continuously monitor and record the concentration of carbon monoxide (CO) in the discharge. The Permittee shall calibrate these temperature and carbon monoxide measurement systems at the discretion of, and in a manner acceptable to, the District Director.

These records must be kept available for inspection by Metro Vancouver staff as required in Section 2.

Stack Information:
Height above ground level: 12.8 m
Internal diameter at stack top: 0.965 m
Raincap: No
Minimum exit temperature when high intensity process air is directed to this source = 180°C

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.

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.

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_2 for natural gas and fuel oil; or
   - 8% O_2 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.

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District Director

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District Director

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_x) are expressed as Sulphur Dioxide.
9. Nitrogen Oxides (NO_x) are expressed as Nitrogen Dioxide.
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.

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@metrovancouver.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
04, 08	September 30, 2022	On or before September 30 for each subsequent year, ending September 30, 2026.	Written report detailing the measured discharge rate and concentration in the emissions of air contaminants specified in the adjacent "Parameter(s)" column. Flow rate and temperature of the exhaust are to be measured at each source at the time of sampling. Stack testing must occur within 4 months of the reporting requirement due date. The sampling and assessment program must adhere to the methodologies and criteria as outlined in the approved stack sampling plan and must be conducted by qualified personnel.	Ammonia, Hydrogen Sulphide, Dimethyl Disulphide, Dimethyl Sulphide, Methyl Mercaptan (Methane Thiol), Total Hydrocarbons (as Methane), Total Reduced Sulphur Compounds	The test methods for the Parameters will be as follows: - Ammonia – US EPA CTM-027 - Dimethyl Sulphide, Dimethyl Disulphide, Hydrogen Sulphide, Methyl Mercaptan – Primary Environment Canada 1/RM/6; supporting ASSC (Alberta Stack Sampling Code) TRS with GC - Total Reduced Sulphur Compounds – US EPA Method 16A	Stack

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District Director
K. Preston, PhD, P. Eng.
District Director

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	PARAMETER(S)	TEST METHOD	REPORT TYPE/ TITLE
					- Total Hydrocarbons (as Methane) – US EPA Method 25A	
04, 07, 08	March 31, 2026	N/A	Written report detailing the measured discharge rate and concentration of Particulate Matter in the emissions. Flow rate and temperature of the exhaust are to be measured at each source at the time of sampling. Stack testing must occur within 4 months of the reporting requirement due date. The sampling and assessment program must adhere to the methodologies and criteria as outlined in the approved stack sampling plan and must be conducted by qualified personnel.	Particulate Matter	Those approved by the District Director	Stack

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.

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/ TITLE
Facility	December 31, 2021	N/A	Submit for written approval by the District Director an outline or annotated table of contents of the annual meteorological station report that includes but is not limited to: • Quarterly and annual wind roses (both site-specific meteorological station and comparison to Metro Vancouver meteorological station Vancouver-Templeton (T48); • Maximum, minimum, mean 1-minute and 1-hour values for each meteorological parameter for each quarter and year; • % calms (i.e., less than stall speed of anemometer); • % data completeness for each parameter; • Example tables and figures; and • Table of contents and outline for the annual reporting of data quality assurance, calibration, inspection, and maintenance summaries.	Outline for Meteorological Station Data Report Information - Other
04, 08	February 28, 2022	N/A	Written stack sampling plan, prepared by a qualified person which outlines a program to measure the discharge rate and concentration of specified contaminants in the emissions: ES04 and ES08 • Ammonia, • Dimethyl Sulphide, • Dimethyl Disulphide, • Hydrogen Sulphide, • Methyl Mercaptan (Methane Thiol), • Total Hydrocarbons (as Methane), • Total Reduced Sulphur Compounds.	Stack Sampling Plan Stack Test Plan

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District Director
K. Preston, PhD, P. Eng.
District Director

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/ TITLE
			The stack sampling plan is to be submitted to Metro Vancouver for review, comment, and written approval by the District Director. Any sampling and analyses associated with this plan must be conducted by qualified personnel.	
02, 04, 05, 07, 08, 10, 12, 13, 14, 15, 16, Facility	February 28, 2022	On or before February 28 for each subsequent year.	Written report, for review and written approval by the District Director, based on the Odour Management Plan submitted as required under Permit GVA0141 and approved on March 14, 2019. The report is to include a summary of measures or actions taken in the previous year to mitigate odour, recommendations for any changes in the odour management procedures for continuous improvement including, complaint handling protocols, and communication to the surrounding community if odours are noted in the community.	Odour Management Plan Update Information - Other
02, 04, 07, 08, 10, 14, 15, 16	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
04, 07, 08	March 31, 2022	On or before March 31 for each subsequent year.	Submit a written report summarizing frequency and results of all inspections and maintenance carried out on the scrubbers. The report shall also include any actions, taken or proposed, to solve identified problems.	Scrubber
02, 10, 14, 15, 16	March 31, 2022	On or before March 31 for	Submit a written report providing details of the types and amounts of fuel burned in the preceding calendar year.	Fuel Use

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Amended: May 18, 2022

R.H. (Ray) Robb, P. Eng.
District Director
K. Preston, PhD, P. Eng.
District Director

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/ TITLE
		each subsequent year.		
Facility	March 31, 2022	On or before March 31 for each subsequent year.	Submit a 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
Facility	March 31, 2022	Every 3 years, on or before March 31 every third year.	Submit a written report, for review and written approval by the District Director, in accordance with the Building Envelope Assessment Plan submitted under permit GVA0141, and approved on June 21, 2017. The report should include an assessment of the air tightness of the building envelope of the facility buildings and air tightness of related structures. The report must be prepared by an independent Qualified Professional* with experience in the assessment of odorous buildings that require capture and control of all room air prior to release to atmosphere. It must discuss any applicable deficiencies in the structures that may lead to fugitive emissions due to openings (i.e., doors, vents or poor sealing), wind entrainment, differential pressure gradients, thermal gradient differences, leaks from external conveyance devices (meal transfer lines, valves), and failure to maintain negative pressure at all points and at all times within the structures. The report must also include recommendations and timelines to address all deficiencies as well as recommendations for improving ongoing maintenance and repair. As part of the assessment, an inventory of all leaks and deficiencies must be developed and appended to the report. *As submitted by the permit holder using the most recent versions of the "Qualified Professional Declaration of Competency" and "Qualified Professional Conflict of Interest	Building Envelope Assessment Report Information - Other

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/ TITLE
			Disclosure Statement" forms, as available in the forms package for air permit applications on the Metro Vancouver website.	
Facility	March 31, 2022	On or before March 31 for each subsequent year.	Submit a written report, as per an approved meteorological station data report outline, summarizing the wind speed and wind direction observations (including quarterly and annual wind roses) from the approved site specific meteorological station for the previous calendar year (January 01 to December 31).	Meteorological Station Data Report Information – Other
Facility	June 30, 2023	On or before June 30 for each subsequent year.	A written report for review and written approval by the District Director that includes (but is not limited to) activities undertaken in the previous calendar year to: • Assess the facility building envelopes and air tightness of related structures for any applicable deficiencies in the structures that may lead to fugitive emissions (i.e. leaks, poor sealing); • Assess the negative pressure within the structures; and • Resolve any identified deficiencies. An inventory of all leaks and deficiencies identified must be developed and appended to the report.	Building Envelope Internal Review Information - Other
02, 04, 07, 08, 10, 14, 15, 16	March 31, 2025	N/A	Submit a dispersion modelling plan for review and written approval by the District Director. The plan must be developed using the most recent version of the British Columbia Air	Dispersion Model Plan

Issued November 10, 2021

Amended: May 18, 2022

R.H. (Ray) Robb, P. Eng.
District Director
K. Preston, PhD, P. Eng.
District Director

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/ TITLE
			Quality Dispersion Modelling Guideline and the most recent version of the Metro Vancouver dispersion model plan template.	
08	October 31, 2025	N/A	A written report for review and written approval by the District Director, detailing the review of the technical feasibility of increasing the exit velocity of ES08. This report must be prepared by an independent Qualified Professional*. *As submitted by the permit holder using the most recent versions of the "Qualified Professional Declaration of Competency" and "Qualified Professional Conflict of Interest Disclosure Statement" forms, as available in the forms package for air permit applications on the Metro Vancouver website.	Technical Feasibility Evaluation Information - Other
02, 04, 07, 08, 10, 14, 15, 16	October 31, 2025	N/A	Submit a written report for review and written approval by the District Director, of the results of a dispersion modelling assessment of the potential cumulative impacts of Particulate Matter and Nitrogen Oxides emissions from the facility (for the period January 01, 2022 to December 31, 2024). Modelling must be conducted in accordance with the most recent version of the British Columbia Air Quality Dispersion Modelling Guideline and a dispersion model plan approved by the District Director. The report must address modelling results for: 1. Particulate Matter; and 2. Nitrogen Dioxide	Dispersion Model Report

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District Director
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District Director

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/ TITLE
			Modelling is to include elevated receptors on nearby buildings and sensitive receptors within the model domain such as schools, daycares, senior facilities, hospitals etc. Model results are to be presented on a satellite imagery basemap. Model results are to include the relative contribution of each source to the maximum predicted concentrations at the most impacted sensitive receptors and the maximum point of impingement for each of the modelled parameters detailed above. Modelling is to be based on: 1. Minimum exit temperatures for ES02, ES10, ES14, ES15, and ES16 and linear regression equations based on actual hourly exit temperatures for ES04, ES07 and ES08. 2. Minimum stack exit velocity for ES04 and actual stack exit velocities for ES02, ES07, ES08, ES10, ES14, ES15, and ES16. 3. Permitted flow rates.	
04, 07, 08	November 30, 2025	N/A	Written stack sampling plan, prepared by a qualified person which outlines a program to measure the discharge rate and concentration of Particulate Matter in the emissions. The stack sampling plan is to be submitted to Metro Vancouver for review, comment, and written approval by the District Director. Any sampling and analyses associated with this plan must be conducted by qualified personnel.	Stack Sampling Plan - Particulate Matter Stack Test Plan

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/ TITLE

C. AMENDED OR ADDITIONAL REQUIREMENTS

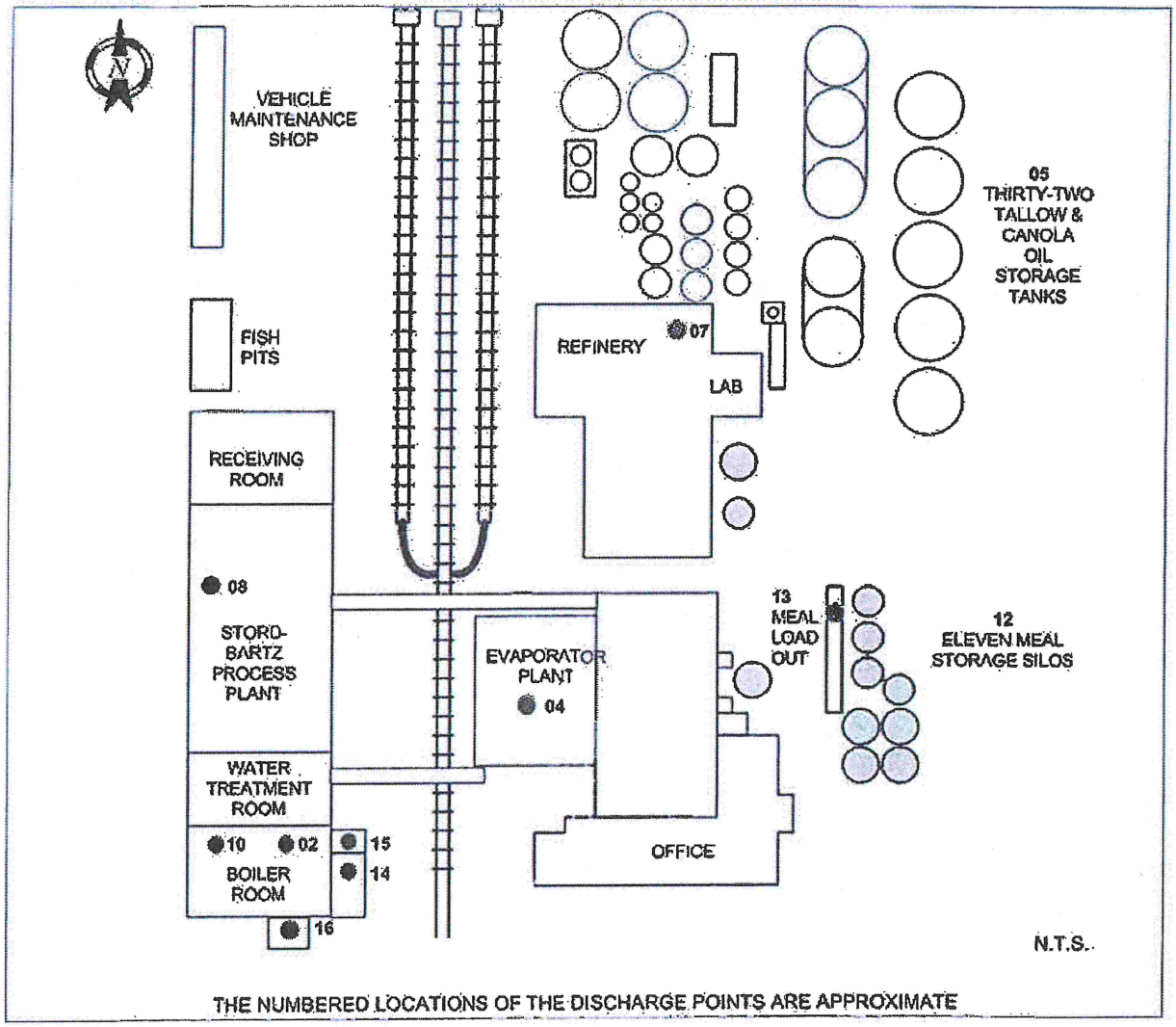
Based on the results of the monitoring program, including the stack sampling results or any other information, the District Director may:

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.

SECTION 4 – SITE PLAN

LEGAL DESCRIPTION OF DISCHARGE SITE: **PID: 025-982-257. PARCEL A EXCEPT: PART STATUTORY RIGHT OF WAY PLAN BCP18581 BLOCKS C, D AND E, BED AND FORESHORE OF BURRARD INLET DISTRICT LOT 183 GROUP 1 PLAN BCP11927.**

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


N
VEHICLE MAINTENANCE SHOP
FISH PITS
RECEIVING ROOM
08
STORD-BARTZ PROCESS PLANT
WATER TREATMENT ROOM
10
02
15
BOILER ROOM
14
16
REFINERY
07
LAB
05
THIRTY-TWO TALLOW & CANOLA OIL STORAGE TANKS
EVAPORATOR PLANT
04
13
MEAL LOAD OUT
12
ELEVEN MEAL STORAGE SILOS
OFFICE
N.T.S.
THE NUMBERED LOCATIONS OF THE DISCHARGE POINTS ARE APPROXIMATE

SCHEDULE A
Ethyl Amine
Methyl Amine
Dimethyl Amine
Triethylamine
Butyl Amine
Trimethylamine
Butyl Mercaptan
Butanoic Acid (Butyric Acid)
Hexanoic Acid (Caproic Acid)
Propionic Acid
2-Methylpropanoic Acid (Isobutyric Acid)
Pentanoic Acid (Valeric Acid)
Acetic Acid
3-Methyl Butanoic Acid (Isovaleric Acid)
Propanal (Propionaldehyde)
Butanal (Butyraldehyde)
Pentanal (Valeraldehyde)
Crotonaldehyde
Ethyl Acetate
Ethanol
2-Butanone (MEK)
2-Hexanone (Methyl n-Butyl Ketone, MBK)
3-Methylbutanal (Isovaleraldehyde)
Acetaldehyde
Hexanal (Hexaldehyde)