



metro vancouver

Greater Vancouver Regional District • Greater Vancouver Water District

Greater Vancouver Sewerage and Drainage District • Metro Vancouver Housing Corporation

4330 Kingsway, Burnaby, BC, Canada V5H 4G8 604-432-6200 www.metrovancouver.org

*Metropolitan Planning, Environment and Parks Department
Tel. 604-432-6200 Fax 604-436-6707*

PERMIT GVA0261

Pursuant to
Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008
and BC Environmental Management Act

Shell Canada Limited

located at
201 Kensington Avenue, Burnaby, BC V5B 4B2


is authorized to discharge air contaminants to the air from
Petroleum Products Storage & Distribution Terminal

subject to the requirements in this Permit for the emission sources and works existing or planned on
March 29, 2012.

Contravention of any of these requirements is a violation of the bylaw
and may result in enforcement action.

Issued:
Amended:

November 07, 1992
March 29, 2012


Don Miller
Assistant District Director

GREATER 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 are subject to the specified terms and conditions.

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

EMISSION SOURCE 12: Tank Truck Loading Rack discharging through tank truck vents.

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

MAXIMUM ANNUAL OPERATING HOURS: 8760 hrs/yr

MAXIMUM EMISSION QUALITY:

1. Odour: None past the plant boundary such that pollution occurs.

WORKS AND PROCEDURES:

All tank truck loading of aviation gasoline must be done using submerged or bottom loading.

Proposals to load other petroleum products through the tank truck loading rack must be authorized by the District Director.

EMISSION SOURCE 18: Storage tanks (Number 50, 134, 193, 282 and 283) with fixed roofs discharging through roof vents.

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

MAXIMUM ANNUAL OPERATING HOURS: 8760 hrs/yr

MAXIMUM EMISSION QUALITY:

1. Odour: None past the plant boundary such that pollution occurs.

WORKS AND PROCEDURES:

Fixed roof tanks with roof seals or conservation vents in good repair, together with good operating practices. The vapour pressure of materials stored in these tanks shall not exceed 10kPa.

The most recent version of the Canadian Council of Ministers of Environment (CCME) "Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks" shall be adhered to for all applicable tanks unless otherwise stated in this permit.

Issued: November 07, 1992
Amended: March 29, 2012


Don Miller
Assistant District Director

Permit GVA0261

GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

EMISSION SOURCE 22: Storage tanks (Number 105, 138, 139, 208 and 215) discharging through internal floating roof secondary seals.

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

MAXIMUM ANNUAL OPERATING HOURS: 8760 hrs/yr

MAXIMUM EMISSION QUALITY:

1. Odour: None past the plant boundary such that pollution occurs.

WORKS AND PROCEDURES:

Existing internal floating roof tanks with primary and secondary roof seals in good repair, together with good operating practices. The vapour pressure of materials stored in these tanks shall not exceed 76 kPa.

The most recent version of the Canadian Council of Ministers of Environment (CCME) "Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks" shall be adhered to for all applicable tanks unless otherwise stated in this permit.

EMISSION SOURCE 33: Marine vessel loading discharging through a Vent(s).

MAXIMUM EMISSION FLOW RATE: The authorized maximum rate of discharge is that resulting from displaced vapour venting during product loading.

MAXIMUM ANNUAL OPERATING HOURS: 8760 hrs/yr

MAXIMUM EMISSION QUALITY:

1. Odour: None past the plant boundary such that pollution occurs.

WORKS AND PROCEDURES:

Loading of petroleum products into marine vessel cargo holds must be done by submerged fill, together with good operating practices.

Issued: November 07, 1992
Amended: March 29, 2012


Don Miller
Assistant District Director

Permit GVA0261

GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

SECTION 2 – GENERAL REQUIREMENTS AND CONDITIONS

A. AMENDMENTS

The terms and conditions of this permit may be amended, as authorized by applicable legislation. New and modified sources must receive authorization prior to start-up.

B. POLLUTION

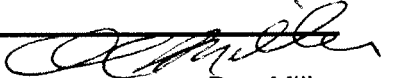
Notwithstanding any conditions in this permit, no person shall discharge or allow or cause the discharge of any air contaminant so as to cause pollution as defined in the Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008 and the Environmental Management Act.

C. STANDARD CONDITIONS AND DEFINITIONS

Unless otherwise specified, the following applies to this permit:

1. Gaseous volumes are corrected to standard conditions of 20° Celsius & 101.325 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% O₂ for natural gas and fuel oil;
 - 8% O₂ for wood fuel.
 - 15% O₂ for turbines
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 6 minute average in accordance with the provincial "Source Testing Code for the Visual Measurement 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 hrs/yr and to those periods during which the primary authorized fuel is not available. Fuel oil sulphur content shall not exceed 15 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_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 (June

Issued: November 07, 1992
Amended: March 29, 2012


Don Miller
Assistant District Director

Permit GVA0261

GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

1995, CCME-EPC-87E)" shall be adhered to for all applicable tanks unless otherwise stated in this permit.

- 11. Authorized 'Maximum Annual Operating Hours' of 8760 hrs/yr for an emission source is equivalent to authorization for continuous operation of the emission source for an entire calendar year, including leap years.

D. HEATING, VENTILATION, AIR CONDITIONING AND INTERNAL COMBUSTION ENGINES

Air contaminants discharged from any natural gas-fired heating, ventilation or air conditioning systems for buildings and any internal combustion engines located at the discharge site shall be maintained and operated in a manner prescribed by the manufacturer to ensure good combustion of the fuel with minimum discharge of air contaminants.

E. AUTHORIZED WORKS AND PROCEDURES

Works and procedures, which this permit authorizes to control the discharge of air contaminants, shall be employed during all operating periods of the related facilities. The permit holder shall regularly inspect and maintain all such works in good repair.

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

F. BYPASSES

The discharge of contaminants which have bypassed authorized control works during non-emergency conditions are prohibited unless approval has been obtained in writing from the District Director.


G. EMERGENCY PROCEDURES

In the event of an emergency that prevents compliance with a requirement(s) of this permit, that requirement(s) shall be suspended for such time as the emergency continues or until otherwise directed by the District Director, provided that:

- 1. Due diligence was exercised in relation to the process, operation or event that caused the emergency and that the emergency occurred notwithstanding this exercise of due diligence; and,
- 2. The District Director is notified at the first available opportunity of the emergency and of contingency actions invoked or planned to mitigate adverse impacts and restore compliance. Notification shall be made to Metro Vancouver's 24-hour number: 604-436-6777; and,
- 3. Due diligence is exercised in shutting down related processes and/or taking action to restore compliance in the shortest possible time frame, unless specified otherwise in this permit or by written notice from the District Director.

Notwithstanding 1, 2 and 3 above, the District Director may specify contingency actions to be implemented to protect human health and the environment while authorized works and/or standard operating procedures are being restored.

Issued: November 07, 1992
Amended: March 29, 2012


Don Miller
Assistant District Director

Permit GVA0261

GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

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

Issued: November 07, 1992
Amended: March 29, 2012


Don Miller
Assistant District Director

Permit GVA0261

GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

SECTION 3 – REPORTING REQUIREMENTS

A. MONITORING REQUIREMENTS AND REPORTING

Unless otherwise approved by the District Director prior to any sampling or analysis, all measurements shall 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 approval from the District Director.

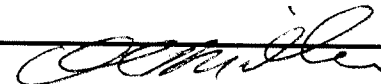
A minimum of 3 days advance notice must be given prior to taking measurements required by this Monitoring and Sampling Program. Notification must be given to the Metro Vancouver, Regulation & Enforcement Division (phone 604-436-6777, Fax 604-436-6707, email regulationenforcement@metrovancover.org).

Unless otherwise specified, sampling shall 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 shall be reported in the metric units which are used in this permit. These submissions shall include process data relevant to the operation of the source of the emissions and the performance of the emission control works.

The permit holder shall conduct the following monitoring and sampling and submit electronic reports of the results to the District Director by the dates specified below using a password enabled web based application provided by Metro Vancouver.

SOURCE	DUE DATE	FREQUENCY	REQUIREMENT	PARAMETER(S)	TEST METHOD	REPORT TYPE
N/A	N/A	N/A	N/A	N/A	N/A	N/A

Issued: November 07, 1992
Amended: March 29, 2012


Don Miller
Assistant District Director

Permit GVA0261


GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

B. INFORMATION REPORTING REQUIREMENTS

The permit holder shall submit electronic reports containing the required information to the District Director by the dates specified below using a password enabled web based application provided by Metro Vancouver.

EMISSION SOURCE	DUE DATE	FREQUENCY	REQUIREMENT	REPORT TYPE
12, 18, 22, 33	March 31, 2012	Yearly	<p>Written report detailing hydrocarbon losses, based on the previous calendar year, from storage tanks, tank truck loading, marine vessel loading and wastewater treatment. All data inputs to the equations shall be reported including storage tank capacity, material stored and the annual throughput for each tank and loading operations.</p> <p>Calculations for hydrocarbon losses from storage tanks shall be based on Emission Factors using the most recent version of the US EPA Storage Tank Emissions Calculations in the 'Tanks' Software or equivalent.</p>	Information - Other
22	March 31, 2012	Yearly	<p>A written report of all inspections and gap measurements taken, in the previous calendar year, in accordance with the below guideline must be submitted annually.</p> <p>The most recent version of the Canadian Council of Ministers of the Environment (CCME) "Environmental Guidelines for Controlling Emission of Volatile Organic Compounds from Aboveground Storage Tanks" shall be adhered to for all applicable tanks unless otherwise stated in this permit.</p> <p>With respect to Appendix D.4.2 of the CCME guideline, the following alternative inspection plan is prescribed: Following a second gas</p>	Information - Other

Issued: November 07, 1992
 Amended: March 29, 2012

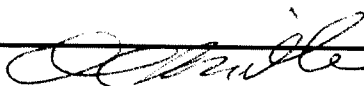

 Don Miller
 Assistant District Director

Permit GVA0261

GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

			<p>reading which is still below 20% LFL but substantially above the baseline, monitoring should continue and an inspection should be conducted at the first reasonable opportunity. A specified schedule for inspections must be submitted to the District Director for approval within 10 days.</p> <p>With respect to Part 4, Section 4.3.5 in the CCME guideline: If the permittee cannot complete repairs or replacement of equipment within the specified times, alternative repair or replacement plans and a work schedule must be submitted to the District Director within 30 days of the inspection date.</p> <p>Notes: Gap measurement are not required for out of service tanks or tanks which contain materials with a vapour pressure less than 10kPa. A floating roof tank with a dome is treated equivalent to an "internal floating roof" as described in the CCME guideline.</p>	
18, 22	March 31, 2012	Yearly	Written report detailing the organic storage tank capacity, the material stored and the annual throughput for each tank for the preceding calendar year.	Information - Other
33	March 31, 2012	Yearly	<p>Submit a written report summarizing the quantity and types of products loaded to marine vessels.</p> <p>The permittee shall also report plans to increase marine loading operations such that the estimated annual VOC emissions would be equal to or greater than 2 times the average of the previous 3 years.</p>	Information - Other

Issued: November 07, 1992
 Amended: March 29, 2012


 Don Miller
 Assistant District Director

Permit GVA0261


GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

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.

Issued: November 07, 1992
Amended: March 29, 2012


Don Miller
Assistant District Director

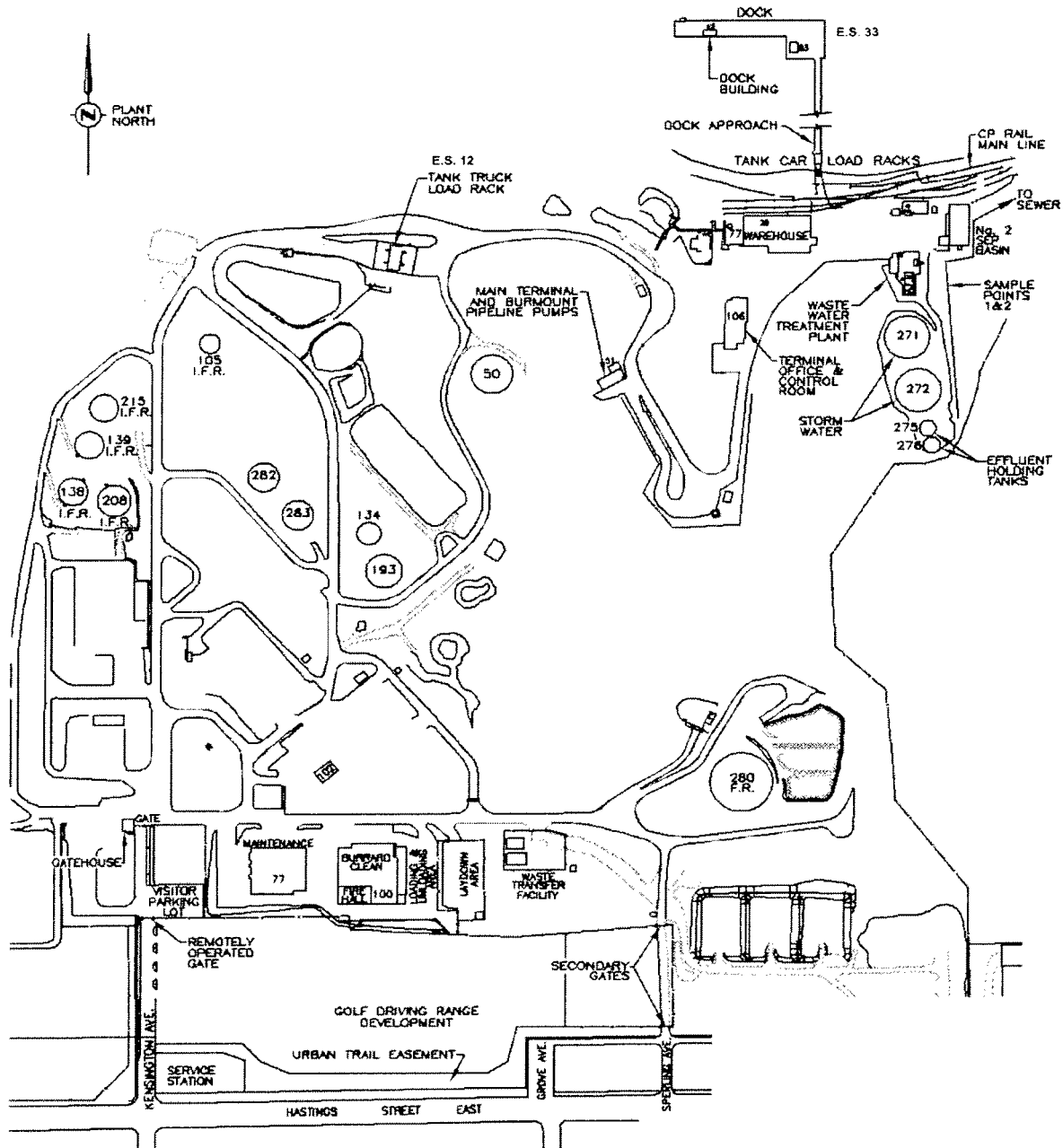
Permit GVA0261

GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

SECTION 4 – SITE PLAN


LEGAL DESCRIPTION OF DISCHARGE SITE: Municipality of Burnaby Parcel Identifier 008-990-875 Block V except: Part on Plan with Bylaw Filed A35693, District Lots 205, 206, 217 and 218 Group 1 New Westminster District Plan 28422

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



Issued:
Amended:

November 07, 1992
March 29, 2012


Don Miller
Assistant District Director

Permit GVA0261