



**metrovancover**

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.metrovancover.org

*Policy & Planning Department, Regulation & Enforcement Division, Telephone: 604-432-6200 Fax: 604-436-6707*

## PERMIT GVA0379

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

### **Petro-Canada**

located at  
**9950 Barnet Highway, Burnaby, British Columbia V3H 3E1**

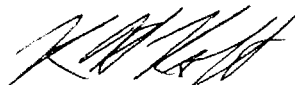
is authorized to discharge air contaminants to the air from a  
**PETROLEUM STORAGE AND DISTRIBUTION FACILITY**

located at the above address, subject to the requirements in this Permit.

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

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Date Issued: November 30, 1992  
Date Amended: **NOV 06 2009**  
(most recent)

  
R.H. Robb, District Director  
Permit GVA0379

**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 08:** Storage tanks (Number: 2195, 2198, 3116, 3117, 3157, 3295, 3296, and 3297) 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. No odours past the plant boundary such that the District Director determines that air pollution has occurred.

**WORKS AND PROCEDURES:**

All fixed roof storage tanks, without internal floating roofs, are restricted to the storage of materials with a vapour pressure that 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.

**EMISSION SOURCE 10:** Storage tanks (Number: 2196, 2197 and 3156) 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

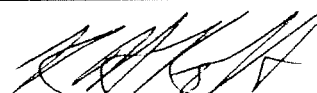
**MAXIMUM EMISSION QUALITY:**

1. No odours past the plant boundary such that the District Director determines that air pollution has occurred.

**WORKS AND PROCEDURES:**

Existing internal floating roof tanks with primary and secondary roof seals in good repair, together with good operating practices. All roof seals shall be compatible with materials (i.e. E95-Ethanol) stored within the tanks. The vapour pressure of materials stored in these tanks shall not exceed 76 kPa.

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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 11:** Tanker truck loading operation discharging through tanker truck vents and vapour recovery unit vent.

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

**MAXIMUM ANNUAL OPERATING HOURS:** 8760 hrs/yr

**MAXIMUM EMISSION QUALITY:**

1. No odours past the plant boundary such that the District Director determines that air pollution has occurred.

**WORKS AND PROCEDURES:**

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

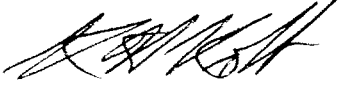
Displaced vapours from tanker trucks transporting gasoline must be connected to the existing vapour recovery unit. Applicable requirements in the most recent versions of Metro Vancouver Gasoline Distribution Emission Regulation Bylaw No. 1085, 2008 must be adhered to unless otherwise stated in the permit.

E95-Ethanol may be loaded into tanker trucks previously containing E95-Ethanol products using a vapour balancing system until such time that the displaced vapours of E95-Ethanol can be connected to vapour control works.

The permittee shall research, design and install a system for the collection of the displaced vapours from E95-Ethanol tanker truck loading and route the collected vapours to the vapour control works in a timely manner; and, by no later than December 31, 2014. Proposals to increase the annual throughput of E95-Ethanol to an amount which is greater than  $76 \times 10^6$  L, without the use of the vapour control works, must be authorized in writing by the District Director. Any such proposals shall also include a revised timeline for the installation and use of vapour control works.

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# 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 Bylaw and Act.

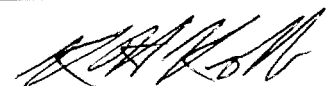
### **C. STANDARD CONDITIONS AND DEFINITIONS**

Except where otherwise indicated, the following standard conditions and definitions apply 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% O<sub>2</sub> for natural gas and fuel oil;
  - 8% O<sub>2</sub> for wood fuel.
  - 15% O<sub>2</sub> for turbines
3. 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. Visual opacity 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".
5. Standby fuel use is restricted to those periods during which the primary authorized fuel is not available. Fuel oil sulphur content shall not be greater than 0.0015% by weight.
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 at the time of Permit issuance or amendment.
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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## **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**

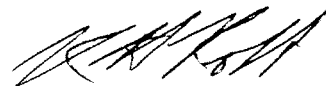
In the event of an emergency that prevents compliance with a requirement(s) of this permit, that requirement(s) shall be suspended for such time as the emergency continues or until otherwise directed by the District Director, provided that:

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 the 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.

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**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 [regulation&enforcement@metrovancover.org](mailto:regulation&enforcement@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 written reports of the results to the District Director by the dates specified below.

No Reporting Requirements.

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**B. INFORMATION REPORTING REQUIREMENTS**

The Permit holder shall submit written reports containing the required information to the District Director by the dates specified below.

<b>EMISSION SOURCE</b>	<b>DUE DATE</b>	<b>FREQUENCY</b>	<b>REQUIREMENT</b>	<b>REPORT TYPE</b>
08 & 10	March 31, 2009	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
08 & 10	March 31, 2009	Yearly	Written report detailing hydrocarbon losses, based on the previous calendar year, from storage tanks and tank truck loading.  Calculations for 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. 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.	Information - Other
11	March 31, 2009	Yearly	Written report detailing the materials loaded and the annual throughput of each material in the preceding calendar year.	Materials and Products Information - Other
10	March 31, 2009	Yearly	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.  The Canadian Council of Ministers of the Environment (CCME) "Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks (June 1995, CCME-EPC-87E)" shall be adhered to for all applicable tanks unless otherwise stated in this permit.	Materials and Products Information - Other

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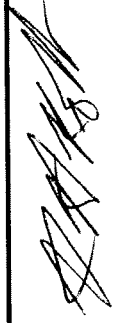
			<p>With respect to Appendix D.4.2 of the CCME guideline, the following alternative inspection plan is prescribed: Following a second gas reading which is still below 20% LFL but substantially above the baseline, monitoring should continue and an inspection should be conducted at the first reasonable 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. Notes: Gap measurements are not required for out of service tanks, or tanks which contain materials with a vapour pressure less than 10 kPa.</p>	
11	December 31, 2010	Yearly - Until Completion of Works	Written progress report detailing the research and design of a vapour control system for the collection of the displaced vapours from E95-Ethanol tanker truck loading. The progress report shall also include a schedule for completion works.	Information - Other

**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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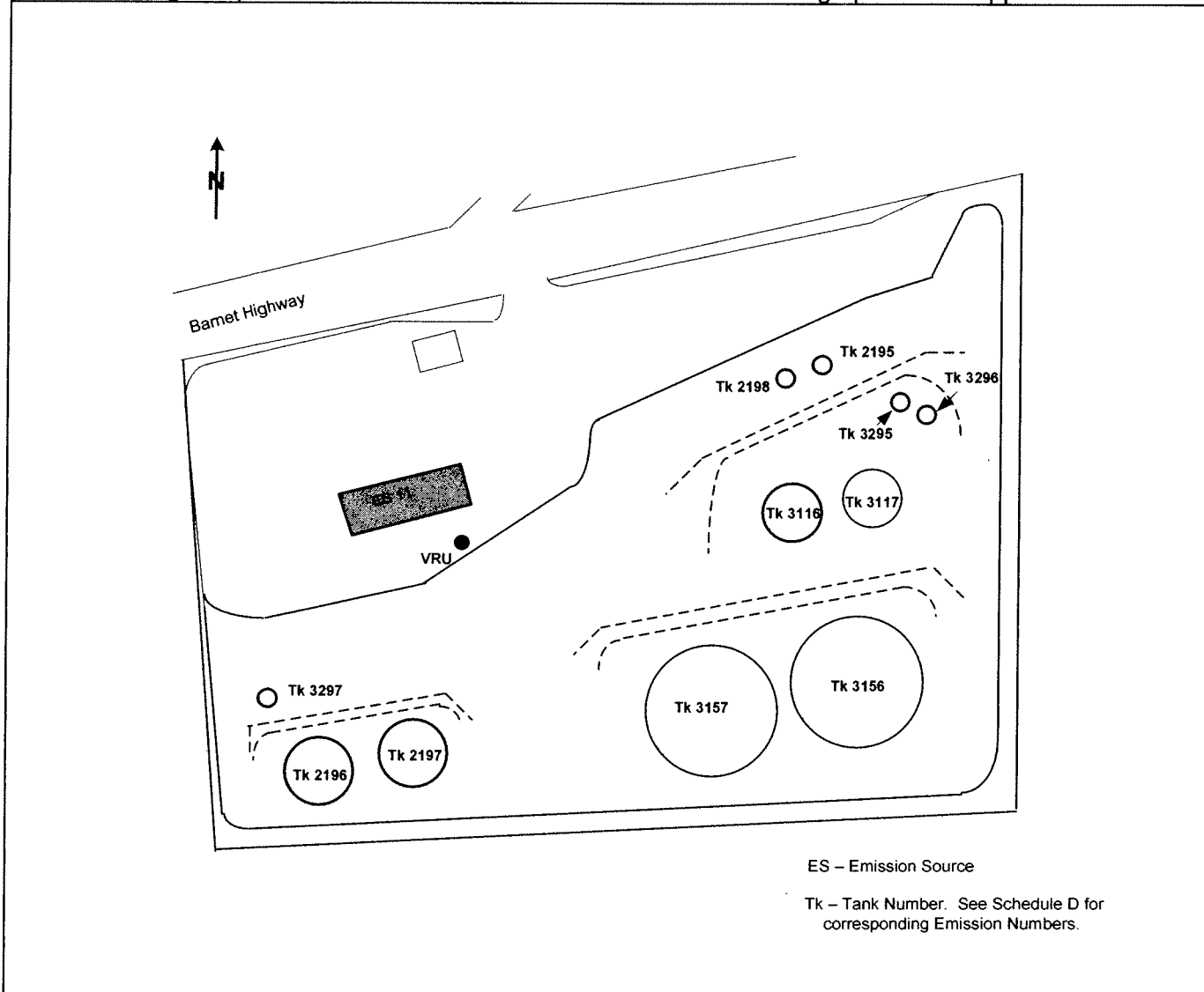


**GREATER VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT**

**SECTION 4 – SITE PLAN**

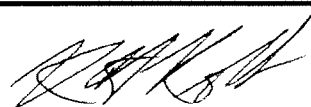
LEGAL DESCRIPTION OF DISCHARGE SITE: "Municipality of Burnaby, Parcel Identifier: 002-156-474 Parcel "H" (Explanatory Plan 13823) of Lots "A" and "C", District Lot 31, Group 1, New Westminster District, Plan 3859; Municipality of Burnaby, Parcel Identifier: 002-156-431, Lot "B", District Lot 31, Group 1, New Westminster District, Plan 3859; Municipality of Burnaby, Parcel Identifier: 002-156-423, Block "E", District Lot 31, Group 1, New Westminster District, Plan 4027."

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



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