

Greater Vancouver Sewerage and Drainage District • Greater Vancouver Housing Corporation

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

Policy & Planning Department Tel. 604-432-6200 Fax 604-436-6707

PERMIT GVA0097

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

Lafarge Canada Inc. (dba Columbia Bitulithic)

located at 13340 Mitchell Road, Richmond, British Columbia V6V 1M8

is authorized to discharge air contaminants to the air from an **ASPHALT PLANT**

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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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 01: Asphalt pavement plant discharging through a Baghouse Exhaust(s).

MAXIMUM EMISSION FLOW RATE: 1750 m3/min

MAXIMUM ANNUAL OPERATING HOURS: 1500 hrs/yr

MAXIMUM PRIMARY BURNER INPUT FIRING RATE: 105 GJ/hr

MAXIMUM EMISSION QUALITY:

- 200 mg/m³ Carbon Monoxide Corrected to 16% O2. 1.
- 60 mg/m³ Organics Corrected to 16% O2. Based on a 1 hour average. 2.
- 90 mg/m³ Particulate Matter 3.
- 10% Opacity. May be exceeded for a total of six minutes per hour up to a maximum of 4. 20%.
- Odour: None past the plant boundary such that pollution occurs. 5.

WORKS AND PROCEDURES:

The firing of the low N0x asphalt counter-flow dryer/drum mixer with natural gas and /or standby fuel oil (as defined in section 2.C.5), using good combustion practices and operating procedures together with the knock-out box, baghouse and related appurtenances.

The maximum authorized production rate for the works shall be determined from the production rate during the most recent valid in-compliance stack test. The rate during the test will establish a rate equivalent to 80% of the maximum authorized production rate. The maximum authorized percentage of recycled asphalt utilized shall be equivalent to the rate used during the most recent valid in-compliance stack test.

The authorized production rate and percentage of recycled asphalt added may be exceeded for the purposes of compliance testing and/or for the purposes of establishing a new authorized rate, pursuant to the terms and conditions above and in section 3 of this Permit. If the maximum plant production rate or maximum percentage of recycled asphalt mix is exceeded during periods when stack monitoring is not being performed, stack monitoring must be repeated as per the requirements in section 3.

The operating period referred to in section 3.B of this Permit shall be continuously monitored and recorded using methods that have received prior approval by the District Director. Records are to be maintained in a written bound log or other format approved by the District Director, and made available for inspection, by Policy and Planning staff for a minimum period of three years.

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EMISSION SOURCE 03: Asphalt storage tanks discharging through a Vent(s).

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

MAXIMUM ANNUAL OPERATING HOURS: 8760 hrs/yr

MAXIMUM EMISSION QUALITY:

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

WORKS AND PROCEDURES:

Tank vents.

Temperature control together with good operating practices.

EMISSION SOURCE 04: Concrete and recycled asphalt crushing and screening activities Crushing, screening, stockpiling area.

MAXIMUM EMISSION FLOW RATE: The authorized rate of discharge is that resulting from the crushing and screening operations as well as stock-pile wind erosion effects.

MAXIMUM ANNUAL OPERATING HOURS: 8760 hrs/yr

MAXIMUM EMISSION QUALITY:

- 1. 20% Opacity.
- 2. Particulate: None past the plant boundary such that pollution occurs.

WORKS AND PROCEDURES:

Crushing, screening, stockpiling area.

Water sprays at the transfer points on the conveyors together with good operating practices.

EMISSION SOURCE 05: Asphalt emulsion and fuel oil storage tanks discharging through a Vent(s).

MAXIMUM EMISSION FLOW RATE: The authorized rate of discharge is that resulting from vapor venting during tank filling 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:

Tank vents.

Good operating practices.

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EMISSION SOURCE 07: Aggregate and recycled asphalt feed bins and aggregate storage piles Feeders and aggregate storage area.

MAXIMUM EMISSION FLOW RATE: The authorized rate of discharge is that resulting from the transfer and reclaiming operations as well as stockpile wind erosion effects.

MAXIMUM ANNUAL OPERATING HOURS: 8760 hrs/yr

MAXIMUM EMISSION QUALITY:

- 1. 20% Opacity.
- 2. Particulate: None past the plant boundary such that pollution occurs.

WORKS AND PROCEDURES:

Feeders and aggregate storage area.

Partial enclosures together with good operating procedures.

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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 fuel oil is authorized as a standby fuel in section 1 of this permit, the standby fuel oil 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 (SOx) are expressed as Sulphur Dioxide.
- 9. Nitrogen Oxides (NOx) 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

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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.

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.

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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@metrovancouver.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 and/or electronic reports of the results to the District Director by the dates specified below.

SOURCE	DUE DATE	FREQUENCY	REQUIREMENT	PARAMETER(S)	TEST METHOD	REPORT TYPE
01	August 31, 2011	Yearly	Written report detailing the measured discharge rate and emission concentrations (mg/m3) for particulate matter, organics (one-hour average, "organics" means total gaseous organic vapours consisting primarily of alkanes, alkenes or arenes {aromatic hydrocarbons} or any combination of them) and carbon monoxide. The following additional information must be collected: (a) Amount of recycled asphalt used	Monoxide, Organics, Particulate Matter	EPA Test Method 5, EPA Test Method 10,	Stack

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		TEST METHOD	
as a percentage of total hot mix asphalt production; (b) Temperature of the final hot mix asphalt product leaving the plant.			
Stack monitoring must be performed when the plant is operating at 80% or more of the authorized maximum plant production rate and maximum percentage of recycled asphalt as determined by procedures in Section 1. Repeated monitoring conducted as a result of exceedances of the maximum authorized production rate, as required in Section 1, must be completed within 30 days and the results must be submitted to the District Director within 30 days of the repeated test.			
	asphalt product leaving the plant. Stack monitoring must be performed when the plant is operating at 80% or more of the authorized maximum plant production rate and maximum percentage of recycled asphalt as determined by procedures in Section 1. Repeated monitoring conducted as a result of exceedances of the maximum authorized production rate, as required in Section 1, must be completed within 30 days and the results must be submitted to the District Director within	asphalt product leaving the plant. Stack monitoring must be performed when the plant is operating at 80% or more of the authorized maximum plant production rate and maximum percentage of recycled asphalt as determined by procedures in Section 1. Repeated monitoring conducted as a result of exceedances of the maximum authorized production rate, as required in Section 1, must be completed within 30 days and the results must be submitted to the District Director within	asphalt product leaving the plant. Stack monitoring must be performed when the plant is operating at 80% or more of the authorized maximum plant production rate and maximum percentage of recycled asphalt as determined by procedures in Section 1. Repeated monitoring conducted as a result of exceedances of the maximum authorized production rate, as required in Section 1, must be completed within 30 days and the results must be submitted to the District Director within

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B. INFORMATION REPORTING REQUIREMENTS

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

EMISSION SOURCE	DUE DATE	FREQUENCY	REQUIREMENT	REPORT TYPE
Facility	, , , , , , , , , , , , , , , , , , , ,		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
03, 05	March 31, 2011	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
01	March 31, 2011	Written report providing details of the total number of hours and days operated in the preceding calendar year. Detailed records are to be maintained in a written bound log or other format approved by the District Director and made available for inspection by Metro Vancouver staff for a minimum period of three years.		Operating Period
Facility	March 31, 2011	Yearly	Written report providing details of the types and amounts of fuel burned in the preceding calendar year.	
01			Written report indicating inspection frequency, bag condition and action taken or proposed to solve any problems detected for the baghouses described in section 1 of this Permit.	Baghouse

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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:

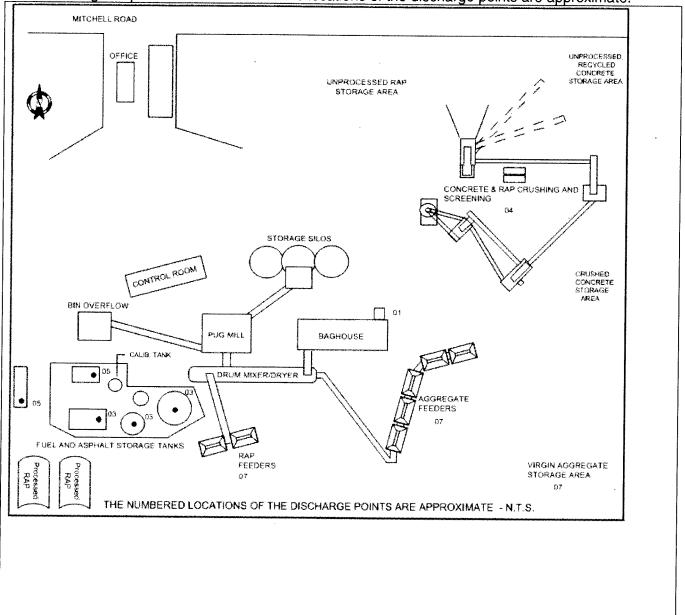
- 1. Amend the monitoring and reporting requirement of any of the information required by this Permit including plans, programs and studies.
- 2. Require additional investigations, tests, surveys or studies.

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SECTION 4 - SITE PLAN

LEGAL DESCRIPTION OF DISCHARGE SITE: City of Richmond Parcel Identifiers: 003-980-499 and 003-980-529 Lots 23 and 24 of District Lot 527 Group 1 Plan 2806 and Lot 5926 (North Fraser Harbour Commission Lease No. 06005) Group 1 New Westminster District.

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



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