



### AMENDING DOCUMENT

Under the provisions of the  
Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008,

**AIR QUALITY MANAGEMENT PERMIT NUMBER GVA0175**  
Issued December 14, 1992 and last amended March 18, 2005

in the name of **Lehigh Northwest Cement Limited.**  
located at 7777 Ross Road, Delta, B.C.,

is amended, subject to the terms and conditions listed below:

**Effective Date(s):** JAN 0 1 2010

**Schedule A, Face Page:** The company name is changed from Lehigh Northwest Cement Limited to **Lehigh Hanson Materials Limited.**

**Schedule F, Page 1:** Change the authorized maximum discharge criteria for Emission Number 06 for Parameter Hydrogen Chloride and replace with:

Emission Number	Parameter	Restriction	Notes
06	Hydrogen Chloride	10 mg/m <sup>3</sup>	Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).

**Schedule H, Record of Permit Issuance:** Add new text under the headings:

Date	Action	Sections Affected
	Amended	Schedule F

All other terms and conditions prescribed in Permit GVA0175 remain unchanged.

Amendment Date: JAN 0 1 2010

R.H. Robb, District Director



*Policy & Planning Department  
Telephone: 604-432-6375 Fax: 604-436-6970*

# PERMIT

(Under the provisions of the GVRD Air Quality Management Bylaw No. 937, 1999  
and the BC Environmental Management Act)

LEHIGH NORTHWEST CEMENT LIMITED

IS AUTHORIZED TO DISCHARGE AIR CONTAMINANTS

FROM A PORTLAND CEMENT PLANT

LOCATED AT 7777 ROSS ROAD, DELTA BC V4G 1B8

This permit has been issued under the terms and conditions  
prescribed in the attached Schedules A, B, C, D, E, F, G & H  
for emission sources and works existing or planned on March 18, 2005

DISTRICT DIRECTOR  
PERMIT NUMBER GVA0175

**INDEX OF SCHEDULES**

Schedule A.....Site Plan

Schedule B.....General Requirements

Schedule C.....Emission Monitoring, Sampling and Reporting Requirements

Schedule D.....Emission Sources and Discharge Points

Schedule E.....Authorized Rates of Discharge

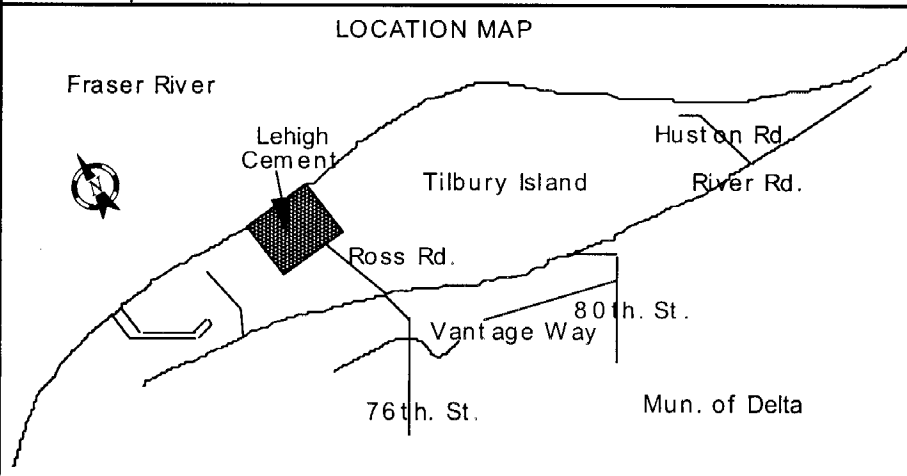
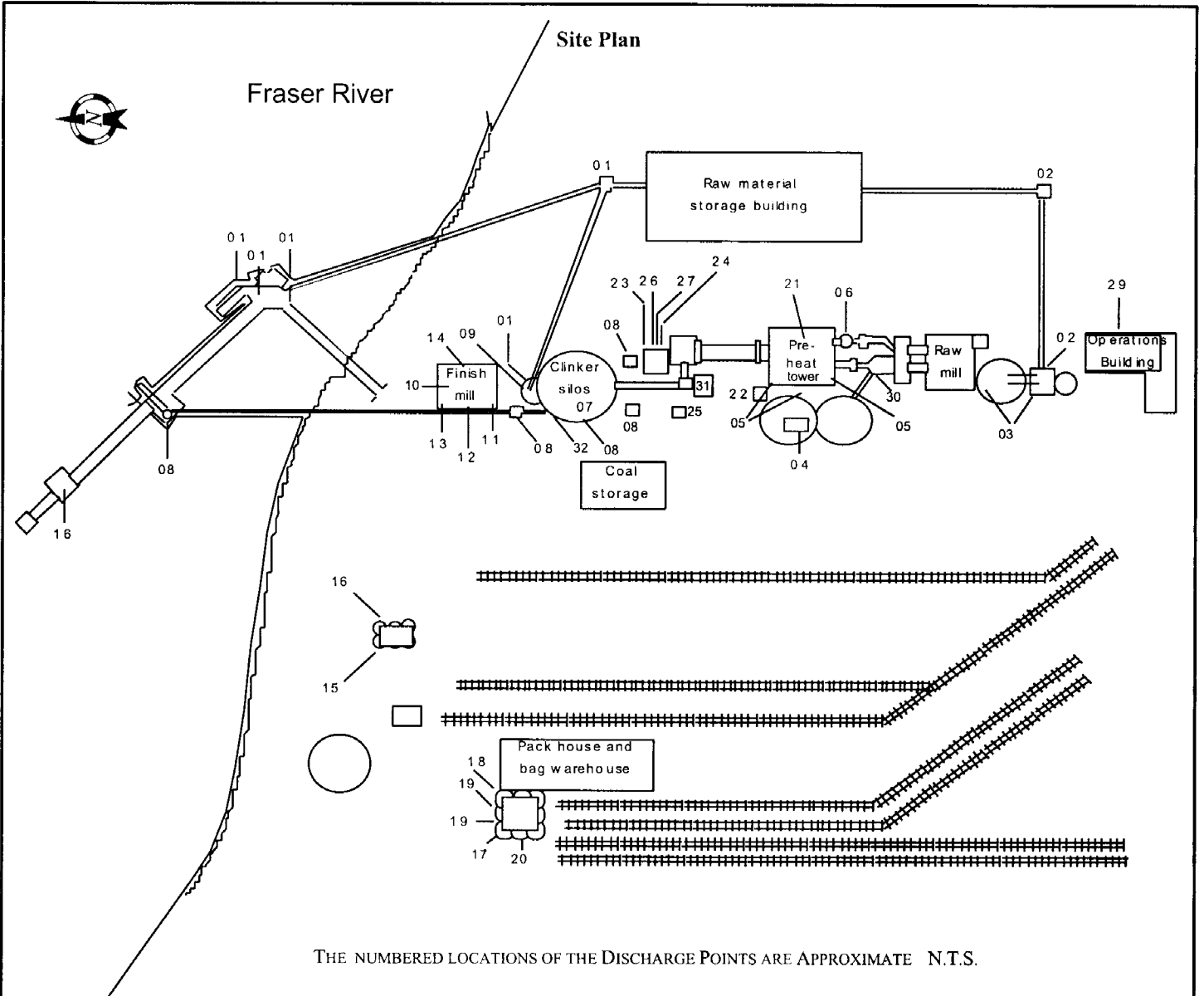
Schedule F.....Authorized Discharge Criteria

Schedule G.....Authorized Works and Procedures

Schedule H.....Record of Permit Issuance Dates

**GREATER VANCOUVER REGIONAL DISTRICT**

**SCHEDULE A - Page 1  
to PERMIT GVA0175**



March 18, 2005

*[Signature]*

DISTRICT DIRECTOR

Schedule A to Permit No. GVA0175

**GREATER VANCOUVER REGIONAL DISTRICT**

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**SCHEDULE B - Page 1  
to PERMIT GVA0175**

**A AMENDMENTS**

The terms and conditions of this Permit may be amended, as authorized by applicable legislation.

**B MAINTENANCE AND OPERATION OF WORKS**

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 Permittee shall regularly inspect and maintain all such works in good repair.

**C EMERGENCY PROCEDURES**

An emergency or other condition may prevent the continuous utilization of the above authorized works and procedures, or may result in a discharge of air contaminants which is not authorized by this Permit. If such a situation occurs, the Permittee shall report the circumstances of this event to the Greater Vancouver Regional District, Policy and Planning Department at 604-436-6777 (24 hours), at the first available opportunity. In particular, all electrostatic precipitator outages from the kiln for over 2 minutes, or a cumulative total of 10 minutes, must be reported in this manner.

No discharge that has bypassed control works is authorized unless the District Director's approval has been obtained. In the event of an emergency, bypassing facilities may be used for such periods as are necessary to effect a shutdown of the related processes.

**D AIR CONDITIONING, HEATING AND VENTILATION SYSTEMS**

Air contaminants discharged from any natural gas-fired air conditioning, heating or ventilation systems for buildings located at the discharge site are not specified in this Permit. These works 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. Notwithstanding the above, the District Director may at her/his discretion stipulate limits for emission of contaminants from these sources in the Permit at a future date under provisions of the Bylaw.



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**SCHEDULE B - Page 2  
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**E GENERAL SITE RESTRICTIONS**

No air contaminant(s) from any single source, or combination of sources shall pass the boundary of the property, described in Section I of this Schedule B, such that the District Director determines that pollution has occurred.

**F INTERNAL COMBUSTION ENGINES**

Air contaminants discharged from any natural gas, propane, gasoline, diesel, or other fossil fuel fired internal combustion engines operated at the discharge site may not be specifically authorized in this Permit. These works shall be maintained and operated in a manner prescribed by the manufacturer to ensure good combustion of the fuel and to minimize emissions such that the requirements of Section E of this Schedule B are not exceeded. The District Director may at her/his discretion stipulate further limits for emission of contaminants from these sources in the Permit at a future date under provisions of the Bylaw.

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**G ENGINEERING UNITS**

The engineering units specified in this Permit are in accordance with the Metric System of measure. Approximate equivalent values for the British System can be calculated using the following conversion factors.

$\text{mg/m}^3 \times 0.000437 = \text{gr/cf}$   
 $\text{m}^3/\text{min} \times 35.3 = \text{cf/min}$   
 $\text{kg/m}^3 \times 0.0624 = \text{lbs/cf}$   
 $\text{kg/L} \times 10.0 = \text{lbs/gal}$   
 $\text{mg/m}^3 \times 24.0/\text{M} = \text{ppm (by volume)}$   
 $\text{GJ/h} \times 0.9478 = \text{MMBTU/h}$

where

$\text{m}^3 = \text{cubic metre}$   
 $\text{min} = \text{minute}$   
 $\text{mg} = \text{milligram}$   
 $\text{cf} = \text{cubic feet}$   
 $\text{s} = \text{second}$   
 $\text{lb} = \text{pound}$   
 $\text{kg} = \text{kilogram}$   
 $\text{gal} = \text{gallon}$   
 $\text{L} = \text{litre}$   
 $\text{M} = \text{molecular weight}$   
 $\text{gr} = \text{grain}$   
 $\text{ppm} = \text{parts per million}$   
 $\text{GJ} = \text{GigaJoule}$   
 $\text{MMBTU} = \text{Million British Thermal Unit}$   
 $\text{h} = \text{hour}$

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**SCHEDULE B - Page 4  
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**H STANDARD CONDITIONS AND DEFINITIONS**

Except where otherwise indicated, the following standard conditions and definitions apply to this Permit.

1. The Restrictions in the attached Schedules are maximum limits.
2. The authorized maximum discharge criteria described in Schedule F for the Raw mill, preheater and kiln (Emission No. 06) are corrected to 11% Oxygen, and dry standard conditions of 20°C, 760 mm of mercury except where otherwise specified.
3. The authorized maximum discharge criteria described in Schedule F for all other sources except Emission No. 06 are corrected to dry standard conditions of 20°C and 760 mm of mercury.
4. The authorized maximum discharge criteria described in Schedule E are corrected to dry standard conditions of 20°C and 760 mm of mercury.
5. Opacity is measured at the point of maximum density, nearest the discharge point.
6. Opacity measurements exclude the effect of condensed, uncombined water droplets.
7. Definitions in the Environmental Management Act and GVRD Air Quality Management Bylaw current at the time of issuance of this Permit apply to terminology used in this Permit. If the Permit is subsequently amended, definitions in the Environmental Management Act and GVRD Air Quality Management Bylaw current at the time of amendment shall apply to terminology used in this Permit.
8. 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 for the year 2004.
9. Any production, storage, transportation, handling, treatment, processing or ownership of a hazardous waste must comply with the requirements of the Environmental Management Act Hazardous Waste Regulation (BC Reg. 63/88).



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**I DESCRIPTION OF DISCHARGE SITE**

The land from which the air contaminants are discharged is described as

PARCEL IDENTIFIER: 000-948-411

PARCEL "D" (REFERENCE PLAN 49757) DISTRICT LOT 129 GROUP 2 NEW WESTMINSTER DISTRICT

PARCEL IDENTIFIER: 000-948-438

LOT 2 EXCEPT: FIRSTLY: LOT "J" PLAN 22258

SECONDLY: THAT PORTION LYING BETWEEN THE FERRY SLIP SPUR AND STATUTORY RIGHT OF WAY SHOWN ON PLAN 22258, DISTRICT LOT 135 GROUP 2 AND OF SECTION 24 TOWNSHIP 6 NEW WESTMINSTER DISTRICT PLAN 23570."

"MUNICIPALITY OF DELTA PARCEL IDENTIFIER: 000-948-446

LOT 11 DISTRICT LOTS 27, 134 AND 135 GROUP 2 WEST OF THE COAST MERIDIAN NEW WESTMINSTER DISTRICT PLAN 34110

MUNICIPALITY OF DELTA

PARCEL IDENTIFIER: 000-948-454

LOT 18 DISTRICT LOTS 129, 481 AND 789 GROUP 2 NEW WESTMINSTER DISTRICT PLAN 49682

PARCEL IDENTIFIER: 000-948-462

LOT 19: EXCEPT PART DEDICATED ROAD PLAN 72114; DISTRICT LOTS 129, 481 AND 789 GROUP 2 NEW WESTMINSTER DISTRICT PLAN 49682



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SCHEDULE C - Page 1  
to PERMIT GVA0175

This Schedule describes emission monitoring, sampling and reporting requirements.

The Permittee shall conduct the following monitoring and sampling program on the discharges and submit the results to the District Director. The need for increased or decreased monitoring may be reviewed periodically by the District Director.

EMISSION NUMBER	DUE DATES	REQUIREMENTS
06	September 30, 2006 and every two years thereafter	A written report due updating previous submissions on the reduction of nitrogen oxide emissions from the kiln and associated sources. This report shall include any new information on the feasibility, costs and effectiveness of methods and control systems for reduction of these emissions.
06	April 30, 2005 and at 3 month intervals thereafter	A written report detailing the measured discharge rate and concentration of particulate matter and the following metals in the emission(s): Lead, Antimony, Copper, Manganese, Vanadium, Zinc, Arsenic, Chromium, Cobalt, Nickel, Selenium, Thallium, Tellurium, Cadmium and Mercury.
06	January 31, 2008 and every four years thereafter	A written report detailing the measured discharge rate and concentration of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans in the emissions(s). Testing shall be conducted when waste-based raw materials are being utilized and fuels including natural gas, fuel oil and/or coal are fired together with alternate fuel(s).
06	March 31, 2005 and annually thereafter	A written report due indicating the frequency and cause of any waste oil feed interruptions for reasons outlined in Schedule G during the preceding calendar year. This report shall include any identified problems relating to such disruptions and the means by which they will be rectified.

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SCHEDULE C - Page 2  
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EMISSION NUMBER	DUE DATES	REQUIREMENTS
06	April 30, 2005 and at 3 month intervals thereafter	A written summary of each of the measured parameters as monitored by the Continuous Emission Monitoring System (CEMS) for the preceding calendar quarter. This summary shall include the minimum and maximum values obtained, the total hours operated, the number of hourly averages exceeding applicable permit limits, hourly data (submitted as an electronic file or other suitable format), monthly weighted average and percentage system and analyzer availability.
06	April 30, 2005 and at 3 month intervals thereafter	A written report for the preceding calendar quarter detailing the results of the CEMS performance in accordance with the most current approved Quality Assurance/Quality Control protocol.
06	See Requirement	A record is to be maintained detailing the types of fuel used, the hourly firing rates and the hourly raw feed and hourly clinker production rate. This record shall be maintained in computer files or other suitable format approved by the District Director and be made available for inspection, by GVRD staff for a minimum period of three years.
06	March 31, 2005 and annually thereafter	A written report detailing the times and dates when waste oil was fired during the preceding calendar year. This report shall include a summary of the analyses performed on each batch of oil received and corresponding finger print analysis. The finger print analysis shall include the following parameters: total arsenic, total cadmium, total organic halogens (as chloride), total chromium, total lead, and total polychlorinated biphenyls.



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EMISSION NUMBER	DUE DATES	REQUIREMENTS
06	See Requirement	<p>Waste oil records are to be maintained as follows:</p> <ol style="list-style-type: none"><li>1) Analyses performed on each batch of waste oil received. This record shall include copies of all analyses, as supplied by the waste oil supplier, and a copy of the corresponding finger print analyses, as conducted by the Permittee or independent and accredited environmental laboratory, which confirms the quality of oil. Waste oil generated on site will only require a finger print analysis.</li><li>2) Times and dates when waste oil was fired during the preceding calendar year. This record shall include the rate of waste oil fired in litres per hour during the time reported and the percentage of fuel replacement on a "net" basis.</li></ol> <p>These records shall be maintained in computer files or other suitable format approved by the District Director and be made available for inspection by GVRD staff for a minimum period of three years.</p>
06	See Requirement	<p>Within 30 days of the use of tire derived fuel in excess of 8% of total net fuel demand, a written report shall be submitted detailing the measured discharge rate and concentration of contaminants in the emission(s) as outlined in Schedule F of this Permit for this source.</p>
06	January 31, 2006 and annually thereafter	<p>A written report detailing the results of the CEMS annual evaluation in accordance with the most current approved Quality Assurance/Quality Control protocol.</p>



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EMISSION NUMBER	DUE DATES	REQUIREMENTS
06	See Requirements	Emissions of SOx, NOx, Opacity, Carbon Monoxide, Oxygen, Total Hydrocarbons and Flow shall be monitored by the Continuous Emission Monitoring System (CEMS) at an appropriate location on the kiln system exhaust. The CEMS shall be installed, certified and operated in accordance with a Quality Assurance / Quality Control (QA/QC) plan approved by the District Director.
25	January 31, 2006 and annually thereafter	A written report detailing the measured discharge rate and concentration of particulate matter in the emission.
25, 06	April 30, 2005 and at 3 month intervals thereafter	A written report due indicating the frequency, duration and cause of electrostatic precipitator outages for the preceding 3 month period. This report shall include any identified problems relating to such outage periods and actions taken or planned to resolve the problems.
General	March 31, 2005 and annually thereafter	A written report indicating inspection frequency, bag condition and action taken or proposed to solve any problems detected during the previous calendar year for the baghouses described in Schedule G of this Permit.
General	March 31, 2005 and annually thereafter	A written report detailing the types and amounts of fuel burned in the preceding calendar year.
General	March 31, 2005 and annually thereafter	A written report detailing the types and amounts of principal products produced and principal raw materials used in the preceding calendar year.
General	April 30, 2005 and at three month intervals thereafter	A written report detailing the types of fuels (including alternate fuels), amounts, firing rate, sulphur content, sources and transportation mode of fuels burned in the preceding calendar quarter. Additionally, this report shall include a projection, for the forthcoming three month interval, of proposed fuels and their source(s).

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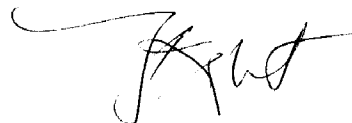
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EMISSION NUMBER	DUE DATES	REQUIREMENTS
General	April 30, 2005 and at three months thereafter	A written report detailing the types, amounts, sources and transportation mode of waste-based raw materials utilized in the preceding calendar quarter. Additionally, this report shall include a projection, for the forthcoming three month interval, of proposed waste-based raw materials and their sources.

Unless otherwise approved by the District Director prior to any sampling or analysis, all emission measurements shall be performed by an independent agency in accordance with those procedures described in applicable source test codes and laboratory manuals which have been published by the British Columbia Ministry of Water, Land and Air Protection, as they may be amended from time to time. Any variance from these procedures must receive prior approval from the District Director. Monitoring results shall be reported in the metric units which are used in this Permit to specify the authorized discharge criteria. These submissions shall include the production rate at the time of the test, and all field data and calculations. In addition, the Permittee shall provide the Greater Vancouver Regional District, Policy and Planning Department, with a minimum of 3 working days advance notice before any emission measurements required by this Monitoring and Sampling Program are carried out.

Ambient air sampling and monitoring shall be undertaken by the Permittee, when required by the District Director.

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**SCHEDULE D - Page 1  
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The authorized emission sources and discharge points located approximately as shown on Schedule A are:

<b>EMISSION NUMBER</b>	<b>EMISSION SOURCE</b>	<b>DISCHARGE POINT</b>
01	Unloading of raw materials from a barge to a storage building and gypsum silo	Baghouse Exhaust(s)
02	Belt transfer of raw materials from the storage building to the raw mill feed bins	Baghouse Exhaust(s)
03	Belt transfer of materials from the raw material feed bins to the raw mill	Baghouse Exhaust(s)
04	Pneumatic transfer of materials from the raw mill to the homogenizing and kiln feed silos	Baghouse Exhaust(s)
05	Pneumatic transfer of materials from the kiln feed silos to the preheater	Baghouse Exhaust(s)
06	Raw mill, preheater, and kiln	Stack(s)
07	Belt transfer of clinker from the kiln to the clinker storage silos	Baghouse Exhaust(s)
08	Barge and truck loading of clinker from the clinker silos	Baghouse Exhaust(s)
09	Belt transfer of materials from clinker and gypsum storage to the finishing mill	Baghouse Exhaust(s)
10	No. 1 finishing mill	Baghouse Exhaust(s)
11	Air separator serving the No. 1 finishing mill	Baghouse Exhaust(s)
12	No. 2 finishing mill	Baghouse Exhaust(s)
13	Air separator serving the No. 2 finishing mill	Baghouse Exhaust(s)
14	Fringe bin	Baghouse Exhaust(s)
15	Pneumatic conveying of cement to dock silos	Baghouse Exhaust(s)
16	Pneumatic transfer of cement from six dock silos to marine vessels	Baghouse Exhaust(s)



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**SCHEDULE D - Page 2  
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The authorized emission sources and discharge points located approximately as shown on Schedule A are:

<b>EMISSION NUMBER</b>	<b>EMISSION SOURCE</b>	<b>DISCHARGE POINT</b>
17	Pneumatic transfer of cement from the finishing mill or dock silos to the eleven pack silos	Baghouse Exhaust(s)
18	Pack house	Baghouse Exhaust(s)
19	Bulk truck loading	Baghouse Exhaust(s)
20	Rail car loading	Baghouse Exhaust(s)
21	Belt transfer of material to the riser duct of the preheater	Baghouse Exhaust(s)
22	Belt transfer of material to the riser duct of the preheater and the clinker reclaim system	Baghouse Exhaust(s)
23	Storage and handling of coal	Baghouse Exhaust(s)
24	Coal surge bin	Baghouse Exhaust(s)
25	Clinker cooler and belt transfer of clinker from the kiln to the clinker storage silos	Stack(s)
26	Coal mill grinder	Baghouse Exhaust(s)
27	Ground coal silo	Baghouse Exhaust(s)
29	Laboratory sample handling system	Other
30	Transfer of Raw meal to bucket elevator	Baghouse Exhaust(s)
31	Belt transfer of clinker from the kiln to the clinker storage silos - bypass storage area	Baghouse Exhaust(s)
32	Barge and truck loading of clinker from the clinker silos	Baghouse Exhaust(s)

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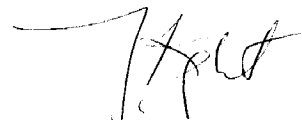
**GREATER VANCOUVER REGIONAL DISTRICT**

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**SCHEDULE E - Page 1  
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The authorized rates of discharge for the works described in Schedule D & G are:

EMISSION NUMBER	MAXIMUM AUTHORIZED RATE OF DISCHARGE			NOTES & ADDITIONAL REQUIREMENTS
	FLOW m <sup>3</sup> /min	DURATION hours/day	FREQUENCY days/week	
01	1,000	24	7	
02	350	24	7	
03	155	24	7	
04	850	24	7	
05	800	24	7	
06	8,500	24	7	
07	1,250	24	7	
08	850	24	7	
09	425	24	7	
10	875	24	7	
11	2,000	24	7	
12	875	24	7	
13	2,000	24	7	
14	148	24	7	
15	655	24	7	
16	380	24	7	
17	1,160	24	7	
18	1,190	24	7	
19	110	24	7	
20	110	24	7	



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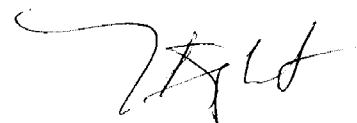
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EMISSION NUMBER	MAXIMUM AUTHORIZED RATE OF DISCHARGE			NOTES & ADDITIONAL REQUIREMENTS
	FLOW m3/min	DURATION hours/day	FREQUENCY days/week	
21	180	24	7	
22	100	24	7	
23	51	24	7	
24	30	24	7	
25	7,200	24	7	
26	803	24	7	
27	50	24	7	
29	40	24	7	
30	100	24	7	
31	283	24	7	
32	37	24	7	

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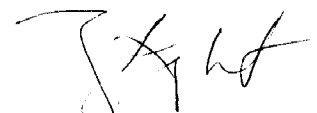
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SCHEDULE F - PAGE 1  
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The authorized maximum discharge criteria for works described in Schedule D & G are:

EMISSION NUMBER	PARAMETER	RESTRICTION	NOTES
06	Hydrogen Chloride	50 mg/m <sup>3</sup>	Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).
06	Nitrogen Oxides	600 kg/h	Expressed as Nitrogen Dioxide calculated as an hourly operating average. Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).
06	Particulate Matter	125 mg/m <sup>3</sup>	Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).
31, 32	Particulate Matter	20 mg/m <sup>3</sup>	
01, 02, 03, 04, 05, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30	Particulate Matter	50 mg/m <sup>3</sup>	
06	Polychlorinated dibenzo-p-dioxins and Polychlorinated dibenzofurans	0.2 ng/m <sup>3</sup>	Toxic equivalency factor applied. Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).



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The authorized maximum discharge criteria for works described in Schedule D & G are:

EMISSION NUMBER	PARAMETER	RESTRICTION	NOTES
06	Sulphur Oxides	500 mg/m <sup>3</sup>	Expressed as Sulphur Dioxide. Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).
06	Total Hydrocarbons	50 mg/m <sup>3</sup>	Expressed as methane. Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).
06	Trace Metals:Class I (Pb, Sb, Cu, Mn, V, Zn)	See Notes	Maximum 1.5 mg/m <sup>3</sup> . The concentration prescribed applies as the sum of the concentrations of the individual metals in that Class. Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).
06	Trace Metals:Class II (As, Cr, Co, Ni, Se, Te)	See Notes	Maximum 0.50 mg/m <sup>3</sup> . The concentration prescribed applies as the sum of the concentrations of the individual metals in that Class. Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).
06	Trace Metals:Class III (Tl, Cd, Hg)	See Notes	Maximum 0.15 mg/m <sup>3</sup> . The concentration prescribed applies as the sum of the concentrations of the individual metals in that Class. Subject to Schedule B, Section E, this restriction does not apply for the duration of startup, shutdown or unavoidable upset conditions (as defined in Schedule G).



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The authorized maximum discharge criteria for works described in Schedule D & G are:

EMISSION NUMBER	PARAMETER	RESTRICTION	NOTES
01, 02, 03, 04, 05, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 29, 30, 31, 32	Opacity	10%	Based on a six minute average. Not to exceed 30% opacity at any time.
25	Opacity	10%	Based on minimum six minute average. May be exceeded for a total of 3 min/hour.
06	Opacity	20%	Based on a six minute average (visual method) or 1 hour average for CEMS data. May be exceeded for a total of 3 min/hour.



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**SCHEDULE G - Page 1  
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The authorized emission control works and procedures to control the discharge of air contaminants from the emission sources described in Schedule D are indicated below. The District Director may require that further works be installed, if the existing works, in her/his opinion, do not provide an acceptable level of emission control. New works or alterations to existing works must be approved, in principle, by the District Director.

Where the District Director has specified that additional works are required, the maximum discharge criteria described in Schedule F of this Permit are applicable as specified by the Completion Date(s) listed below. Prior to the specified date(s) the existing control works and procedures must be maintained in good operating condition and operated in a manner to minimize emissions.

<b>EMISSION NUMBER</b>	<b>COMPLETION DATE</b>	<b>DESCRIPTION OF WORKS/PROCEDURES</b>
01	Completed	EN 01 - Five baghouses, designated 4324, 4302, 4305, 4312 & 4321 and related appurtenances together with good operating practices.
02	Completed	EN 02 - Three baghouses, designated 4309, 4318 and 4315 and related appurtenances together with good operating practices.
03	Completed	EN 03 - Two baghouses designated 6303 & 6306 and related appurtenances together with good operating practices.
04	Completed	EN 04 - A baghouse designated 6315 and related appurtenances together with good operating practices.
05	Completed	EN 05 - Three baghouses designated 6322, 6320 & 7397 and related appurtenances together with good operating practices.



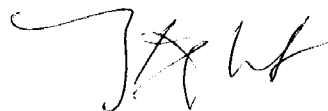
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EMISSION NUMBER	COMPLETION DATE	DESCRIPTION OF WORKS/PROCEDURES
06	Completed	<p>EN 06 - An electrostatic precipitator and related appurtenances together with the firing of the kiln with primary fuels (coal, natural gas, fuel oil) and alternate fuels (waste oil and tire derived fuel ) using good combustion practices and operating procedures.</p> <p>All waste oil used as a supplementary fuel must meet the Waste Oil Specifications in the Environmental Management Act Hazardous Waste Regulation (BC Reg. 63/88) for use as fuel in a cement kiln. The maximum firing rate of waste oil must not exceed 3750 liters per hour or 25% of the total net fuel demand whichever is the lesser. All waste oil will be introduced via the main burner, except for minor spill cleanup materials which may be introduced to the kiln with the tire derived fuel. Waste oil feed to the kiln must cease when any one of the following conditions occur: Raw material feed to the process is less than 150 tonnes per hour, the electrostatic precipitator inlet temperature exceeds 200°C, or the Carbon Monoxide Monitor (designated as 7041CO) reads greater than 1900 ppm carbon monoxide. No waste oil shall be fired during electrostatic precipitator outages.</p> <p>Tire derived fuel must not exceed 8% of total net fuel demand. The Permittee may increase the amount of tire derived fuel to a level greater than 8% of total net fuel demand only for the purpose of emission testing to demonstrate compliance with the limits specified in Schedule F. Upon demonstrating compliance and receiving written approval from the District Director, the maximum feed rate for tire derived fuel may be increased to the percentage of total fuel demand at which compliance has been demonstrated or 20%, whichever is the lesser.</p> <p>Unavoidable upset conditions, as noted in Schedule F, are contingent upon the Permittee adequately demonstrating that:</p>



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(a) the event was not caused by poor or inadequate design, operation, maintenance, or any other reasonably preventable condition;

(b) the operator took immediate and appropriate corrective action in a manner consistent with good air pollution control practice for minimizing emissions during the event, taking into account the total emissions impact of the corrective action, including slowing or shutting down the emission source as necessary to minimize emissions, when the operator knew or should have known that an emission standard or permit condition was being exceeded.

Waste-based raw materials and additional alternate fuels on-site storage and/or usage are authorized based upon demonstrated compliance with permit emission restrictions using the criteria listed below. [Note: The alternate fuels, waste oil and tire derived fuel, are currently authorized for use and are not subject to the criteria below. Exception: waste oil and tire derived fuel may not be introduced to the kiln system during start-up and shut down of the kiln.]

1. Prior to usage of a specific waste-based raw material or alternate fuel, the District Director must receive written notification identifying the proposed material. A report must accompany this notification which shall contain the following:

(a) documentation establishing the proposed waste-based raw material or alternate fuel is not classified as a "Hazardous Waste" as defined in the Environmental Management Act, Hazardous Waste Regulation.

(b) records detailing analyses and written descriptions establishing the composition, source and quality of the proposed waste-based raw material or alternate fuel. The analyses shall contain, but not be limited to,



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quantitative and qualitative trace metal composition of the proposed waste-based raw material or alternate fuel.

(c) proposed feed rate of the waste-based raw material shall be expressed as a percentage of the Total Raw Material Feed (TMF) to the rotary kiln. The proposed feed rate of the alternate fuel shall be expressed as a percentage of the Total Fuel Consumption (based upon net heat value) to the rotary kiln and preheater.

2. Conduct a demonstration trial utilizing the proposed waste-based raw material or alternate fuel at the maximum proposed feed rate. The demonstration trial must meet the following requirements:

(a) site storage and handling of the waste-based raw material or alternate fuel shall be conducted in such a manner so as to effectively control fugitive dust emissions.

(b) maximum duration of 80 hours. Records detailing waste-based raw material or alternate fuel usage times and dates shall be maintained and made available for inspection by GVRD staff.

(c) records detailing feed rates, quantity and quality of all waste-based raw materials and all fuel sources utilized during the demonstration trial shall be maintained and made available for inspection by GVRD staff.

(d) CEMS data shall be provided for SO<sub>x</sub>, NO<sub>x</sub>, THC, Opacity and Flow and emission sampling shall be conducted to determine the measured discharge rate and concentration of particulate matter, hydrogen chloride, and trace metals in the emission including antimony, arsenic, cadmium, chromium, cobalt, copper, manganese, mercury, nickel, lead, selenium,



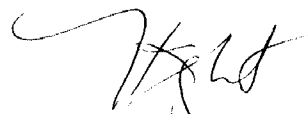
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EMISSION NUMBER	COMPLETION DATE	DESCRIPTION OF WORKS/PROCEDURES
		tellurium, thallium, vanadium and zinc. Lehigh Northwest Cement Limited shall provide the GVRD Policy & Planning Department with a minimum of three business days advance notice before any of the emission testing specified is carried out. All field data and calculations collected for the testing conducted must be submitted to the District Director. These submissions shall include the production rate and feed rates for all fuel sources and waste-based raw materials utilized at the time of testing. The results of emission sampling shall be submitted to the District Director five business days prior to the routine usage of the proposed waste-based raw material or alternate fuel.
		(e) for the duration of the demonstration trial all Permitted discharge criteria shall be in effect.
		3. Waste-based raw materials and alternate fuels may not be introduced to the kiln system during start-up and shut down of the kiln.
07	Completed	EN 07 - Five baghouses designated 7359, 7317, 7319, 7323, & 7326 and related appurtenances together with good operating practices.
08	Completed	EN 08 - Five baghouses designated 7361, 7364, 7353, 7350, & 7340 and related appurtenances together with good operating practices.
09	Completed	EN 09 - Five baghouses designated 8300, 8303, 8306, 8330 & 8333 and related appurtenances together with good operating practices.
10	Completed	EN 10 - A baghouse designated 8312 and related appurtenances together with good operating practices.
11	Completed	EN 11 - A baghouse designated 8321 and related appurtenances together with good operating practices.
12	Completed	EN 12 - A baghouse designated 8339 and related appurtenances together with good operating practices.



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<b>EMISSION NUMBER</b>	<b>COMPLETION DATE</b>	<b>DESCRIPTION OF WORKS/PROCEDURES</b>
13	Completed	EN 13 - A baghouse designated 8336 and related appurtenances together with good operating practices.
14	Completed	EN 14 - A baghouse designated 8352 and related appurtenances together with good operating practices.
15	Completed	EN 15 - Two baghouses designated 8380 & 8388 and related appurtenances together with good operating practices.
16	Completed	EN 16 - Three baghouses designated 9330, 9339 & 9342 and related appurtenances together with good operating practices. All loading is to be under partial vacuum and ducted to control equipment.
17	Completed	EN 17 - Four baghouses designated 8359, 8365, 8371 & 8374 and related appurtenances together with good operating practices.
18	Completed	EN 18 - Three baghouses designated 9309, 9312 & 9317 and related appurtenances together with good operating practices.
19	Completed	EN 19 - Two baghouses designated 9301 & 9350 and related appurtenances together with good operating practices.
20	Completed	EN 20 - A baghouse designated 9304 and related appurtenances together with good operating practices.
21	Completed	EN 21 - A baghouse designated 7483 and related appurtenances together with good operating practices.
22	Completed	EN 22 - A baghouse designated 7488 and related appurtenances together with good operating practices.
23	Completed	EN 23 - A baghouse designated 5005 and related appurtenances together with good operating practices.
24	Completed	EN 24 - A baghouse designated 5021 and related appurtenances together with good operating practices.
25	Completed	EN 25 - An electrostatic precipitator designated 7101 and related appurtenances together with good operating practices.
26	Completed	EN 26 - Two baghouses designated 5080 and 5081 and related appurtenances together with good operating practices.



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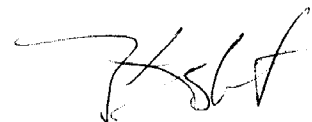
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<b>EMISSION NUMBER</b>	<b>COMPLETION DATE</b>	<b>DESCRIPTION OF WORKS/PROCEDURES</b>
27	Completed	EN 27 - A baghouse designated 5073 and related appurtenances together with good operating practices.
29	Completed	EN 29 - Filter dust collector designated 1410 and related appurtenances together with good operating practices.
30	Completed	EN 30 - A baghouse designated as 6265 and related appurtenances together with good operating practices.
31	Completed	EN 31 - One baghouse designated 7355 and related appurtenances together with good operating practices.
32	Completed	EN 32 - One baghouse designated 7335 and related appurtenances together with good operating practices.

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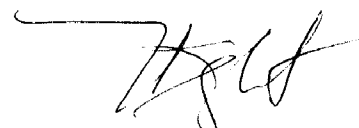
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**RECORD OF PERMIT ISSUANCE**

<b>DATE</b>	<b>ACTION</b>	<b>SECTIONS AFFECTED</b>
December 14, 1992	ISSUANCE	Face, Schedules A, B, C, D, E, F, G & H
October 22, 1993	AMENDMENT	Face, Schedules A, B, C, D, E, F, G & H
November 08, 1996	AMENDMENT	Face, Schedules A, B, C, D, E, F, G & H
December 24, 1997	AMENDMENT	Face, Schedules A, B, C, D, E, F, G & H
December 11, 1998	AMENDMENT	Face, Schedules A, B, C, D, E, F, G & H
March 18, 2005	AMENDMENT	Face, Schedules A, B, C, D, E, F, G & H

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