



Greater Vancouver Regional District
4330 Kingsway, Burnaby, British Columbia, Canada V5H 4G8

General
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Air Quality and Source Control Department - Tel (604) 436-6700 Fax (604) 436-6707

PERMIT

(Under the provisions of the GVRD Air Quality Management Bylaw No. 725)

HAL INDUSTRIES INC.
IS AUTHORIZED TO DISCHARGE AIR CONTAMINANTS
FROM AN ASPHALT PAPER SATURATING PLANT
LOCATED AT 9681 - 187TH STREET, SURREY, B.C., V3T 4W2

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 November 30, 1992


ASSISTANT AIR QUALITY DIRECTOR

PERMIT NUMBER GVA0340

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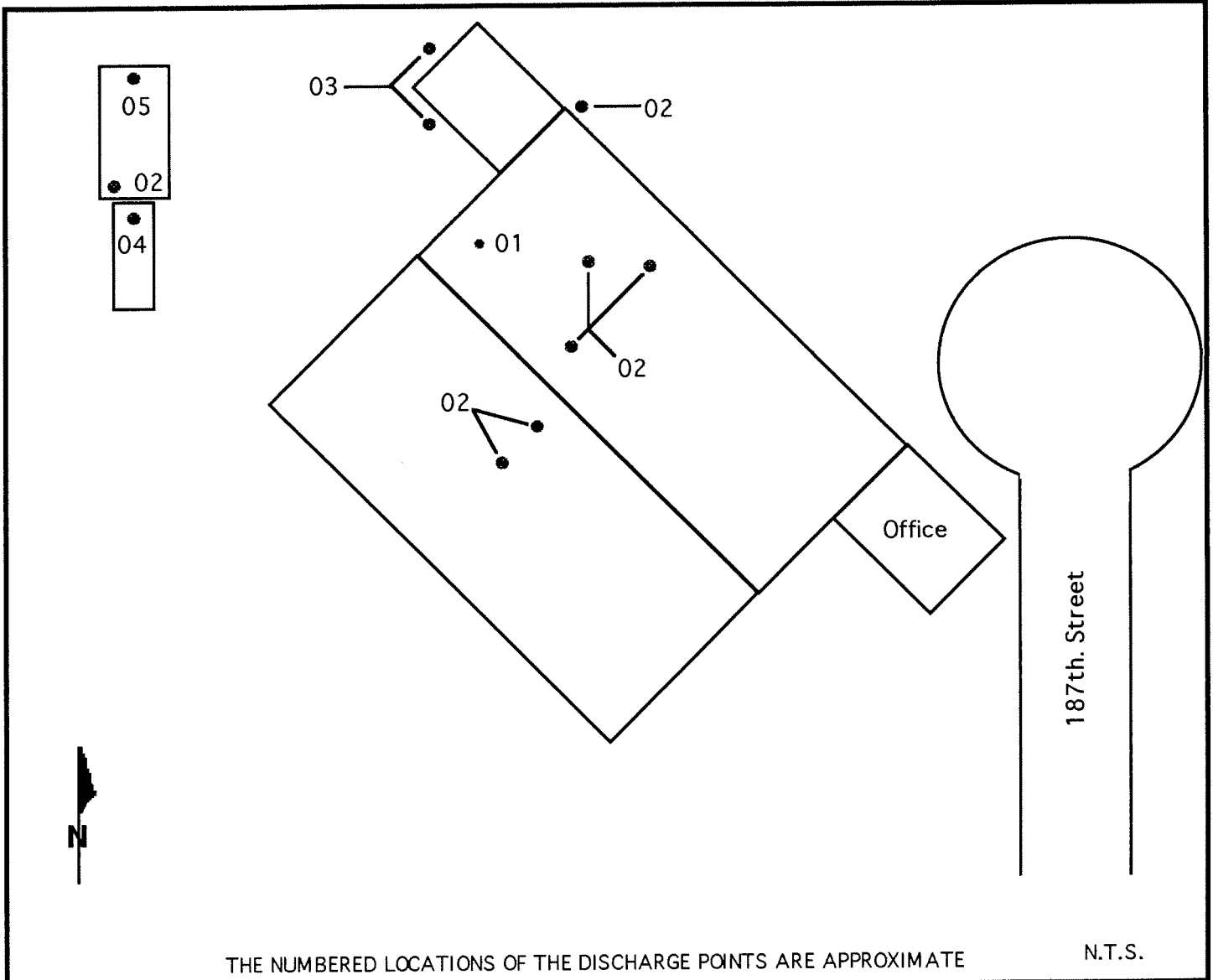


Greater Vancouver Regional District

4330 KINGSWAY, BURNABY, BRITISH COLUMBIA, V5H 4G8 TELEPHONE 436-6777

Air Quality Management Bylaw No. 725

SITE PLAN



THE NUMBERED LOCATIONS OF THE DISCHARGE POINTS ARE APPROXIMATE

N.T.S.



Fraser River

176th. Street

Trans

Canada

Hwy.

187th. St.

96th. Avenue



NOV 30 1992

Robert S. Smith

ASSISTANT AIR QUALITY DIRECTOR

Schedule A to Permit No. GVA0340

SCHEDULE B - PAGE 1
to PERMIT GVA0340

A. OBJECTIVES AND AMENDMENTS

Ambient air quality guidelines and objectives are prescribed under provisions of applicable legislation. If the level of air quality as prescribed by these criteria is exceeded, the conditions of this Permit may be revised, in order that the desired air quality can be maintained. This Permit may also be amended for other reasons, 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, Air Quality and Source Control Department at 436-6777 (24 hours), at the first available opportunity.

No discharge that has bypassed control works is authorized unless the Air Quality 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 Air Quality Director may at 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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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 H of this Schedule B, such that the Air Quality Director determines that air pollution has occurred.

F. 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.

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

where

m^3	=	cubic metre	min	=	minute
mg	=	milligram	cf	=	cubic feet
s	=	second	lb	=	pound
kg	=	kilogram	gal	=	gallon
L	=	litre	M	=	molecular weight
gr	=	grain	ppm	=	parts per million

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G. 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. Gaseous volumes are corrected to dry conditions of 20° Celsius & 760mm Hg.
3. Particulate matter from combustion sources is corrected to 12% Carbon Dioxide.
4. Opacity is measured at the point of maximum density, nearest the discharge point.
5. Opacity measurements exclude the effect of condensed, uncombined water droplets.
6. Definitions in the Waste Management Act and GVRD Air Quality Management Bylaw No. 725 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 for the years 1990 - 1991.
8. Any production, storage, transportation, handling, treatment, processing or ownership of a special waste must comply with the requirements of the Waste Management Act, Special Waste Regulation.

H. DESCRIPTION OF DISCHARGE SITE

The land from which the air contaminants are discharged is described as "Municipality of Surrey, Parcel Identifier: 003-542-602, Lot 3, District Lot 388A, Group 2, New Westminster District, Plan 43843".

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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 Air Quality Director. The need for increased or decreased monitoring may be reviewed periodically by the Air Quality Director.

EMISSION NUMBER	DUE DATE(S)	REQUIREMENT(S)
General	March 31, 1993 and annually thereafter	Written report detailing the types and amounts of principal products produced and principal raw materials used in the preceding calendar year.
General	March 31, 1993 and annually thereafter	Written report detailing the types and amounts of fuel burned in the preceding calendar year.
01	June 15, 1993 and annually thereafter	The measured discharge rate and concentration of particulate matter in the emission.

Unless otherwise approved by the Air Quality 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 Environment, Lands and Parks, as they may be amended from time to time. Any variance from these procedures must receive prior approval from the Air Quality 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, Air Quality and Source Control Department with a minimum of 3 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 Air Quality Director.

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The authorized emission sources and discharge points located approximately as shown on Schedule A are:

EMISSION NUMBER	EMISSION SOURCE	DISCHARGE POINT
01	Three asphalt saturators	Stack
02	Six asphalt saturator tank heaters and one asphalt storage tank heater	Seven stacks
03	20,000 gallon asphalt storage tank	Two vents
04	120 gallon asphalt pouring tank	Vent
05	20,000 gallon heated asphalt storage tank	Vent

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The authorized rates of discharge for the emission sources described in Schedule D are:

EMISSION NUMBER	MAXIMUM AUTHORIZED RATE OF DISCHARGE			NOTES & ADDITIONAL REQUIREMENTS
	FLOW m ³ /min	DURATION hours/day	FREQUENCY days/week	
01	55	24	5	
02	28	24	5	
03	See notes	24	7	The rate of discharge is that resulting from vapour venting during tank filling and breathing.
04	See notes	24	7	The rate of discharge is that resulting from vapour venting during tank filling and breathing.
05	See notes	24	7	The rate of discharge is that resulting from vapour venting during tank filling and breathing.

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The authorized maximum discharge criteria for emission sources described in Schedule D are:

EMISSION NUMBER	PARAMETER	RESTRICTION	NOTES
01, 03, 04 & 05	Chemical Contaminants	See notes	The maximum allowable emission concentration (EC) for each emitted chemical contaminants with a Threshold Limit Value (TLV) is such that the sum of the individual EC/TLC ratios for all such contaminants in any single emission source is less than 10.
01 & 02	Combustion Products	See notes	Typical products of combustion of natural gas.
01, 03, 04 & 05	Odour	See notes	None past the plant boundary such that the Air Quality Director determines that air pollution has occurred.
01	Opacity	10 percent	
01	Particulate matter	50 mg/m ³	

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The authorized works and procedures to control the discharge of air contaminants from the emission sources described in Schedule D are indicated below. The Air Quality Director may require that further works be installed, if the existing works, in 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 Air Quality Director.

Where the Air Quality 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.

EMISSION NUMBER	COMPLETION DATE	DESCRIPTION OF WORKS/PROCEDURES
01	Completed	A surface condenser and a natural gas fired exhaust gas incinerator operated at a minimum incinerator exit temperature of 538°C together with the maintenance of the ducting and related appurtenances such that all contaminants from these sources are conveyed under partial vacuum to the control equipment.
02	Completed	The firing of the six tank heaters with natural gas, using good combustion practices and operating procedures.
03, 04 & 05	Completed	Good operating practices.

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RECORD OF PERMIT ISSUANCE

DATE	ACTION	SECTIONS AFFECTED
November 30, 1992	Issuance	Face, Schedules A, B, C, D, E, F, G & H

November 30, 1992


ASSISTANT AIR QUALITY DIRECTOR