



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

General
Telephone (604) 432-6200
Fax (604) 432-6251

Air Quality Department - Tel (604) 436-6700 Fax (604) 436-6707
Located at: 4720 Kingsway, Burnaby, B.C.

PERMIT

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

NORAMPAC INC., RICHMOND DIVISION  
IS AUTHORIZED TO DISCHARGE AIR CONTAMINANTS  
FROM A CORRUGATED CONTAINER MANUFACTURING PLANT  
LOCATED AT 3300 VIKING WAY, RICHMOND, B.C. V6V 1N6

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 August 21, 1998.

  
ASSISTANT AIR QUALITY DIRECTOR

PERMIT NUMBER GVA0064

**INDEX OF SCHEDULES**

Schedule A..... Site Plan

Schedule B..... General Requirements

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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

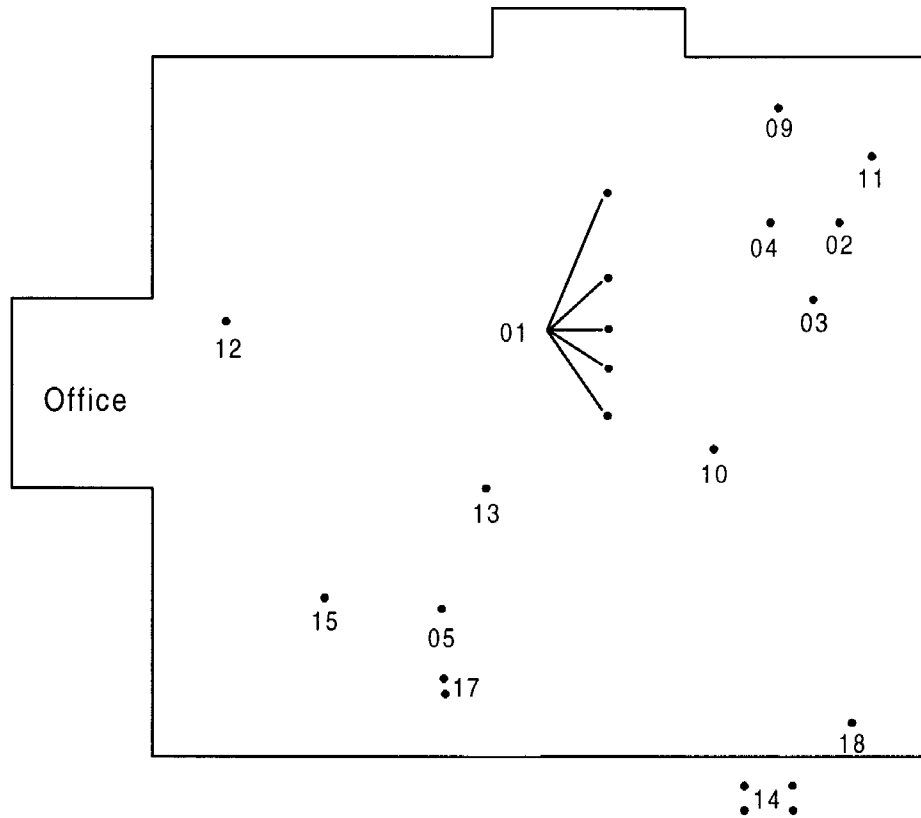
4330 KINGSWAY, BURNABY, BRITISH COLUMBIA, V5H 4G8 TELEPHONE 436-6777

## GVRD Air Quality Management Bylaw No. 725

### SITE PLAN



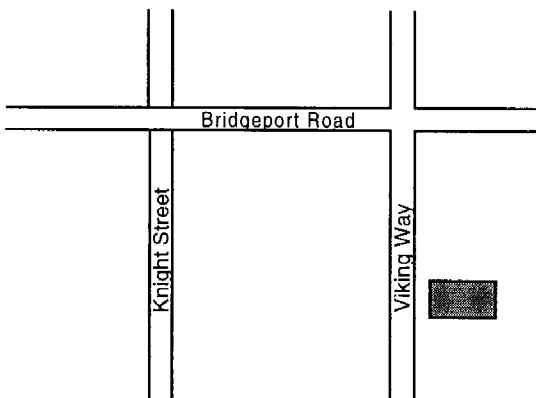
Viking Way



THE NUMBERED LOCATIONS OF THE DISCHARGE POINTS ARE APPROXIMATE

N.T.S.

### LOCATION MAP



August 21, 1998

ASSISTANT DISTRICT DIRECTOR

Schedule A to Permit No. GVA0064

SCHEDULE B - PAGE 1  
to PERMIT GVA0064

**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 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 I of this Schedule B, such that the Air Quality Director determines that air 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 Air Quality Director may at his discretion further limits for emissions of contaminants from these sources in the Permit at a future date under provisions of the Bylaw.

**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.

|                              |   |                 |
|------------------------------|---|-----------------|
| mg/m <sup>3</sup> x 0.000437 | = | gr/cf           |
| m <sup>3</sup> /min x 35.3   | = | cf/min          |
| kg/m <sup>3</sup> x 0.0624   | = | lbs/cf          |
| kg/L x 10.0                  | = | lbs/gal         |
| mg/m <sup>3</sup> x 24.0/M   | = | ppm (by volume) |
| GJ/h x 0.9478                | = | MMBTU/h         |

where

|                |   |             |       |   |                              |
|----------------|---|-------------|-------|---|------------------------------|
| m <sup>3</sup> | = | 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            |
| GJ             | = | GigaJoule   | MMBTU | = | Million British Thermal Unit |
|                |   |             | h     | = | hour                         |

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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. 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 year 1997.
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.

**I. DESCRIPTION OF DISCHARGE SITE**

The land from which the air contaminants are discharged is described as "Municipality of Richmond, Parcel Identifier: 006-549-586, Lot 11 Section 29 Block 5 North Range 5 West New Westminster District Plan 42822".

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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, 1999 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, 1999 and annually thereafter | Written report detailing the types and amounts of fuel burned in the preceding calendar year.                                                                                                                                                                                                                                                                                             |
| General                                             | March 31, 1999 and annually thereafter | Written report detailing the types, amounts and end use of organic solvents and organic solvent-containing materials used in the preceding calendar year.                                                                                                                                                                                                                                 |
| 05                                                  | March 31, 1999 and annually thereafter | Written report indicating inspection frequency, bag condition and action taken or proposed to solve any problems detected for the baghouse described in Schedule G of this Permit.                                                                                                                                                                                                        |
| 01, 02, 03, 04, 05, 09, 10, 11, 12, 13, 15, 17 & 18 | See requirements                       | The operating period referred to in Schedule E of this Permit shall be continuously monitored and recorded using methods that have received prior approval by the Air Quality Director. Records are to be maintained in a written bound log or other format approved by the Air Quality Director, and available for inspection, by Air Quality staff for a minimum period of three years. |

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| EMISSION NUMBER                                              | DUE DATE(S)                               | REQUIREMENT(S)                                                                                              |
|--------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 01, 02, 03, 04,<br>05, 09, 10, 11,<br>12, 13, 15, 17 &<br>18 | March 31, 1999 and<br>annually thereafter | Written report detailing the total number of hours and<br>days operated during the preceding calendar year. |

Emission testing and 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              | Corrugating machine area.          | Five vents       |
| 02              | High pressure process boiler.      | Stack            |
| 03              | Low pressure process boiler.       | Stack            |
| 04              | Hot water boiler.                  | Stack            |
| 05              | Cardboard scrap collection system  | Baghouse exhaust |
| 09              | Welding table.                     | Vent             |
| 10              | Corrugator singlefacer.            | Vent             |
| 11              | Starch mixing tank.                | Stack            |
| 12              | Die room.                          | Vent             |
| 13              | Flexo die wash area.               | Vent             |
| 14              | Four 8000 gallon wax storage tanks | Four vents       |
| 15              | Hot melt gluer                     | Vent             |
| 17              | Koch waxer                         | Two vents        |
| 18              | Resco waxer                        | Vent             |

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 SCHEDULE E - PAGE 1
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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	3540	24	7	The maximum number of operating hours for each calendar year is 6240 hours.
02	90	24	7	The maximum number of operating hours for each calendar year is 6240 hours.
03	10	24	7	The maximum number of operating hours for each calendar year is 6240 hours.
04	70	24	7	Maximum 26 weeks/year.
05	1925	24	7	The maximum number of operating hours for each calendar year is 6240 hours.
09	142	24	7	The maximum number of operating hours for each calendar year is 6240 hours.
10	15	24	7	The maximum number of operating hours for each calendar year is 6240 hours.
11	57	24	7	The maximum number of operating hours for each calendar year is 6240 hours.

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EMISSION NUMBER	MAXIMUM AUTHORIZED RATE OF DISCHARGE			NOTES & ADDITIONAL REQUIREMENTS
	FLOW m ³ /min	DURATION hours/day	FREQUENCY days/week	
12	108	24	7	The maximum number of operating hours for each calendar year is 6240 hours.
13	142	24	7	The maximum number of operating hours for each calendar year is 6240 hours.
14	See notes	24	7	The rate of discharge is that resulting from vapour venting during tank filling and breathing. The frequency of filling is variable.
15	60	24	7	The maximum number of operating hours for each calendar year is 3120 hours.
17	1133	24	7	The maximum number of operating hours for each calendar year is 4500 hours.
18	246	24	7	The maximum number of operating hours for each calendar year is 2000 hours.

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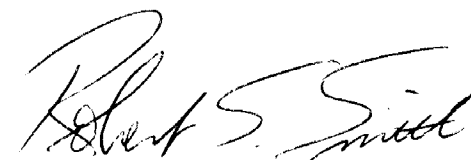
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SCHEDULE F - PAGE 1
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The authorized maximum discharge criteria for emission sources described in Schedule D are:

EMISSION NUMBER	PARAMETER	RESTRICTION	NOTES
01	Particulate matter	20 mg/m ³	
01, 09, 10, 11, 12, 13, 14, 15, 17 & 18	Chemical contaminants	See notes	The maximum allowable emission concentration (EC) for each emitted chemical contaminant with a Threshold Limit Value (TLV) is such that the sum of the individual EC/TLV ratios for all such contaminants in any single emission source is less than 10.
01, 09, 10, 11, 12, 13, 14, 17 & 18	Odour	See notes	None past the plant boundary such that the Air Quality Director determines that air pollution has occurred.
02, 03 & 04	Particulate matter	150 mg/m ³	During firing with fuel oil.
02, 03 & 04	SOx	800 mg/m ³	Expressed as Sulphur Dioxide when firing fuel oil.
02, 03 & 04	Opacity	10 percent	May be exceeded for a total of 3 min/hour to a maximum of 30 percent opacity during the firing of fuel oil.
01 & 05	Opacity	10 percent	
05	Particulate matter	50 mg/m ³	

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EMISSION NUMBER	PARAMETER	RESTRICTION	NOTES
02	Combustion Products	See notes	Typical products of natural gas combustion at a maximum firing rate of 15.5 GJ/hr.
03	Combustion Products	See notes	Typical products of natural gas combustion at a maximum firing rate of 1.8 GJ/hr.
04	Combustion Products	See notes	Typical products of natural gas combustion at a maximum firing rate of 13.3 GJ/hr.

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SCHEDULE G - PAGE 1
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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, 02, 03, 04, 09, 10, 11, 12, 13, 14, 15, 17 & 18	Completed	Good operating practices.
05	Completed	Baghouse and related appurtenances, together with good operating practices.
02, 03, 04	Completed	The firing of the boilers with natural gas (#2 fuel oil standby), using good combustion practices and operating procedures. The sulphur content of fuel oil should not exceed 0.5 percent, by weight.

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RECORD OF PERMIT ISSUANCE

DATE	ACTION	SECTIONS AFFECTED
December 7, 1992	Issuance	Face, Schedules A, B, C, D, E, F, G & H
May 9, 1997	Amended	Face, Schedules A, B, C, D, E, F, G & H
August 21, 1998	Amended	Face, Schedules A, B, C, D, E, F, G & H

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