



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

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

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)

MCKENZIE BARGE & MARINE WAYS LTD.
IS AUTHORIZED TO DISCHARGE AIR CONTAMINANTS
FROM A BARGE BUILDING AND REPAIRING PLANT
LOCATED AT 3919 DOLLARTON HIGHWAY, NORTH VANCOUVER, B.C. V7G 1A1

Unless otherwise stated, 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 9, 1992


ASSISTANT DISTRICT DIRECTOR

PERMIT NUMBER GVA0188

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Schedule D Emission Sources and Discharge Points

Schedule E Authorized Rates of Discharge

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Greater Vancouver Regional District

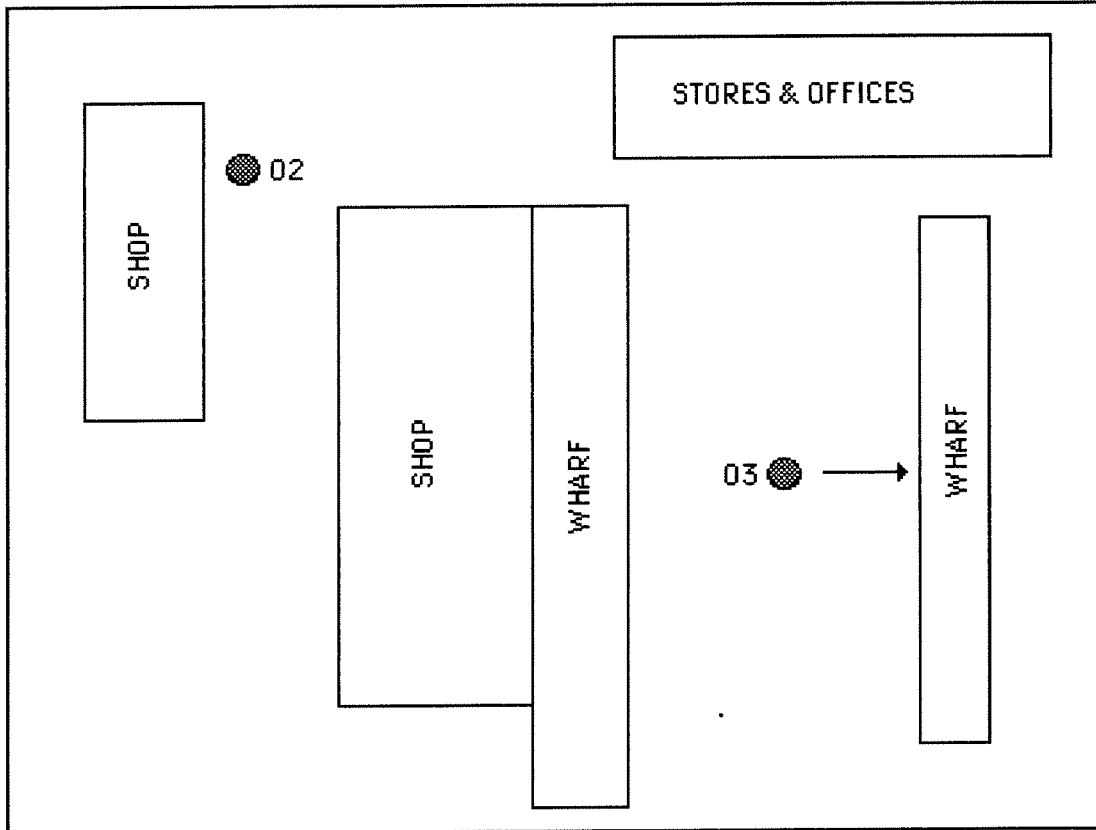
4330 KINGSWAY, BURNABY, BRITISH COLUMBIA, V5H 4G8 TELEPHONE 436-6777

GVRD Air Quality Management Bylaw No. 725

SITE PLAN

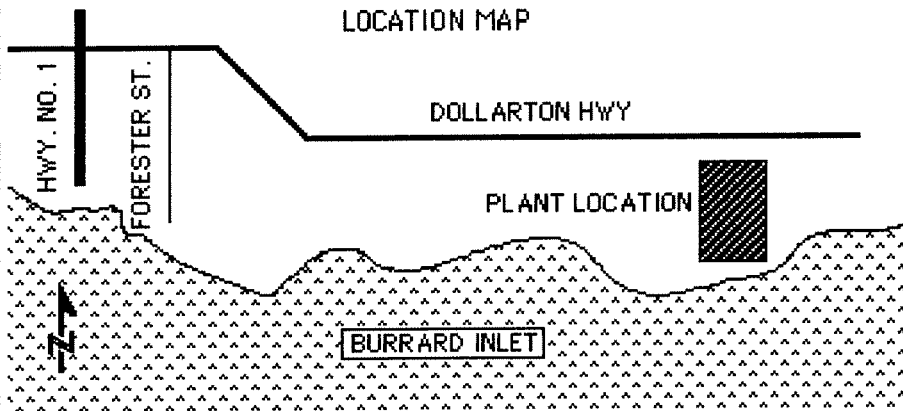


DOLLARTON HWY



THE NUMBERED LOCATIONS OF THE DISCHARGE POINTS ARE APPROXIMATE N.T.S.

LOCATION MAP



NOV. 9 1992

Robert S. Smith

ASSISTANT AIR QUALITY DIRECTOR

Schedule A to Permit No. GVA0188

SCHEDULE B - PAGE 1
to PERMIT GVA0188

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

|              |   |             |     |   |                   |
|--------------|---|-------------|-----|---|-------------------|
| $\text{m}^3$ | = | 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 "Municipality of North Vancouver, Parcel Identifier: 008-965-404, Lot 2 Blocks "A" & "D" D.L. 230 Gp. 1 Plan 12037. First: Centre 1/3 (Ref. Plan 757) of Subdivision "A". Secondly: East 66 ft. of West 1/3 (R.P. 757) of Sub. "A". Both of D.L. 230 Gp. 1 N.W.D."

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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.

| <b>EMISSION NUMBER</b> | <b>DUE DATE(S)</b>                     | <b>REQUIREMENT(S)</b>                                                                                                                                     |
|------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.                                                             |
| General                | March 31, 1993 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. |

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   |
|-----------------|---------------------------------------------------------|-------------------|
| 02              | Coke-fired Blacksmith Forge                             | Stack             |
| 03              | Open air abrasive blasting and spray painting operation | Various locations |

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

| EMISSION<br>NUMBER | MAXIMUM AUTHORIZED<br>RATE OF DISCHARGE |                       |                        | NOTES & ADDITIONAL<br>REQUIREMENTS                                                                                       |
|--------------------|-----------------------------------------|-----------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------|
|                    | FLOW<br>m <sup>3</sup> /min             | DURATION<br>hours/day | FREQUENCY<br>days/week |                                                                                                                          |
| 02                 | 7                                       | 8                     | 5                      |                                                                                                                          |
| 03                 | See notes                               | 8                     | 6                      | The authorized rate of discharge is that resulting from outdoor abrasive blasting and outdoor spray painting operations. |

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

| EMISSION NUMBER | PARAMETER          | RESTRICTION           | NOTES                                                                                                       |
|-----------------|--------------------|-----------------------|-------------------------------------------------------------------------------------------------------------|
| 03              | Odour              | See notes             | None past the plant boundary such that the Air Quality Director determines that air pollution has occurred. |
| 02              | Opacity            | 20 percent            | May be exceeded for a total of 3 min/hour.                                                                  |
| 02              | Particulate matter | 230 mg/m <sup>3</sup> |                                                                                                             |
| 03              | Particulate matter | See notes             | None past the plant boundary such that the Air Quality Director determines that air pollution has occurred. |
| 03              | Opacity            | 20 percent            |                                                                                                             |

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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                                                                                                       |
|-----------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 02              | Completed       | The firing of the blacksmith forge with coke, using good combustion practices and operating procedures.                               |
| 03              | Completed       | Good operating practices which include prior instruction of all operators in proper operation of sandblasting and paint applications. |

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RECORD OF PERMIT ISSUANCE

| DATE             | ACTION   | SECTIONS AFFECTED                       |
|------------------|----------|-----------------------------------------|
| November 9, 1992 | Issuance | Face, Schedules A, B, C, D, E, F, G & H |

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