



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

PERMIT

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

THOMPSON FOUNDRY LIMITED
IS AUTHORIZED TO DISCHARGE AIR CONTAMINANTS
FROM A FERROUS METAL FOUNDRY
LOCATED AT 12540 - 82nd AVENUE, SURREY, B.C. V3W 3E9

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 January 1, 2001

A handwritten signature in black ink, appearing to read 'Robert S. Smith'.

ASSISTANT DISTRICT DIRECTOR

PERMIT NUMBER GVA0161

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

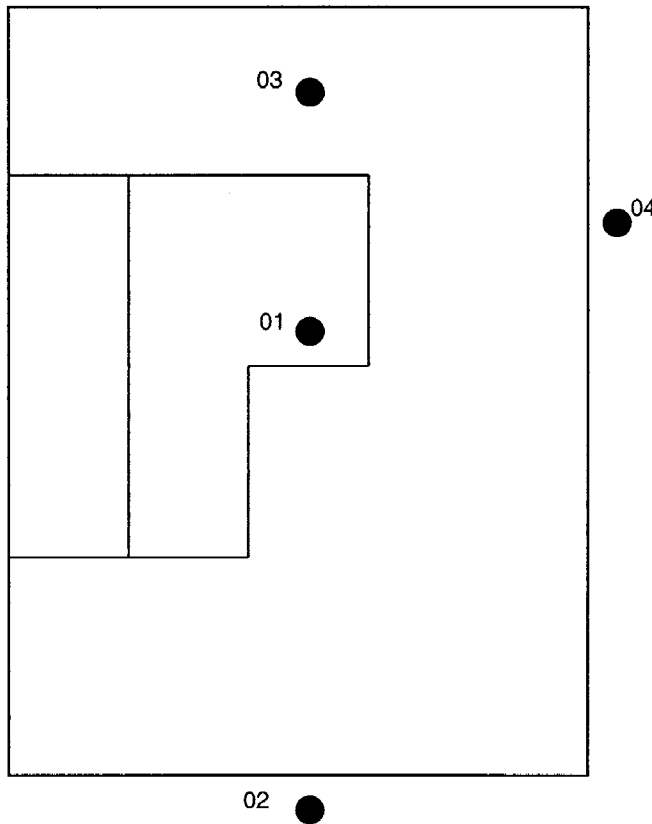
Schedule H..... Record of Permit Issuance Dates

GREATER VANCOUVER REGIONAL DISTRICT

SCHEDULE A - PAGE 1
to PERMIT GVA0161

SITE PLAN

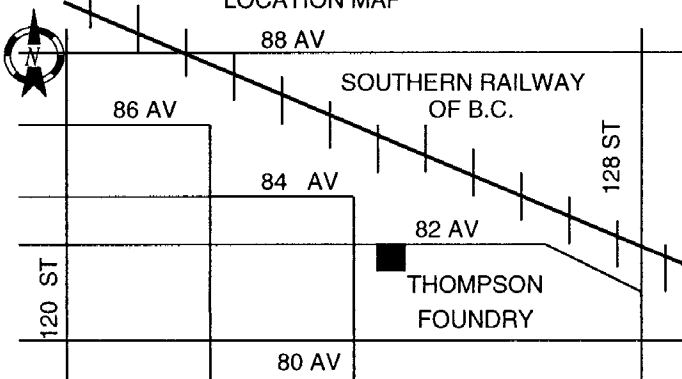
82ND AVENUE



THE NUMBERED LOCATIONS OF THE DISCHARGE POINTS ARE APPROXIMATE

N.T.S.

LOCATION MAP



January 1, 2001

ASSISTANT DISTRICT DIRECTOR

SCHEDULE A TO PERMIT No. GVA0161

SCHEDULE B - PAGE 1
to PERMIT GVA0161

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 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 his discretion stipulate limits for emission of contaminants from these sources in the Permit at a future date under provisions of the Bylaw.

January 1, 2001



ASSISTANT DISTRICT DIRECTOR

SCHEDULE B - PAGE 2
to PERMIT GVA0161

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 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 District Director may at his discretion stipulate further limits for emission 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.

$\text{mg/m}^3 \times 0.000437$	=	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)
$\text{GJ/h} \times 0.9478$	=	MMBTU/h

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
GJ	=	GigaJoule	MMBTU	=	Million British Thermal Unit
			h	=	hour

January 1, 2001


ASSISTANT DISTRICT DIRECTOR

SCHEDULE B - PAGE 3
to PERMIT GVA0161

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. 937, 1999 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 2000.
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 Surrey PID: 009-758-097 Lot "A" Section 30 Township 2 New Westminster District Plan 13063.

January 1, 2001


ASSISTANT DISTRICT DIRECTOR

GREATER VANCOUVER REGIONAL DISTRICT

SCHEDULE C - PAGE 1
to PERMIT GVA0161

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 DATE(S)	REQUIREMENT(S)
General	March 31, 2001 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, 2001 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.
02 & 04	March 31, 2001 and annually thereafter	Written report indicating inspection frequency, bag condition and action taken or proposed to solve any problems detected for the baghouses described in Schedule G of this Permit.
03	March 31, 2001 and annually thereafter	Written report detailing the types and amounts of fuel burned in the preceding calendar year.

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

January 1, 2001


ASSISTANT DISTRICT DIRECTOR

SCHEDULE D - PAGE 1
to PERMIT GVA0161

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

EMISSION NUMBER	EMISSION SOURCE	DISCHARGE POINT
01	Electric induction melting furnace	Stack
02	Sand handling equipment and a shot blast table	Baghouse exhaust
03	Gas fired core oven	Stack
04	Sand storage silo	Baghouse exhaust

January 1, 2001


ASSISTANT DISTRICT DIRECTOR

GREATER VANCOUVER REGIONAL DISTRICT

SCHEDULE E - PAGE 1
to PERMIT GVA0161

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	natural draft	8	5	
02	340	8	5	
03	100	8	5	
04	10	3	5	The rate of discharge occurs during the filling of the silo. The frequency of filling is variable.

January 1, 2001


ASSISTANT DISTRICT DIRECTOR

SCHEDULE F - PAGE 1
to PERMIT GVA0161

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

EMISSION NUMBER	PARAMETER	RESTRICTION	NOTES
01 & 02	Particulate matter	50 mg/m ³	
04	Particulate matter	20 mg/m ³	
01, 02, 03 & 04	Opacity	10%	
03	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.
03	Combustion Products	See notes	Typical products of natural gas combustion at a maximum firing rate of 21.10 GJ/h.
03	Formaldehyde	12 mg/m ³	
03	Phenol	100 mg/m ³	
03	Odour	See notes	None past the plant boundary such that the District Director determines that air pollution has occurred.

January 1, 2001


ASSISTANT DISTRICT DIRECTOR

SCHEDULE G - PAGE 1
to PERMIT GVA0161

The authorized 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 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.

EMISSION NUMBER	COMPLETION DATE	DESCRIPTION OF WORKS/PROCEDURES
01	Completed	Good operating practices
02	Completed	Wheelabrator Baghouse, Model 126 D, No. 11, and related appurtenances together with good operating practices.
03	Completed	The firing of the core oven with natural gas, using good combustion practices and operating procedures.
04	Completed	D.C.E. Dalamatic Baghouse Model No. DLM V9/15W, and related appurtenances together with good operating practices.

January 1, 2001


ASSISTANT DISTRICT DIRECTOR

SCHEDULE H - PAGE 1
to PERMIT GVA0161

RECORD OF PERMIT ISSUANCE

DATE	ACTION	SECTIONS AFFECTED
November 16, 1992	Issuance	Face, Schedules A, B, C, D, E, F, G & H
January 1, 2001	Amended	Face, Schedules A, B, C, D, E, F, G & H

January 1, 2001


ASSISTANT DISTRICT DIRECTOR