



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)

HIGHLAND FOUNDRY LTD.

IS AUTHORIZED TO DISCHARGE AIR CONTAMINANTS

FROM A STEEL FOUNDRY

LOCATED AT 9670 - 187TH STREET, SURREY BC V4N 3N6

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

MAR 28 2006

DISTRICT DIRECTOR
PERMIT NUMBER GVA0197

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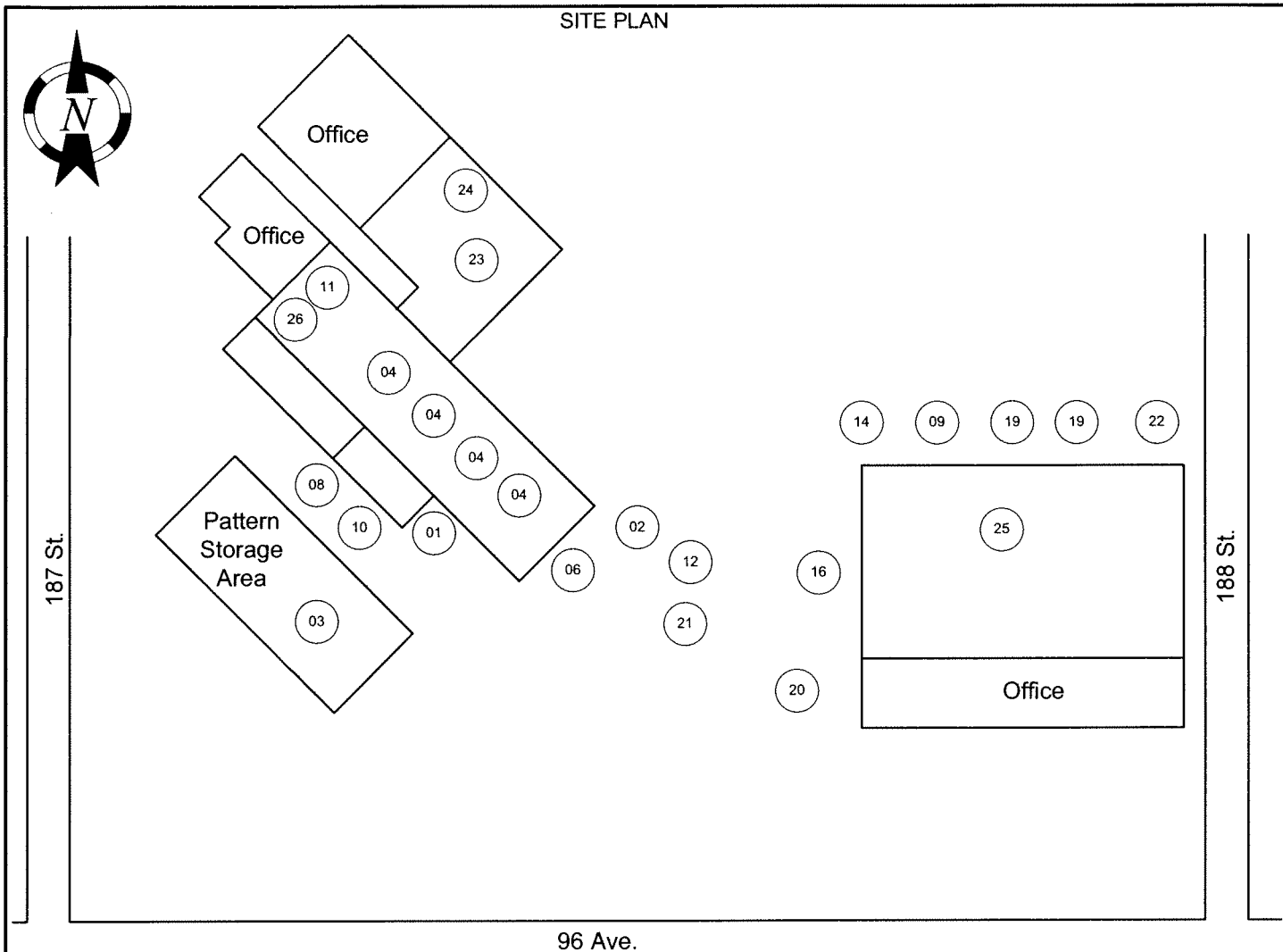
Schedule F.....Authorized Discharge Criteria

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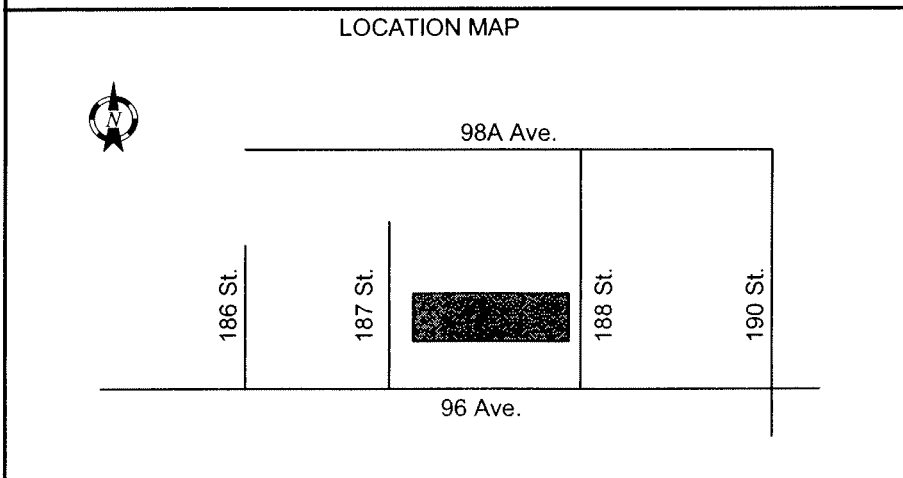
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SITE PLAN



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

LOCATION MAP



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Schedule A to Permit No. GVA0197

GREATER VANCOUVER REGIONAL DISTRICT

**SCHEDULE B - Page 1
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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.

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.

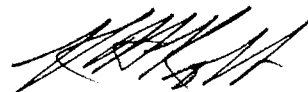
D AIR CONDITIONING, HEATING AND VENTILATION SYSTEMS

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.

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.

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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.

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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H STANDARD CONDITIONS AND DEFINITIONS

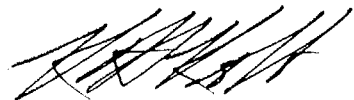
Except where otherwise indicated, the following standard conditions and definitions apply to this Permit.

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 (unless otherwise stated).
4. Opacity is measured at the point of maximum density, nearest the discharge point, based on a six minute average.
5. Opacity measurements exclude the effect of condensed, uncombined water droplets.
6. 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.
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 2005.
8. 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).

I DESCRIPTION OF DISCHARGE SITE

The land from which the air contaminants are discharged is described as "Municipality of Surrey, Parcel Identifier: 013-095-773, Lot "B" District Lot 388A, Group 2, New Westminster District, Plan 80520 and Parcel Identifier 002-859-742, Lot 1, District Lot 388A Group 2, New Westminster District, Plan 70794".

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SCHEDULE C - Page 1
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This Schedule describes emission monitoring, sampling and reporting requirements.

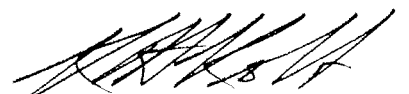
The Permittee shall conduct the following monitoring and sampling program on the discharges and submit the results to the District Director. The need for increased or decreased monitoring may be reviewed periodically by the District Director.

EMISSION NUMBER	DUE DATES	REQUIREMENTS
01, 02, 06, 08, 09, 10, 11, 12, 14, 16, 21, 25, 26	September 30, 2006 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, 19, 22	March 31, 2006 and annually thereafter	Written report detailing the types and amounts of fuel burned in the preceding calendar year.
General	March 31, 2006 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, 2006 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.

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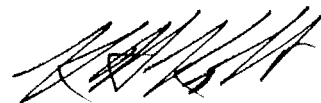
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The authorized emission sources and discharge points located approximately as shown on Schedule A are:

EMISSION NUMBER	EMISSION SOURCE	DISCHARGE POINT
01	Ventilation of two shakeout machines	Baghouse Exhaust(s)
02	Storage silo for reclaim sand	Baghouse Exhaust(s)
03	Core oven	Stack(s)
04	Ventilation of the foundry building	Vent(s)
06	Sand muller	Baghouse Exhaust(s)
08	Virgin sand storage silo	Baghouse Exhaust(s)
09	Shot blast cleaning operation	Baghouse Exhaust(s)
10	Coldset sand reclamation storage silo	Baghouse Exhaust(s)
11	Coldset mixer receiving tank	Baghouse Exhaust(s)
12	Green sand reclamation process	Baghouse Exhaust(s)
14	Pangborn tumble shot blast	Baghouse Exhaust(s)
16	Cutoff saw	Baghouse Exhaust(s)
19	Three heat treat ovens	Vent(s)
20	#2, 3, 4, 5 & 8 welding & gouging booths.	Fan Exhaust(s)
21	Green sand reclaimer 25 ton bin	Baghouse Exhaust(s)
22	#4 heat treat oven	Vent(s)
23	Mould wash spray booth	Stack(s)
24	Shell core machine	Stack(s)
25	Welding/Arc air	Baghouse Exhaust(s)
26	Coldset mixer silo	Baghouse Exhaust(s)

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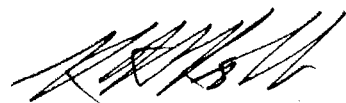
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The authorized rates of discharge for the emission sources described in Schedule D are:

EMISSION NUMBER	MAXIMUM AUTHORIZED RATE OF DISCHARGE			NOTES & ADDITIONAL REQUIREMENTS
	FLOW m3/min	DURATION hours/day	FREQUENCY days/week	
01	372	8	5	
02	10	2	5	
03	29	8	5	
04	1,132	8	5	
06	34	8	5	
08	17	4	See Notes	The maximum duration of operation is 4 hours every 2 weeks.
09	85	8	5	
10	170	3	5	
11	40	1	5	
12	142	4	5	
14	170	8	5	
16	85	6	5	
19	8	24	5	
20	1,642	8	5	
21	57	2	5	
22	6	16	5	
23	224	8	5	
24	71	8	5	
25	170	12	5	

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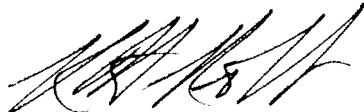
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EMISSION NUMBER	MAXIMUM AUTHORIZED RATE OF DISCHARGE			NOTES & ADDITIONAL REQUIREMENTS
	FLOW m3/min	DURATION hours/day	FREQUENCY days/week	
26	40	1	5	

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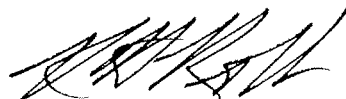
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The authorized maximum discharge criteria for emission sources described in Schedule D are:

EMISSION NUMBER	PARAMETER	RESTRICTION	NOTES
01, 02, 08, 11, 12, 16, 23, 24, 25, 26	Particulate Matter	20 mg/m3	
03, 04, 06, 09, 10, 14, 20, 21	Particulate Matter	50 mg/m3	
01, 02, 04, 06, 08, 09, 10, 11, 12, 14, 16, 19, 20, 21, 22, 25, 26	Opacity	10%	May be exceeded for a total of 3 min/hour.
03	Opacity	20%	May be exceeded for a total of 3 min/hour.
03, 23, 24	Odour	See notes	None past the plant boundary such that the District Director determines that pollution has occurred.
11	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 is less than 10.
03	Combustion Products	See notes	Typical products of natural gas combustion at a maximum firing rate of 0.53 GJ/h (0.5 MMBTU/h.).
22	Combustion Products	See notes	Typical products of natural gas combustion at a maximum firing rate of 3.96 GJ/h (03.75MMBTU/h.).
19	Combustion Products	See notes	Typical products of natural gas combustion at a maximum firing rate of 6.33 GJ/h (6 MMBTU/h.).

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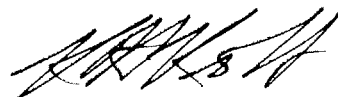
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The authorized emission control works and procedures to control the discharge of air contaminants from the emission sources described in Schedule D are indicated below. The District Director may require that further works be installed, if the existing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

EMISSION NUMBER	COMPLETION DATE	DESCRIPTION OF CONTROL WORKS/PROCEDURES
12	Completed	#51HV Cyclone and a Simon Day 42 HPB8 Baghouse and related appurtenances, together with good operating practices.
09	Completed	AAF 4-242-600 M-Fabri-Pulse Baghouse and related appurtenances, together with good operating practices.
01	Completed	AAF Amer-Flo Baghouse, a cyclone, and related appurtenances, together with good operating practices.
02	Completed	AAF Pak 2-9-25 Baghouse and related appurtenances, together with good operating practices.
14	Completed	Apsco 96 Baghouse and related appurtenances, together with good operating practices.
25, 26	Completed	Baghouse and related appurtenances, together with good operating practices.
08	Completed	Booth 300 Baghouse and related appurtenances, together with good operating practices.
03	Completed	Firing of the core oven with natural gas, using good combustion practices and operating procedures together with the use of low smoke producing resin.
22	Completed	Firing of the heat treat oven with natural gas, using good combustion practices and operating procedures.
19	Completed	Firing of the three heat treat ovens with natural gas, using good combustion practices and operating procedures.
04, 20, 23, 24	Completed	Good operating practices.
21	Completed	Murphy Baghouse and related appurtenances, together with good operating practices.

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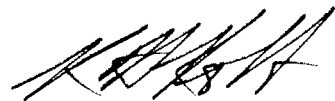
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EMISSION NUMBER	COMPLETION DATE	DESCRIPTION OF CONTROL WORKS/PROCEDURES
16	Completed	NIS 4000 Baghouse and related appurtenances, together with good operating practices.
11	Completed	Two Torit, Model #2DF8 Baghouses and related appurtenances, together with good operating practices.
06, 10	Completed	Wheelabrator Baghouse and related appurtenances, together with good operating practices.

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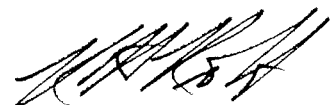
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RECORD OF PERMIT ISSUANCE

DATE	ACTION	SECTIONS AFFECTED
MAR 28 2006	AMENDMENT	Face, Schedules A, B, C, D, E, F, G & H
September 30, 1992	ISSUANCE	Face, Schedules A, B, C, D, E, F, G & H
September 17, 1993	AMENDMENT	Face, Schedules A, B, C, D, E, F, G & H

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