

*Alberta*  Government

# **Code of Practice for Foundries**

**Effective September 30, 1996**

© Published by Alberta Queen's Printer

Queen's Printer Bookstore  
5<sup>th</sup> Floor, Park Plaza  
10611 - 98 Avenue  
Edmonton, AB T5K 2P7  
(780) 427-4952  
Fax (780) 452-0668  
E-mail: [qp@gov.ab.ca](mailto:qp@gov.ab.ca)  
Shop on-line at [www.qp.alberta.ca](http://www.qp.alberta.ca)



**CODE OF PRACTICE FOR FOUNDRIES**  
**ALBERTA ENVIRONMENTAL PROTECTION**

**TABLE OF CONTENTS**

1	Preface
2	Introduction
3	Definitions
4	Registration
5	Person Responsible's Duty
6	Pollution Control Technology Requirements
7	Operation Requirements
8	Record Keeping
9	Reporting
10	Code Amendment
11	Effective Date
	Appendix "A" - Environmental Log Book Format
	Appendix "B" - Information Form
	Registration Form

# **CODE OF PRACTICE FOR FOUNDRIES**

## **ALBERTA ENVIRONMENTAL PROTECTION**

### **Preface**

**1(1)** The Code of Practice for Foundries is incorporated by the *Substance Release Regulation* (A.R. 124/93), under the authority of section 36 of the *Environmental Protection and Enhancement Act*. Persons responsible for foundries affected by this Code must meet all its requirements to ensure that their activities are in compliance with Alberta's environmental laws. In addition to the requirements of this Code of Practice, persons responsible must comply with all requirements of the *Environmental Protection and Enhancement Act*, its associated regulations, and all other applicable laws.

**(2)** Persons responsible for foundries affected by this Code must register with Alberta Environmental Protection prior to commencing operation of a foundry. Section 4 of this Code deals with registration in greater detail.

### **Introduction**

**2(1)** This Code of Practice outlines the minimum operating requirements for foundries as defined below. These requirements must be complied with by persons responsible for these foundries within the Province of Alberta. As well, persons responsible should consult with persons or parties that may be affected by the foundry's operations.

**(2)** Larger foundries will require an approval under the *Environmental Protection and Enhancement Act*. Persons responsible should refer to the *Activities Designation Regulation* to determine if their activities will require an approval.

**(3)** Questions or concerns regarding the application or contents of this Code of Practice can be made to:

Alberta Environmental Protection  
Northeast Boreal & Parkland Regions  
Regional Director  
5th Floor, 9820 - 106 Street  
Edmonton, AB T5K 2J6  
Phone: (403) 427-5836  
Fax: (403) 422-5120

or:

Alberta Environmental Protection  
Northwest Boreal & Northern East Slopes Regions  
Regional Director  
203, 111 - 54 Street  
Edson, AB T7E 1T2

Phone: (403) 723-8395  
Fax: (403) 723-8542

or:

Alberta Environmental Protection  
Southern East Slopes & Prairie Regions  
Regional Director  
201 Deerfoot Square  
2938 - 11 Street N.E.  
Calgary, AB T2E 7L7  
Phone: (403) 297-7605  
Fax: (403) 297-5944

### **Definitions**

**3(1)** In this Code of Practice,

- (a) "baghouse" means a device that removes particulates from air by passing the air through a fabric bag or paper cartridge filter;
- (b) "environmental log" means the environmental log format set out in Appendix "A" to this code;
- (c) "foundry" means a plant that
  - (i) produces metal products through thermal melting and casting or moulding of metals, including reclaimed metals, and
  - (ii) has a nominal melting rate of not more than 5 tonnes per hour of metal;
- (d) "fugitive dust emissions" means dust emissions to the environment originating from a plant source other than a vent, flue, stack, or break or rupture in process equipment;
- (e) "industrial runoff" means surface water resulting from precipitation that falls on and traverses a plant excluding any undeveloped areas.

**(2)** Terms that are defined in section 1 of the *Environmental Protection and Enhancement Act* and in the *Substance Release Regulation* (A.R. 124/93) have the same meaning when they are used in this Code of Practice, unless otherwise defined or modified within this Code of Practice.

### **Registration**

**4** In addition to any information required by the Director under the *Approvals and Registration Procedure Regulation* (A.R. 113/93), the person responsible shall complete the registration form attached to this Code of Practice and forward it to the Director.

### **Person Responsible's Duty**

**5** The person responsible shall comply with all requirements of this Code of Practice.

### **Pollution Control Technology Requirements**

**6(1)** A foundry shall be equipped with pollution control technology that meets the requirements of this Code.

**(2)** If a person responsible proposes at any time to make significant modifications to the pollution control technology or the plant throughput of a foundry, the person responsible shall provide the Director with additional information about these proposed modifications by completing and submitting the form attached as Appendix "B" to this Code of Practice.

**(3)** A foundry shall use pollution control technology and operating practices that meet the following environmental requirements.

- (a)** The opacity from all air emission sources at the foundry shall not exceed 20 percent, averaged over a period of 6 consecutive minutes, except for one 6-minute period per hour of not more than 40 percent opacity.
- (b)** The concentration of particulates in the effluent stream from all air emission sources at the foundry to the ambient air shall not exceed 0.20 grams per kilogram of effluent.
- (c)** Fugitive dust emissions from the foundry shall not cause an adverse effect.
- (d)** Industrial run-off from the foundry and related operations shall be controlled in a manner to prevent adverse effects.

### **Operation Requirements**

**7(1)** The person responsible shall collect, store, transport and dispose of baghouse dust in tight containers to minimize its release in the ambient air.

**(2)** The person responsible shall dispose of waste moulding sand and slag material in accordance with the most recent edition of Alberta User Guide for Waste Managers, published by Alberta Environmental Protection.

**(3)** No person shall burn or bury waste at a foundry.

**(4)** The person responsible shall operate all baghouse type dust collectors as follows.

- (a)** The person responsible shall monitor and record the pressure drop across the baghouse daily in the environmental log for all baghouses normally equipped with a pressure sensing device.

- (b) The person responsible shall maintain the pressure drop within the manufacturer's recommended operating limits.
  - (c) The bags or cartridge filters shall be cleaned automatically at regular intervals.
- (5) The person responsible shall visually inspect each baghouse at least once every month, and shall record in the environmental log the following observations made during each inspection:
- (a) any damaged or broken bags,
  - (b) any problems with the bag or cartridge filter cleaning mechanism,
  - (c) any problems with the damper operation, and
  - (d) requirements for spare parts.
- (6) The person responsible shall conduct an inspection of all baghouses and associated equipment each year to ensure they are in proper operating condition. This shall include an examination of all bags or filters to ensure they are in good condition, an examination of the seals and connections on all baghouses and the condition of all vent lines and ducts. The person responsible shall record the results of this inspection in the environmental log.
- (7) The person responsible shall operate all wet scrubber type dust collectors as follows.
- (a) The scrubber water return system shall be operated to ensure sufficient retention time in the system to settle out collected dirt and sediment.
  - (b) The scrubber water supply pump shall be of sufficient size to provide the circulation flowrate required for proper scrubber operation.

### **Record Keeping**

- 8(1)** The person responsible shall maintain a copy of the registration at the foundry at all times. This document shall be made available at any time for inspection by Alberta Environmental Protection.
- (2)** The person responsible shall keep an environmental log of all actions taken to comply with this Code of Practice. The form of environmental log is included in Appendix "A" of this Code and shall include the following information:
- (a) The date of the annual baghouse inspection and name of the person who conducted the inspection shall be recorded in the environmental log. A summary of the conditions of all baghouses and the corrective actions taken shall also be recorded.
  - (b) The date of the monthly baghouse inspection, name of the person

who conducted the inspection and conditions of all baghouses shall be recorded in the environmental log.

- (c) All problems occurring at the foundry, and the corrective or maintenance action taken shall be recorded in the environmental log.

**(3)** The person responsible shall complete the environmental log each month and shall make it available at the foundry for inspection by Alberta Environmental Protection upon request. Each completed environmental log shall be maintained at the foundry by the person responsible for a minimum of 5 years from the completion of the operating year covered by the environmental log.

### **Reporting**

**9** The person responsible shall immediately report any contravention of this Code of Practice by telephone to the Director of Pollution Control Division at (403) 422-4505. The Director of Pollution Control Division may require the operator to provide a further written report of any contravention.

### **Code Amendment**

**10** This Code of Practice will be reviewed every 10 years beginning in 2006. Alberta Environmental Protection will accept and compile written comments on the contents of this Code at any time, and will review all comments received at the next 10 year review. The Director may institute a review and amendment of this Code of Practice at any time. All proposed amendments to this Code of Practice will be reviewed by government, the industry, and the interested public. The Director shall have the final decision on amendments made to this Code of Practice. Amendments to this Code of Practice shall become effective when published by Alberta Environmental Protection.

### **Effective Date**

**11** This Code of Practice is effective September 30, 1996.



## **APPENDIX A**

ENVIRONMENTAL LOG

FOR

FOUNDRY

COMPANY NAME: \_\_\_\_\_

REGISTRATION NO.: \_\_\_\_\_

YEAR: \_\_\_\_\_

FOUNDRY - ENVIRONMENTAL LOG

ANNUAL BAGHOUSE INSPECTION:

BAGHOUSE IDENTIFICATION (eg. Make, Model, Number)

NOTES ON THE CONDITION OF THE BAGHOUSE:

ACTIONS TAKEN AS A RESULT OF THE INSPECTION

Inspection Performed by: \_\_\_\_\_

Date Performed: \_\_\_\_\_

- NOTES:
- 1) One annual report page is required for every baghouse at the plant. If the baghouse is not used during the entire year, the annual inspection need not be done and instead an explanation as to why the baghouse was not required shall be provided (eg. the portion of the plant served by that baghouse was not in operation).
  - 2) One monthly inspection sheet is required for each baghouse. If problems needing correction are found on more than three months, continue the same reporting format on an additional sheet. If the baghouse is not in service during the entire month, the monthly report is not required and instead an explanation as to why the baghouse was not required shall be put in the appropriate line in the monthly inspection report.

**MONTHLY BAGHOUSE INSPECTION**

BAGHOUSE IDENTIFICATION (eg. Make, Model, Number) \_\_\_\_\_

MONTH	NO. OF DAMAGED OR BROKEN BAGS OR FILTERS	PROBLEMS WITH BAG/FILTER CLEANING MECHANISM	PROBLEMS WITH DAMPER OPERATION	SHORTAGE OF VITAL SPARE PARTS	NAME OF PERSON WHO CONDUCTED INSPECTION
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

## DAILY BAGHOUSE PRESSURE DROP

(Fill out one sheet per baghouse per month)

BAGHOUSE IDENTIFICATION \_\_\_\_\_

DATE	PRESSURE DROP (" WC)	DATE	PRESSURE DROP (" WC)
1			
2		17	
3		18	
4		19	
5		20	
6		21	
7		22	
8		23	
9		24	
10		25	
11		26	
12		27	
13		28	
14		29	
15		30	
16		31	

ENVIRONMENTAL MAINTENANCE LOG

BAGHOUSE IDENTIFICATION \_\_\_\_\_ Page \_\_\_\_\_

DATE	PROBLEM(S) NOTED AND CORRECTIVE ACTIONS TAKEN

## **APPENDIX B**



INFORMATION FORM FOR ASPHALT PAVING PLANTS,  
FOUNDRIES AND READY-MIX CONCRETE PLANTS

REGISTRATION NO.:

1. ADMINISTRATION

Company Name (legal incorporated Name):	
Operating Name (if different than above):	
Mailing Address:	
Contact Person	Phone No.

2. MODIFICATION DESCRIPTION


3. OPERATIONS

OLD EQUIPMENT	NEW EQUIPMENT

4. SIGNATORY REQUIREMENTS

DATE \_\_\_\_\_ SIGNATURE \_\_\_\_\_  
NAME AND TITLE OF SIGNATORY \_\_\_\_\_





REGISTRATION FORM FOR ASPHALT PAVING PLANTS, FOUNDRIES AND READY-MIX CONCRETE PLANTS

1. ADMINISTRATION

<b>A. GENERAL</b>			
Company Name (legal incorporated Name):			
Operating Name (if different than above):			
Mailing Address:			
Contact Person		Phone No:	
Location:	Legal Land Description:		
<b>B. ASPHALT PLANTS ONLY</b>			
Portable <input type="checkbox"/>	Stationary <input type="checkbox"/>	Hot Mix <input type="checkbox"/>	Cold Mix <input type="checkbox"/>
Max. Production Capacity (t/hr):		Fuel Type:	

2. APPROVALS

(a) Has the plant ever received an environmental approval? Yes <input type="checkbox"/> If Yes, the approval number: _____ and go to Section 4. No <input type="checkbox"/> If No, provide information in Section 3.
(b) Have there been any equipment changes since the <b>issuance</b> of the approval or registration that affect substance release to the environment? Yes <input type="checkbox"/> If Yes, provide information requested in Section 3. No <input type="checkbox"/> If No, go to Section 4.

3. OPERATIONS

AIR POLLUTION CONTROL EQUIPMENT	MAKE AND MODEL (DESCRIBE)
Baghouse	
Baghouse	
Baghouse	
Baghouse	
Baghouse	
Scrubbers	
Cyclones	

For Plants with Scrubbers:

Water Pump Flow Rate:	Scrubber Water	Recycled:
		Discharged:

**4. SIGNATORY REQUIREMENTS**

I acknowledge that I have reviewed a copy of the Code of Practice for (check one):

Asphalt Paving Plants \_\_\_\_\_

Concrete Producing Plants \_\_\_\_\_

Foundries \_\_\_\_\_

and that I am bound by the provisions of this Code of Practice, and any subsequent amendments to it.

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
NAME AND TITLE OF SIGNATORY

For Office Use Only:		
Date Received:	Registered By:	
Director's Signature: _____	Title: _____	Date: _____
Registration Number: _____		