STARTUP, SHUTDOWN, AND MALFUNCTION PLAN (SSM PLAN)
GULF COAST METALS, INC.
TAMPA, FLORIDA

Prepared for

GULF COAST METALS, INC.
6912 EAST 9TH AVENUE
TAMPA, FLORIDA 33619

Prepared by:

ENVIRONMENTAL ENGINEERING CONSULTANTS, INC.
5119 NORTH FLORIDA AVE.
TAMPA, FLORIDA 33603
EEC # 97049.025D

Revised December 9, 2004

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 STARTUP PROCEDURES TO MINIMIZE EMISSIONS 1
2.1 Rotary Furnace Operation 1
2.2 Baghouse Operation 2

3.0 OPERATION DURING MALFUNCTIONS TO MINIMIZE EMISSIONS 3

4.0 CORRECTIVE ACTIONS AND/OR REPAIRS TO MINIMIZE EMISSIONS 3

1.0 INTRODUCTION

Gulf Coast Metals, Inc. recovers aluminum from scrap by a melting/separation process. Recovered aluminum is cast on site.

2.0. STARTUP PROCEDURES TO MINIMIZE EMISSIONS

2.1 Rotary Furnace Operation

The starting procedure for the start of the workweek is as follows:

1. First, the baghouse must be operating before starting any furnace.

2. Turn blower on for burner.

3. Allow fifteen (15) seconds for furnace purge.

4. Turn switch to ignite.

5. Start drive that turns drum.

6. Allow 60-90 minutes warm-up time.

7. When furnace is red, it is ready to start.

8. Refer to the fluxing chart for choice of alloy. Weigh the flux material and put into furnace. GCM is attempting to increase their yield 1-2% and is performing a trial of a wetting agent. The wetting agent has two components. The first, the separator is identified as Cryolite and 3-5% of the flux weight of this powder is added to the flux, then 50 pounds of calcium carbonate pellets are added per shift. This additive makes up approximately 3-5% of the flux weight. The flux is 50% potash and 50% salt. During the compliance test 2,140 lb. of flux was used.

9. In approximately five (5) minutes, the furnace is ready to be charged with scrap.

10. Begin by recording each scoop from the loader and then charging (adding) scrap to the furnace. The loading record is kept in the furnace control room and is recorded either by the furnace operator or the tapper.

11. Allow approximately 10-30 minutes to melt.

2.1 Rotary Furnace Operation continued:

12. Continue charging the furnace until it is full (i.e. repeating step 9).

13. Pour off the liquid aluminum into the sow molds or put into ladles.

14. Repeat steps 9-12 until the end of the shift.

15. Pour out the salt cake.

16. The iron is sold as scrap and the used salt cake material sent to the landfill.

2.2 Baghouse Operation:

The Wheelabrator-Frye Model 1622-171-5S Baghouse (hereafter referred to as the baghouse) is a four-chamber design. The filter bags are made of Nomex and are rated at 400 ºF. The gross cloth area from meeting on 7-26-04 is 21,680 square feet with each compartment having a cloth area of 5,420 square feet. The baghouse shall operate at all times during the furnace operation, except for emergencies. The baghouse is not turned off until all furnaces have stopped emitting smoke.

Each Chamber has a Magnahelic pressure gauge that measures inches of water. The bags are routinely shaken out manually twice a day. Each compartment is equipped with one tube type shaker device, which is driven by one motor. Shaker motors are located on the outside of each compartment. Each shaker motor has a switch located in the baghouse control room. The bags are usually shaken between 8:30 – 9:00 a.m. and between 4:00 – 4:30 p.m. The dust is collected in two 30-yard roll-off containers. After each shaking, six 50-pound bags of lime are added to the baghouse. *Record the amount, date and time of lime addition on the baghouse-monitoring sheet.* The pressure gauges are checked several times during the day by the rotary supervisor to monitor the performance of the baghouse *and are recorded once per shift by an employee.*

The blower motor amperage is set at 200 amperes (Amps) and is controlled by an inlet damper to the baghouse. The damper opens to allow more air into the baghouse as back pressure builds up and causes the blower motor Amps to increase, this allows the Amps to be maintained at 200.

The furnace exhaust gas becomes the inlet to the baghouse. This temperature is monitored and controlled by a digital controller via a thermocouple. When the set point of approximately 250 ºF is reached, a solenoid opens a valve to bring in fresh air. The purpose of this is to prevent the bags from becoming too hot and catching on fire.

2.2 Baghouse Operation continued:

A second digital controller and thermocouple after the initial controller and fresh air inlet measures the gas temperature inlet to the baghouse. If the temperature set point of 375 ºF is reached, the baghouse bypass valves are opened to prevent the bags from becoming too hot and catching on fire.

The baghouse control room is located approximately 20 feet east of the baghouse. The control panel contains three digital controllers, four control knobs and four start buttons. The digital controllers' control: (1) the blower motor Amps, (2) the fresh air intake valve and (3) the Baghouse bypass valves. The control knobs have three positions, hand, off and auto. In the auto mode, each chamber damper closes if the bypass comes open. In the off position, this closes each chamber damper. In the hand position, this closes the main inlet damper and allows the shaking procedure to begin. Next, pushing the start button opens the bottom damper leading to the hopper and starts the shaking procedure. The shaking procedure lasts from 10 – 30 seconds, the switch is returned to the auto mode after the shaking procedure is completed.

3.0 OPERATION DURING MALFUNCTIONS TO MINIMIZE EMISSIONS:

Furnace: Malfunction procedures:
If the furnace will not ignite; verify that all the natural gas line valves are open. Call Florida Gas Transmission Service and verify that the line is operational. Call supervisor and request assistance.
If the furnace bearing begins to make noise (i.e. howl), stop and pour out the furnace contents at the first reasonable opportunity and call the supervisor to perform the repair.

Baghouse:
The bag leak detection is used to monitor and identify problems within the baghouse. When an alarm indicates a broken bag that chamber is isolated until repairs can be made. Isolate the chamber with the broken bag by closing the inlet valve to that chamber. The controls are in the baghouse control room, adjacent to the baghouse. Record the date and time each time a chamber is isolated and the date and time it comes back into service. Also, record the date and time each time the bypass valve operates. The baghouse is made to operate with only 3 of 4 chambers in service, based on experience with the broken bag leak detection system.

4.0 CORRECTIVE ACTIONS AND/OR REPAIRS TO MINIMIZE EMISSIONS:

Repairs are made as soon as possible or within 24 to 48 hours.

Attachment A

Gulf Coast Metals has a contract to purchase natural gas directly from Florida Gas Transmission Service. The Btu value of the natural gas is typically 1000-1050 Btu/cubic foot of gas. The sulfur content is typical of natural gas and is low.