GREAT LAKES CASTINGS LLC

800 N. Washington
Ludington, MI 49431

CSI BAGHOUSE

(EUHUNTERSAND)
GLC # 14050

MALFUNCTION ABATEMENT PLAN

MARCH 2007

Last Update 2020

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Section 1 Introduction

The purpose of this plan is to prevent, detect, and correct malfunctions or equipment failures resulting in emissions exceeding permitted emission limitations applicable to operation of baghouse air pollution control equipment for the Hunter Line, Heat Treatment equipment and Sample Shotblast.

This MAP, has been prepared to comply with the requirements of MI-ROP-A3934-2015, as well as Michigan Air Pollution Control Rules 910 and 911. Michigan Rule 910 requires the proper installation, maintenance, and operation of air pollution control systems. The Rule reads: An air-cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with these rules and existing law. Michigan Rule 911 specifies that, upon request of the MDEQ, a facility must prepare a MAP to prevent, detect, and correct malfunctions or equipment failures resulting in emissions exceeding any applicable emission limitation.

Rule 113(a) defines a malfunction as: Malfunction means any sudden, infrequent and not reasonably preventable failure of a source, process, process equipment, or air pollution control equipment to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions. A true malfunction must have a reasonable potential to cause:

- An operating parameter to stray from an acceptable range or value that has been established to indicate compliance with an emission limit or
- An exceedance in emissions or operating parameter

Most malfunctions of the control equipment will not result in emissions exceedances. However, the systems must be returned to service as soon as possible to maintain maximum emission control. If a malfunction or failure occurs that cannot be corrected by an operator, then a Work Order will be issued to repair the system.

Following is a list of malfunction events covered by this Plan.

- Failure of emission control system components.
- Bag failure (e.g., due to rips/tears, bag blinding due to moisture in gas, timer failure, magnahelic failure, manometer failure)
- Power failure
- Sudden and unavoidable failure of control or process equipment, not due to poor operation or maintenance procedures

Section 2 Responsible Supervisory Personnel

Great Lakes Castings LLC (GLC) will maintain a current list of responsible supervisory personnel. This list will include individuals responsible for overseeing the inspection, maintenance and repair of baghouse air pollution control equipment. The current list of responsible supervisory personnel appears as Attachment A.

Section 3 Preventive Maintenance Program

This preventive maintenance program includes a description of the air pollution control and monitoring equipment that will be inspected, the frequency of inspections, and an identification of the major replacement parts that are maintained in inventory for replacement.

Section 3.1 Inspection Activities

GLC will complete the following inspection or repair activities.

Daily Activity (This activity applies only to days on which the device is operated.)

1. **Observe emissions from the baghouse exhaust stack.**
2. **Observe whether the monitoring equipment is functioning properly.**
3. **Observe and record the differential pressure across the baghouse.**
4. **Observe and record the pressure drop across the dust silo vent.**
5. **Inspect dust transport pipe from the baghouse to the dust storage silo, on the lower level only.**

Monthly Activity

1. **Inspection of filter bags.**
2. **Inspection of transport blower filter.**
3. **Inspection of dust silo vent filter cartridges.**
4. **Inspection of dust transport pipe from the baghouse to the dust storage silo, on the upper level only.**

Semi-Annual Activity

1. **Black light inspection of the baghouse.**
2. **Inspection of blower and motor, transport blower, rotary airlock and mixer.**

Section 3.2 Major Replacement Parts

GLC will take reasonable steps to maintain an inventory of major replacement parts on site. This inventory may include filter bags, blower motor, blower drive belts, solenoid valves and valve repair parts, and filter bag cages. In some instances, only one replacement part may be in inventory for a particular item. Once this single item is removed from inventory, it will be replaced as soon as practical.

Section 4 Malfunction Detection

GLC will monitor air-cleaning device operating variables to detect a malfunction by identifying the normal operating range of these variables, and monitoring deviation from the normal operating range. The plan will include a description of the method of monitoring or surveillance procedures.

The following air-cleaning device operating variable(s) have been identified:

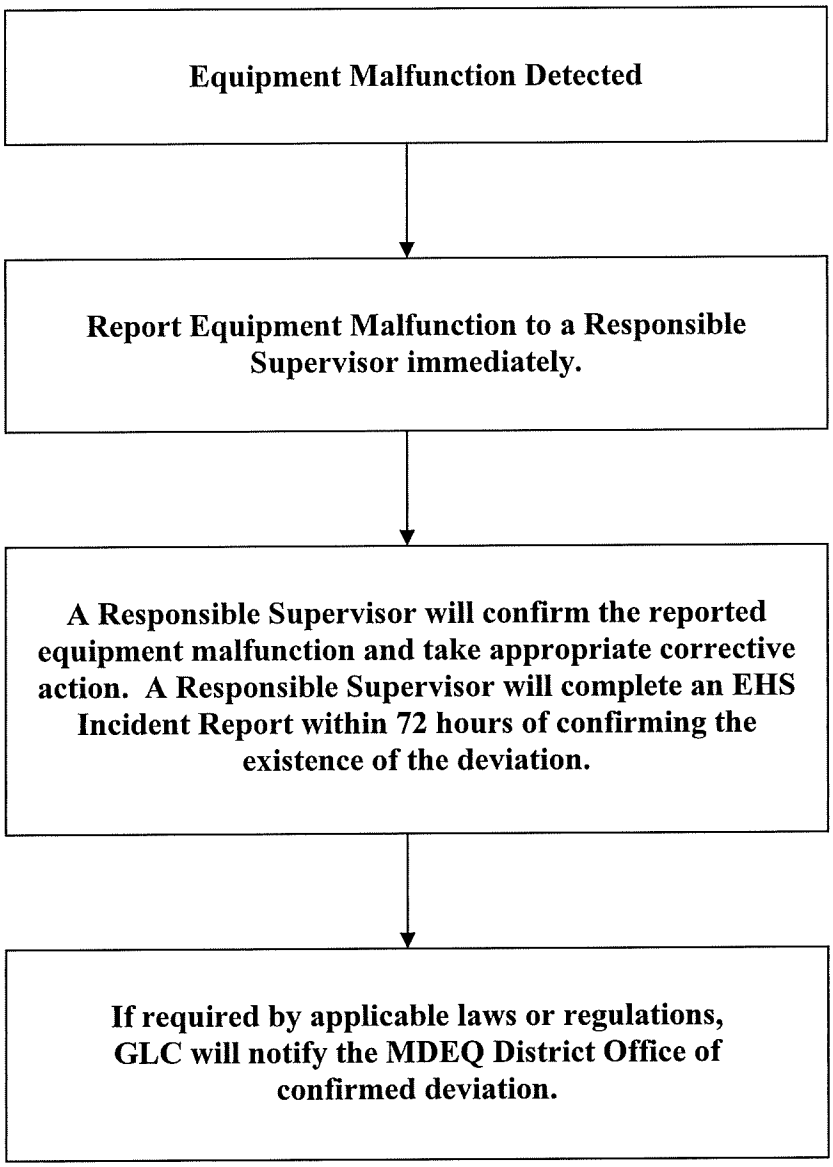
- **The baghouse exhaust stack will be observed daily, as described in Section 3, to determine whether visible emissions exceed normal levels.**

- **The baghouse will be equipped with a differential pressure gauge. Differential pressure across the baghouse will be monitored daily, as described in Section 3, to determine whether it is within its normal operating range. The Air Quality Permit (ROP) operating range for this baghouse is 0.2 to 7.0 inches of water. The Compliance Assurance Plan (CAM) operating range is 1.0 to 6.0 inches of water**

- **The dust silo vent will be equipped with a differential pressure gauge. Pressure drop across the dust silo vent will be monitored daily, as described in Section 3, to determine whether it is within its normal operating range. The normal operating range for this dust silo bin vent is 0.2 to 7.0 inches of water.**

Section 5 Corrective Action Procedure

This section describes the corrective action activities that GLC will complete in response to an equipment malfunction.



Attachments

Attachment A - List of Responsible Supervisory Personnel*

Department Supervisor 1st Shift – Dave Beadle	Ext 291
Department Supervisor 2nd Shift – Scott Hodges	Ext 279
Department Supervisor 3rd Shift – Charlie Anible	Ext 522
EHS Supervisor – Gordon Anderson	Ext 205
Maintenance Supervisor 1st Shift – Mike Holmes	Ext 256
Maintenance Supervisor 2nd Shift – Dave Scott	Ext 270
Environmental Manager –Bob Ellis	Ext 238
Engineering Manager – Mike Cicholski	Ext 209
Plant Superintendent – Dave Beadle	Ext 291

* - GLC may assign supervisory responsibilities to other positions as necessary to meet plan requirements.