

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection

A076732454

FACILITY: East Jordan Iron Works, dba EJUSA, Inc.		SRN / ID: A0767
LOCATION: 301 Spring St., EAST JORDAN		DISTRICT: Gaylord
CITY: EAST JORDAN		COUNTY: CHARLEVOIX
CONTACT: Tony Pitts, Assistant Environmental Director		ACTIVITY DATE: 12/04/2015
STAFF: Bill Rogers	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On December 4, 2015, I inspected East Jordan Iron Works. I didn't find any violations. Scott Nachazgel, Todd Ingalls, Richard Hodge, and Tony Pitts met with me and showed me around the facility.

For emission unit EUMELT-OPERATIONS the facility should be recording afterburner temperatures and baghouse pressure drop four times per hour. Sample data, attached, indicates that several of these values are missing during the time period for which EJ provided me representative data. This is a violation of their Renewable Operating Permit and 40 CFR 64.6(c)(iii) of the Foundry MACT.

I did not find any other violations during this inspection or while reviewing records.

I checked the following equipment and records:

Source Wide Conditions, Condition III.1 requires a facility-wide Preventive Maintenance Plan. I saw a copy of this plan onsite. We also have it in our files, accepted October 3, 2012.

**Table EUMELT-OPERATIONS:**

Condition I.1 limits carbon monoxide to 332 pounds per hour. According to the most recent stack test available, conducted in September 2011, EUMELT-OPERATIONS emits 2.32 pounds of carbon monoxide per hour. This complies with the permit limit.

Condition I.2 limits carbon monoxide to 1175 tons per year. According to EJ's 2014 emission report, the most recent one available, they emitted 3.9 tons of carbon monoxide during 2014. This complies with the permit limit.

Condition I.3 limits particulate matter to 0.60 pounds per ton of material charged. According to the September 2011 stack test, EUMELT-OPERATIONS emits 0.029 pounds of particulate matter per ton of material charged. This complies with the permit limit.

Condition I.4 limits particulate matter emissions to 36.6 pounds per hour. According to the September 2011 stack test, EUMELT-OPERATIONS emits 1.52 pounds of particulate matter per hour. This complies with the permit limit.

Condition I.5 limits particulate matter emissions to 129 tons per year. According to the 2014 emission report, EUMELT-OPERATIONS emitted 12.1 tons during 2014. This complies with the permit limit.

Condition II.1 limits material charged to 431,868 tons per year. According to the 2014 emission report, EUMELT-OPERATIONS had 176,918 tons of material charged in 2014. This complies with the permit limit.

Condition III.1 requires the baghouse, afterburners, and quencher be installed and operating properly. The equipment appeared to be in place and operating properly in compliance with this condition.

Condition III.2 requires maintaining afterburner temperature within a temperature range set in the Preventative Maintenance Plan, in order to control carbon monoxide emissions. The Preventative Maintenance Plan sets the temperature range as anything above 1300 degrees F, measured at minimum four times per hour. A representative sheet of temperature readings including part of the day of my inspection is attached. It shows temperatures for the afterburner in excess of 1600 degrees f, recorded four times per hour. This complies with the permit condition. During several hours of operation, however, there were fewer than four values recorded per hour, and in some cases, none. This is a

violation of the permit condition. I have contacted EJ to start investigation of this matter.

Condition III.3 requires operating the baghouse properly to control particulate matter emissions. The means of showing this is to keep pressures as specified in the Preventative Maintenance Plan. This plan states that an acceptable pressure drop is anything above zero, measured at least four times per hour. A representative sheet of pressure drop readings is attached. It shows pressure drops of between about 3 and 5 inches w.g. measured four times per hour. This complies with the permit condition. During several hours of operation, however, there were fewer than four values recorded per hour. This is a violation of the permit condition. I have contacted EJ to start investigation of this matter.

Condition IV.1 requires a device to measure pressure drop across the baghouse. The pressure readings attached indicate such a pressure drop meter exists.

Condition IV.2 requires a device to measure afterburner temperature. The afterburner temperature readings attached indicate such a temperature measuring device exists.

Conditions VI.1 and VI.2 require afterburner temperature above 1300 degrees F recorded at least four times per hour. Afterburner temperature readings, attached, indicate temperatures above 1300 degrees and recorded four times per hour. This complies with the permit condition.

Condition VI.6 requires maintaining the afterburner temperature monitoring device. Records, attached, indicate it was operating properly around the time of my inspection, which in turn indicates it was being maintained adequately.

Condition VI.7 requires recording maintenance and corrective actions taken in the event of a control or monitoring equipment malfunction. A representative malfunction response record is attached. This complies with the permit condition.

Condition VI.8 requires recording pressure drop across the baghouse at least four times per hour. Pressure drop records, attached, show compliance with this permit condition.

Condition VI.9 requires keeping records of the cupola metal charging rate per month and per 12 month rolling time period. Records I saw at the plant state that as of November 2015 the company is keeping monthly records and the 12 month total was 179,415 tons. Permit limit is 431,868 tons per 12 month rolling time period.

Condition VI.10 requires calculating monthly and 12 month PM and CO emissions. I saw these at the facility and confirmed that emissions were within permit limits. However, if I wrote down the numbers, I have lost them.

Condition VIII.1 sets a minimum "stack" height for the baghouse of 65 feet. The exhaust is actually rows of vents along the top of the baghouse. It appears to be about 65 feet above ground level, in compliance with the permit condition.

#### Table EUNOBAKE-MOLD

Condition III.1 and III.2 require properly operating baghouses, operating at a pressure drop established in the PMP. The two baghouses for this equipment are shared with FG-LML, the Large Mold Line. The PMP calls for a pressure drop of 1.5-8.5 inches w.g. measured once per day. Pressure drop records, attached, indicate there is a baghouse, it is operating, the pressure drop is around 6" w.g (which is within the approved range) and pressure drop is being recorded once per day. This complies with the permit conditions and with the PMP.

Condition IV.1 requires a pressure drop gauge on the baghouses. Pressure drop readings, attached, indicate that a pressure drop measuring device is present.

Condition VI.1 requires recording pressure drop once per day. An example sheet of the required records is attached.

Condition VI.2 requires keeping records of raw materials used, which contain VOC, and their VOC content. I confirmed that records of the binders used are kept, as required.

#### Table EUTACCONE-MOLD

Conditions I.6, I.7, and I.8 set opacity limits for different parts of this mold line. I observed the mold line's stacks and there was zero visible emissions from them. This complies with the various opacity limits in these conditions.

Condition III.2 requires the associated baghouses be installed and operating properly. I saw them and confirmed they were present; also pressure drop records (attached) indicate there are baghouses and they are operating properly.

Condition III.3 requires not operating the equipment more than 6240 hours per year. I saw this information was being kept and confirmed its rate, so far this year, is on target to fall below the limit. Year to date was 5234 hours of operation.

Condition V.2 requires daily non-certified opacity observations. A representative daily opacity observation form, showing compliance with this condition, is attached.

Condition VI.1 requires recording baghouse pressure drops four times per hour. Representative records, showing compliance with this condition, are attached.

Condition VIII.1 through VIII.11 sets stack dimensions for the various stacks which serve this equipment. Stack height is generally 60 feet. I observed the various stacks. I was not able to identify all the stacks individually but they all appeared to be at or about the required heights. All the stacks I saw exhausted unobstructed vertically upward.

#### Table EULADLERPAIR

Condition III.1 requires operating the baghouse within the pressure range listed in the PMP. The PMP calls for pressure drops between 1.5 and 8" w.g. Example records, attached, show pressure drop of around 4" w.g. This complies with the permit limit.

Condition III.2 requires the baghouse be installed and operating properly. I saw ductwork and a Magnehelic for the baghouse, and also records of pressure drops across the baghouse, all of which indicate compliance with this permit condition.

Condition V.1 requires daily informal opacity observations of the equipment stack. An example daily opacity check form is attached, showing compliance with this condition.

Condition VI.1 requires recording pressure drop across the baghouse once per calendar day. Example records showing compliance with this condition are attached.

#### Table EUWHEELABRATOR

Conditions III.1 and VI.1 require operating the baghouse within a pressure range set in the PMP. The PMP sets a pressure range of 1.5-8.5" w.g. Records, attached, show pressure drop across the baghouse of about 4" w.g. This complies with the permit conditions.

Condition VI.2 requires recording baghouse pressure drop once per calendar day. Records, attached, show compliance with this condition.

Condition VIII.2 sets a minimum exhaust height for one of two stacks for this equipment as 50 feet above ground level. The height appeared to be correct or approximately so. (There is a second stack but the permit indicates it has no specific dimensions required.)

#### Table EUASPHALTDIP

Condition VI.2 requires keeping records of coating used and its VOC content; also clean-up solvent used. I confirmed these records are being kept.

Condition VI.3 requires monthly and 12 month VOC emissions calculations. These records are being

kept as required. VOC emissions were 5.2 tons per the 12 month rolling time period ending with November 2015. November's emissions were 0.58 tons.

#### Table EUSMALLSHELLCORE

Condition II.1 limits cores to 6000 tons per year. Condition VI.1 requires keeping track of tons of cores produced. Records I reviewed indicated the company had produced 43.91 tons of cores this month. In the 12 month period ending November they produced 1195.65 tons. The amount produced and the records kept comply with the applicable permit conditions.

#### Table FGFINISHING

Condition III.1 requires operating the line with baghouses within the pressure drop range established by the PMP. The PMP requires a pressure drop between 1 and 8.5" w.g. Example records, attached, indicate pressure drop of about 3.5" w.g. This complies with the permit condition.

Condition III.2 requires the baghouses be installed and operating properly. I saw these baghouses installed while I was on site. In addition, pressure drop records, attached, indicate the baghouse is operating properly.

Record VI.4 requires a pressure gauge. Attached records indicate this gauge is installed as required.

Conditions VIII.1 and VIII.2 set stack dimensions. Plant personnel pointed these stacks out to me. They appear to be of the proper widths and heights.

#### Table FGCOLDCLEANERS

Plant personnel told me this table is currently not applicable because there are no solvent based cold cleaners on site, only cleaners based on aqueous cleaning solutions. They are thinking of renting a mineral spirits type cleaner (they said "Safety Kleen.") If they bring one on site, it will be covered by this table.

#### Table FGMACT

Condition I.1 requires a 20% opacity limit on fugitive emissions from all buildings. I didn't see any visible emissions from the buildings. This complies with the permit condition.

Condition III.1 requires an Operating and Maintenance Plan. The company submitted one of these to us, which we approved October 3, 2012.

Condition III.4 requires a Startup, Shutdown, and Malfunction Plan. The company submitted one of these to us. We approved it October 3, 2012.

Condition III.5 requires a Scrap Selection and Inspection Plan. The company submitted one of these to us on April 15, 2005.

Condition III.6 requires operating with the afterburner above 1300 degrees f. Condition VI.2 requires recording the temperature four times per hour. The company is in compliance with these conditions. These conditions duplicate some in table EUMELT-OPERATIONS and were discussed in detail there.

Condition VI.7 requires keeping records of compliance for the Scrap Selection and Inspection Plan. As an example of how this is being done, records documenting a load of scrap metal which was rejected are attached.

#### Table FG-LML Large Mold Line

There are various conditions regarding operation of the baghouse controlling emissions from this line. However, they duplicate conditions in Table EUNOBAKE-MOLD, which shares its baghouse with the Large Mold Line. Compliance with these conditions is discussed under EUNOBAKE-MOLD.

COMMENTS:

I observed the foundry from outside. There were no visible emissions from any stack or opening in the building. I encountered minor foundry odors immediately outside the foundry building on the downwind side. In my opinion the odors at the time of my inspection were not sufficient to cause unreasonable interference with the comfortable enjoyment of life and property, in violation of Rule 901.

Maintenance throughout the plant appeared to be good.

Plant personnel mentioned they may be modernizing the compliance data records and associated computer systems shortly. They also mentioned they may be renting a "Safety Kleen" parts washer. If they did so, table EUCOLDCLEANERS in the ROP would allow it.

NAME William J Rogers Jr.

DATE 1/8/2015

SUPERVISOR 

