

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

A399936058

FACILITY: L E JONES CO		SRN / ID: A3999
LOCATION: 1200 34TH AVENUE, MENOMINEE		DISTRICT: Upper Peninsula
CITY: MENOMINEE		COUNTY: MENOMINEE
CONTACT: PATRICK MELLINGER, Environmental Management Representative		ACTIVITY DATE: 08/11/2016
STAFF: Eric Grinstern	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced inspection		
RESOLVED COMPLAINTS:		

L.E. JONES COMPANY

FACILITY DESCRIPTION

L.E. Jones is located in the City of Menominee in Menominee County. The facility is a foundry that manufactures iron, nickel, chromium and cobalt alloy based engine valve seat inserts. The major production operations are raw material handling, mold production, metal melting, pouring and cooling, and cast finishing.

Melting operations consist of three electric induction furnaces, emissions from which are uncontrolled. The facility utilizes shell sand molds and isocure bottom distribution molds. Rough finishing operations consist of three shotblast units and grinding and sanding operations that are controlled by three dust collectors and various manual grinding/sanding/cutoff stations that vent internally. Additionally, the facility has two separate buildings dedicated to finishing operations, consisting of milling, polishing, etc. that do not vent externally.

REGULATORY OVERVIEW

The facility is an area source subject to the federal Iron and Steel Foundry Area Source National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart ZZZZZ (5Z) under the Clean Air Act. Based on the facility's annual metal melt production, they are considered an existing "small" foundry under the Subpart 5Z.

The facility is also subject to the federal Aluminum, Copper, and Other Nonferrous Foundries National Emission Standard for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, Subpart ZZZZZZ (6Z) under the Clean Air Act. The facility's processes that are covered by new source review (NSR) permits that include the grinding and sanding operations (759-80) and the shell mold machines, isocure machine and mold pouring and cooling (1102-92C).

COMPLIANCE EVALUATION

Upon entering the facility's property a fairly strong foundry resin odor was noted. Staff did not detect this odor off site; however it is very likely the odors migrate off site, especially to the residences south of 35th Avenue.

At the facility, AQD Staff, Eric Grinstern (EG), met with John Schmitz, Controller, since Patrick Mellinger, Quality/Purchasing Manager, was out of the office. It was agreed that Mr. Schmitz would accompany EG on a tour of the facility and any follow-up information, including records, would be provided by Mr. Mellinger.

SCRAP/CHARGE MATERIAL

The facility's charge materials consist of spec. metal, 1010 scrap, and revert. Due to the type of castings they manufacture, the facility uses very clean charge material. The facility does not melt any shredded auto scrap. The charge material is subject to pollution prevention

management requirements under Subpart 5Z. Staff previously verified that the facility has written scrap specifications that have been conveyed to their scrap providers, as is required by Subpart ZZZZZ. During the inspection, observation of the charge material showed that it complies with the restricted metallic scrap option in Subpart ZZZZZ.

SAND OPERATIONS

The facility manufactures shell molds from pre-coated sand on ten (10) mold machines. The mold machines vent to the outside atmosphere uncontrolled through five stacks. Bottom distribution molds for the shell mold stacks are made on one isocure cold box machine that utilizes TEA as a catalyst. Emissions from the isocure machine are controlled by an acid scrubber that is vented internally. The acid scrubber pH level is monitored and recorded to assure proper operation.

At the time of the inspection, several of the shell sand molding machines were in operation, however the cold box molding machine was not operating.

MELTING OPERATIONS

Metal melting operations are conducted in three (3) electric induction furnaces. The furnaces are of the following sizes: (1) 1,000 lb. capacity and (2) 750 lb. capacity. The facility only operates two (2) of the furnaces at one time. None of the furnaces are equipped with a lid. The furnaces have side hood capture that vents furnaces emissions to the outside atmosphere uncontrolled. The facility does not conduct any ductile inoculation. The (2) 750 lb. capacity furnaces have a combined exhaust stack, while the 1,000 lb. capacity furnace vents through a separate stack.

FINISHING OPERATIONS

Cast finishing operations consist of three shot blast units that are controlled by three baghouses that are equipped with pre-cyclone units. The baghouses are equipped with magnehelic gauges which the facility has calibrated on a regular basis. The facility has a hardening furnace, tempering furnace and a stress furnace. Each of the furnaces is below 10 million Btu and therefore exempt under Rule 282(a). The facility has numerous milling, cleaning, polishing operations that are exempt from air permitting requirements.

PTI No. 1102-92C

EUSANDMOLD

Emission Limits

EUSANDMOLD limits the emission of PM to 0.1 lbs. per 1,000 lbs. of exhaust gases and PM10 to 0.675 pounds per hour from each individual stack. Compliance with emission limits can be demonstrated by requiring the facility to conduct stack testing, if requested. It does not appear that stack testing has previously been requested.

Stack Restrictions

Requires each of the five (5) stacks to have a maximum diameter of 24 inches and a minimum height of 40 feet. Visual observation of the stacks showed that they appear to meet the dimension requirements.

Status: Compliant

FGSCRUBBERS

Flex group includes the isocure cold box machine, EUISOCURE, and EUCOOLING. EUCOOLING covers the pouring and cooling. Pouring is uncontrolled; while the cooling room is controlled by a wet scrubber.

Emission Limits

Restricts the emission of VOC to 3.5 tpy based on a 12-month rolling average. Since FGSCRUBBERS includes EUISOCURE and EUCOOLING, the facility calculates VOCs from both emission units. Compliance is based upon the monthly emission calculations using emission factors.

The facility provided records (attached), which based upon the supplied assumed emission factors, demonstrate compliance with the emission limit. Staff reviewed records for 2014 until current. Reported emissions never exceeded 0.11 tons per month for the records reviewed.

Status: Compliant

Recordkeeping/Reporting

Requires the facility to keep monthly records of gallons of material used, VOC content of each material, VOC emission calculations on a monthly and 12-month rolling time period.

The facility provided records (attached) as required by the permit that demonstrate compliance with the recordkeeping requirement and emission limit.

Status: Compliant

Stack Restrictions

Requires SVSCRUBBERS to have a stack with a maximum diameter of 35x57 inches and a minimum height of 12 feet. This appears to address the stack associate with the scrubber controlling emissions from the cooling room, since the isocure process vents internally. Visual observation of the stack showed that it appeared to meet the dimension requirements.

Status: Compliant

Note: The facility monitors the pH and pressure drop on the isocure acid scrubber. The facility has the gauges calibrated and certified on a regular basis. During the inspection the pressure drop was 0.0 inches (isocure machine not operating) and the pH was 0.47.

The mold cooling room is controlled by a wet scrubber to address odors. Observation of the cooling room and wet scrubber showed good capture. Staff noted that there was black staining on the duct work adjacent to the discharge of the wet scrubber stack. Observation of the stack showed intermittent opacity from the stack. In a subsequent phone conversation with Mr. Mellinger, the wet scrubber was discussed. Mr. Mellinger stated that my inspection occurred the week prior to the annual maintenance of the scrubber, at which time the media balls are removed and washed. Mr. Mellinger stated that the opacity was resolved with the annual maintenance.

The facility is considered an existing small area source since their metal melt production is below 20,000 tons on an annual basis. As an existing small area source the facility is subject to the pollution prevention management practices regarding metallic scrap and mercury switches, as well as notification and semi-annual certification reporting requirements. As detailed above, the facility is in compliance with the scrap pollution prevention requirements.

The facility has submitted the required initial notification and notification of compliance status reports. The facility has also submitted all required semi-annual certification reports.

Status: Compliant – The facility appears to be in compliance with all of the requirements of Subpart ZZZZZ

AREA SOURCE Aluminum, Copper, and Other Nonferrous Foundries NESHAP Subpart ZZZZZZ

The facility has determined that they are subject to Subpart ZZZZZZ. The facility has submitted the required initial notification as required by the standard. The facility has not submitted any semi-annual certifications since Subpart ZZZZZZ only requires them to be submitted when a deviation from the standard occurs.

All sources subject to the standard are required to comply with the following management practices.

1. Cover or enclose each melting furnace that is equipped with a cover or enclosure during the melting operations to the extent practicable.
2. Purchase only metal scrap that has been depleted to the extent practicable of the specified foundry HAPs.
3. Prepare and operate according to a written management practices plan to minimize emissions from melting furnaces.

- Must include management practices for Number 1. and Number 2. above.

The facility's furnaces are not equipped with a cover or enclosure and the facility has specifications regarding scrap requirements. The facility's management practices are in part the scrap/material charge specifications.

Status: Compliant – The facility appears to be in compliance with all of the requirements of Subpart ZZZZZZ

CONCLUSION

Based on the information and observations made during this inspection, the facility is in compliance with applicable air quality rules and regulations.

NAME Pat Dunston

DATE 8/29/16

SUPERVISOR 