

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Stack Test Observation

N605248814

FACILITY: East Jordan Foundry LLC		SRN / ID: N6052
LOCATION: 2673 US 131, ANTRIM		DISTRICT: Gaylord
CITY: ANTRIM		COUNTY: ANTRIM
CONTACT: Tony Pitts , Environmental Services Manager		ACTIVITY DATE: 05/01/2019
STAFF: Bill Rogers	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Observed stack tests		
RESOLVED COMPLAINTS:		

On May 1, 2019, I went to the EJ Foundry near Elmira to observe a stack test.

This new facility was running a comprehensive series of stack tests for particulate matter, sulfur dioxide, and carbon monoxide for all the emission units installed. The stack test series was supposed to run Sunday, April 28th, through Friday May 3rd. The stack tests were run by Air Analysis, Inc.

I arrived on site about 9:00. I met Tony Pitts and Chet, one of the stack testers. Chet said they were running a test on Stacks C and E, on the sand tower. They had run tests on B and C on Tuesday. That test went well. Today they planned to test for gasses and particulate matter using Method 5 for PM and Method 202 for gasses.

The test was not running when I arrived. It was raining heavily, and had been most of the night. The test equipment was showing a lot of electrical problems, especially ground faults. They couldn't run until they got that sorted out.

They started the first run at 11:10. At that time the process was operating; I could see iron pouring on both of the large mold lines. I climbed to the top of the sand tower and observed the stacks. It was raining heavily and the sky was gray, so any visible emissions would have been hard to see, but there could not have been much opacity in any case. I didn't see any.

Mr. Pitts told me they were melting iron in two of the induction furnaces while pouring iron from another two. They were operating at perhaps 20-24 tons per hour.

I went and observed the northern of the two largest mold lines. They were operating, pouring valve box covers. These are cast iron pieces for housings for valves buried underground along streets and so on.

At 11:35 I read the following from the analyzers in the sampling trailer: Stack C, 20.68% O<sub>2</sub>, CO<sub>2</sub> 0.11%, NO<sub>x</sub> 2.86 ppm, CO 13.74 ppm, THC 2.25 ppm. Stack E, O<sub>2</sub> 20.63%, CO<sub>2</sub> 0.11%, NO<sub>x</sub> 4.37 ppm, CO 8.42 ppm, THC 5.27 ppm.

Flows during the first run were about 95,000 ACFM.

The testers had to pause one of the stacks, so Run 1 ended a bit late at 12:29 PM.

I thought the run had started at 1:15 and noted the following values from the analyzers. However, the run had not in fact begun. It was delayed due to production problems. The equipment was all operating properly but EJ had expected the tests to be done by this time, and had not planned to continue production past their usual shift end at 14:00. Therefore in order to run long enough to do a second run, they had to hurry to adjust workers' schedules and bring in more raw materials.

The emission numbers I recorded at 1:15 were: Stack C, O<sub>2</sub> 20.70%, CO<sub>2</sub> 0.16%, NO<sub>x</sub> 2.80 ppm, CO 8.73 ppm, THC 1.80 ppm. Stack E, O<sub>2</sub> 20.66%, CO<sub>2</sub> 0.16%, NO<sub>x</sub> 2.33 ppm, CO 4.28 ppm, THC 2.49 ppm.

The second run started at 13:55. I left once the run was going smoothly. I observed the southern of the two large mold lines. This was operating, pouring iron into some very large castings, but I did not note down what product EJ was making.

**COMMENTS:**

Stack test and plant personnel both mentioned that the testing conditions in the permit were difficult. They were considering asking for some permit modifications to make future tests easier to perform; perhaps so that multiple stacks wouldn't have to be done at once. But they had no solid details on these ideas yet.

Mr. Pitts told me that EJ is still moving things over from the old foundry in East Jordan. In fact, as far as he knew the only thing still operating at the old site was the asphalt coating dip tank. The problem is that the new asphalt dip coating they plan to use at the new facility, which is a VOC free formulation, has not yet been certified as acceptable by firefighting organizations. Therefore they can't use it on fire equipment such as hydrants and associated valves. For now they are taking these parts back to the old foundry and dipping them in the old coating in the old tank. They expect no problems getting the new coating certified; it's just not finished yet.

They have some of the sand mold making equipment they just moved over. I saw workers welding steel and stringing electrical wires to sand mold core making machines while I was there. Mr. Pitts said EJ hoped to have installation on the core making equipment done overnight, in time to run stack tests on it the next day. However, they wouldn't be able to get the automatic controls operating in time. They would have to run the core machines manually. This should not be a problem as the machines had been running manually all along at the old foundry; the automated controls are a new thing for the new foundry.

I was concerned with trying to get the core machines operating and tested on such a tight schedule. I told Mr. Pitts that if it would not be possible to run them in a way representative of normal production, and especially if installing them so quickly increased danger to the workers, it would be better to delay the tests a bit.

Someone told me that the Stacks B and C test ran well on Tuesday. The foundry was pouring about 25 tons of iron per hour during that test.

Mr. Pitts told me that production data, including tons of iron melted and poured, was being kept automatically and would be included in the final stack report.

NAME William J Rogers Jr DATE 5/10/2019 SUPERVISOR SN