

A1590
manila
InghamDEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

A159039833

FACILITY: Michigan Forge Co.		SRN / ID: A1590
LOCATION: 2807 S MARTIN LUTHER KING BLVD, LANSING		DISTRICT: Lansing
CITY: LANSING		COUNTY: INGHAM
CONTACT: Thomas Priest, Plant Manager		ACTIVITY DATE: 05/17/2017
STAFF: Daniel McGeen	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection of facility which was last inspected by AQD in 2011.		
RESOLVED COMPLAINTS:		

On 5/17/2017, the Michigan Department of Environmental Quality (DEQ), Air Quality Division (AQD) conducted a scheduled inspection of Michigan Forge Company (Michigan Forge), which had last been inspected by AQD in 2011. The purpose was to verify compliance with the Michigan Air Pollution Control Rules.

Environmental contact:

Thomas Priest, Plant Manager; 517-505-4071; thomasp@forgerg.com

Facility description:

Michigan Forge produces hot metal forgings.

Emission units:

Emission units*	Exemption rule	Compliance status
Metal shears	285(2)(l)(vi)	Did not observe
5 electric furnaces	282(2)(a)	Compliance
4 forge presses	285(2)(l)(i)	Compliance
5 trim presses	285(2)(l)(i)	Compliance
Shot blaster and belt blaster with baghouses	285(2)(l)(vi)(C)	Not operating
1 shot peener	285(2)(l)(vi)(C)	Not operating
1 die grinding bench with cyclone	285(2)(l)(vi)(A)	Not operating
3 CNC machines	285(2)(l)(vi)(B)	Compliance
Die heat temper furnace	282(2)(a)	Removed from site
Welders	285(2)(l)	Not operating
4 parts washers	281(2)(h)	Did not observe
2 natural gas boilers	282(2)(b)(i)	Compliance
Aluminum part oven	282(2)(a)	Not yet operating
2 Grieve ovens; one natural gas, one electric	282(2)(a)	Compliance
Machine shop (metal working processes)	285(2)(l)(vi)(A) and (B)	Not operating
2 furnaces from F.C. Mason Co.	282(2)(a)	Not yet operating
Several presses from F.C. Mason Co.	285(2)(l)(i)	Not yet operating
Forge from F.C. Mason Co.	285(2)(l)(i)	Compliance

*An emission unit is any part of a stationary source which emits or has the potential to emit an air contaminant.

Regulatory overview:

This facility is considered to be a true minor source, rather than a major source of air emissions. A *major source* has the potential to emit (PTE) of 100 tons per year (TPY) or more, of one of the criteria pollutants. *Criteria pollutants* are those for which a National Ambient Air Quality Standard exists, and include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns, and particulate matter smaller than 2.5 microns.

It is also considered a minor, or *area source*, for Hazardous Air Pollutants (HAPs), because it is not known to have a PTE of 10 TPY or more for a single HAP, nor to have a PTE of 25 TPY or more for combined HAPs.

9/29/2017

The various emission units at this facility are considered exempt from the requirement of Michigan Air Pollution Rule 201 to obtain a permit to install, under exemption rules which are identified in the above emission unit table.

Regarding the two natural gas-fired boilers, a natural gas-fired boiler at an area source of HAPs would not be subject to 40 CFR Part 63, Subpart JJJJJJ, under Section 63.11195(e). JJJJJJ is the *National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*. Any hot water heaters, such as those used for a restroom or cafeteria, at an area source would not be subject, under Section 63.11195(f). To meet the definition of a hot water heater in this area source Generally Achievable Control Technology (GACT) standard, the unit must be no more than 120 gallons in capacity. AQD has not been delegated authority to enforce Subpart JJJJJJ.

Fee status:

This facility is not a Category I fee subject source, because it is not a major source for criteria pollutants. It is not a Category II fee-subject source because it is not a major source for Hazardous Air Pollutants (HAPs), nor is it subject to federal New Source Performance Standards. Additionally, it is not Category III fee-subject, because it is not subject to federal Maximum Achievable Control Technology standards. The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS).

Location:

This facility is located on the edge of an industrial area, with a residential area to the immediate south. The closest residences are roughly 100 feet or less from the south wall of the plant. To the east is a residential area, followed by a park. To the west are a number of industries, while to the north is a wooded area, followed by residences.

Recent history:

I had attempted to inspect this facility unannounced, on 3/16/2017, but had found no one in the plant office onsite, upon my arrival. Rather than walk unescorted through the plant to look for a contact, I returned to the DEQ offices. An Internet search produced a current phone number for the company.

The most recent air pollution complaint associated with this site was received on 9/10/2004, well before Michigan Forge Co. purchased this facility from the former owner, Bharat Forge America.

Arrival:

For cross-training purposes, I was accompanied on today's inspection by Ms. Erin Moran, of AQD's Enforcement Unit. This was not an unannounced inspection. A few weeks prior, I contacted the company, to see if an environmental contact would be available, and to learn what entry procedures and safety apparel were appropriate for this site.

No odors or visible emissions could be detected offsite, as we drove south of the plant, and then east of the plant. From the plant parking lot at 10:00 AM, I could not detect any odors. There were no visible emissions from exhaust stacks, nor from the high capacity discharge (HCD) vents on the facility roof peak.

We met with Mr. Thomas Priest, Plant Manager. We were informed that Michigan Forge Company purchased this plant from Bharat Forge America, who had previously acquired it from Federal Forge. We were also told that they recently purchased the closed F.C. Mason Company, which was located in St. Johns. They have relocated 8 F.C. Mason Co. employees, several presses, and two furnaces to the Michigan Forge Company Lansing plant. They are continuing to make the agricultural parts that were once made in St. Johns. Additionally, we were advised that they purchased the Burton Mixer Co. in St. Johns.

We were informed that the contracts for the Lansing plant used to be automotive, but they have since diversified, making agricultural farm implements, and parts for railroads, and the oil industry. It was mentioned that now they only make one part for the auto industry. We were told that heat treating of metal parts was once done here, but is gone from the site now. The plant operates one shift per day, we were advised.

Inspection:

In the plant, bars of steel alloy are cut to dimension blanks and then heated, forged, trimmed, and machined into a variety of products. We were told that they have also added an aluminum division here.

Metal shears; Rule 285(2)(I)(vi):

I did not observe these operate. These are used to shear steel into an appropriate forge length.

5 electric furnaces; Rule 282(2)(a):

Electric induction coils in the furnaces are sized to accommodate the size of the steel blanks. It is my understanding that the steel alloy blanks are heated to 2,250 plus or minus 45 degrees F. I did not observe any opacity from the furnaces.

4 forge presses; Rule 285(2)(I)(i):

We were informed that they now have 4 main presses, as a fifth one was sold. The presses are activated to forge a heated blank into a shape, with the shape being determined by a die. Some shapes may be heated again, prior to a second forging or trimming. We observed a heated blank as it was forged into a shape, and then set onto a cooling conveyor. Some of the parts were cooling outdoors. There was no sign of quenching or gaseous atmosphere heat treating for these forged parts. I did not see any opacity from the presses.

It is my understanding that their presses include:

- One 6,000 ton Ajax press
- One 5,000 ton Ajax press.
- Two 4,000 ton presses, which were running.
- There was a stripped Ajax 2,500 ton press.

5 trim presses; Rule 285(2)(I)(i):

I did not observe any opacity from the trim presses.

Shot blaster and belt blaster with baghouses; Rule 285(2)(I)(vi)(C):

There is only 1 existing shot blaster left, we were told, but they will be adding another, which will exhaust to the same baghouse as the existing one. The baghouse exhausts outside, and we were told it has 12 filters in it. The shot blaster was not operating, at the time of the inspection. We saw that collected particulate is routed into a 55 gallon drum, with lid. We were told that it takes about a month to fill the drum.

The belt blaster was not operating, at the time of the inspection. It is equipped with a baghouse.

1 shot peener; Rule 285(2)(I)(vi)(C):

This was not running, at the time of the inspection. The unit has a capacity of 28 cubic feet, as noted in the 2011 AQD inspection report.

1 die grinding bench; Rule 285(2)(l)(vi)(A):

We were shown that only 1 die grinding bench is left, and is controlled by a cyclone located outdoors. We were told that they will add 2 more grinding benches to the opposite wall of the grinding area from the current unit. The two proposed units will be controlled by their Torit dust collector, which exhausts indoors, we were advised.

We observed the cyclone for the existing die grinder, which was not operating, at the moment. Where a cyclone serving a bench grinder had two minute holes in its 1/4 inch steel surface, the company informed me that they have already fabricated a replacement cyclone from 1/2 inch steel, to be installed in the near future. AQD will check on the status of this replacement cyclone, to see if it has been installed, as time and resources allow.

3 CNC machines; Rule 285(2)(l)(vi)(B):

These machines exhaust into the general, in-plant environment. Dies which are welded and repaired onsite are machined back into specification by the CNC (computer numerical controlled) machines.

Die heat temper furnace; Rule 282(2)(a):

It is my understanding that this has been removed from the site.

Welding; Rule 285(2)(i):

We were shown where there would be a new weld center within the forge building, with an outside exhaust. Welding is considered exempt. Dies are welded as they become worn.

4 parts washers; Rule 281(2)(h):

I did not observe these. It was noted in the 2011 AQD inspection report that these were serviced monthly by Safety Kleen, and operated using petroleum distillates as the cleaning solvent. The units were said to each be mounted on a drum, and to have a cleaning basin, supplied by a pump, which drains immediately back into the drum. AQD's Brian Culham indicated in the 4/22/2011 inspection report that by design, these satisfied Rule 707 of the Michigan Air Pollution Control Rules.

2 natural gas boilers; Rule 282(2)(b)(i):

A natural gas-fired boiler at an area source of HAPs, like this facility, would not be subject to 40 CFR Part 63, Subpart JJJJJ, under Section 63.11195(e). JJJJJ is the *National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*. The boilers are utilized to provide hot water for employee rest rooms and showers. AQD has not been delegated authority to enforce Subpart JJJJJ.

Aluminum parts oven; Rule 282(2)(a):

We saw a Wisconsin Oven Corp. natural gas-fired oven, that had been brought onsite, but was not yet operating. We were told that it is rated at a maximum 300,000 Btu/hr, and is used to treat aluminum parts that have been dipped in an aging solution. We were told that water quenching is done, and that there are no oil-coated parts. The maximum rated Btu/hr are below the 10,000,000 Btu/hr exemption threshold of Rule 282(2)(a) for a natural gas-fired furnace used to heat treat metal which does not involve oil quenching.

We were told the natural gas-fired oven has two horizontal exhaust pipes, which go out the side wall of the plant. Because this process is exempt there does not appear to be a requirement for these to exhaust vertically, as there would be in a permit to install (PTI). No visible emissions were observed.

2 Grieve ovens; one natural gas, one electric; Rule 282(2)(a):

We were shown a Grieve oven which was natural gas-fired and rated at 400,000 Btu/hr, below the 10,000,000 Btu/hr exemption threshold of Rule 282(2)(a). It exhausts horizontally, we were told. Since this unit is exempt, there does not appear to be a requirement to exhaust vertically, as there would be in a PTL.

We also saw an electric oven, which should qualify for the Rule 282(2)(a) exemption, because of being electrically heated. It was not operating, at the moment. We were told there are no oil coated parts heated in it.

Machine shop (metal working processes); Rule 285(2)(l)(vi)(A and (B)):

We were shown a small machine shop, with a number of vintage metal working processes, which were not running, at the moment. They appear to satisfy either of the two exemptions listed above, as they are metal working processes which are used on a non-production basis, and they exhaust into the general, in-plant environment.

2 furnaces from F.C. Mason Co.; Rule 282(2)(a):

We were told that the following were recently acquired:

- One natural gas furnace
- One natural gas furnace, made by Buldozer

We observed one of the natural gas furnaces, which, we were told, has a maximum rated heat input capacity of less than 10,000,000 Btu/hr and is therefore exempt under Rule 282(2)(a).

Several presses from F. C. Mason Co.; Rule 285(2)(l)(i):

We were told that the following were recently acquired:

- One 200 ton hydraulic press
- Two 150 ton presses
- One 300 ton press
- Two #2 upsetters
- One Bulldozer press
- Two small induction lines

Forge from F.C. Mason Co.; Rule 285(2)(l)(i):

We observed a small forge which was acquired from the F.C. Mason Co. It was being used to make eye bolts, at the moment. It satisfies the exemption criteria for forging.

Miscellaneous:

We were shown a small building, their compressor building, and advised that it was to be demolished, since the compressors have been removed. I was informed that they are well aware of the requirements of the asbestos NESHAP for demolishing subject structures, and that no asbestos containing material (ACM) was found, during an asbestos inspection.

We left the site at 1:05 PM.

Conclusion:

I could not find any instances of noncompliance. AQD requested a copy of the SDS for the aging solution used on aluminum parts, on 9/28/2017, the day this inspection activity report was written.

NAME [Signature]

DATE 9/29/2017

SUPERVISOR [Signature]