UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

DATE: DEC 19 2019

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Ajax Metal Processing, Detroit, Michigan

FROM: Natalia Vazquez, Environmental Engineer
AECAB (MI/WI)

THRU: Sarah Marshall, Section Chief
AECAB (MI/WI)

TO: File

BASIC INFORMATION

Facility Name: Ajax Metal Processing (Ajax)

Facility Location: 4651 Bellevue St, Detroit, Michigan 48207

Date of Inspection: December 4, 2019

EPA Inspector(s):
1. Natalia Vazquez, Environmental Engineer
2. Constantinos Loukeris, Environmental Engineer

Other Attendees
1. Todd Zynda, Senior Environmental Engineer Michigan Department of Environment, Great Lakes, and Energy
2. Dave Krause, General Manager, Ajax
3. Alexandria Kline, Process and Environmental Engineer, Ajax

Contact Email Address: akline@ajaxmetal.com

Purpose of Inspection: determine compliance with facility's Title V permit, State Implementation Plan and 40 C.F.R. Part 63 Subpart MMMM

Facility Type: metal processing facility

Regulations Central to Inspection: Facility has a Title V permit and the coating area is subject to 40 C.F.R. Part 63 Subpart MMMM – National Emission Standard for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products

Arrival Time: 12:45 p.m.
Departure Time: 3:45 p.m.

Inspection Type:
☒ Unannounced Inspection
☐ Announced Inspection

OPENING CONFERENCE

☒ Credentials Presented
☒ CBI warning to facility provided

The following information was obtained verbally from Ajax unless otherwise noted.

Process Description:
Ajax mostly provides its services to the automotive industry who sends its carbon steel parts for treatment. The treated parts include: nuts, bolts, and brackets. The facility has three processes: heat treatment, coating, and metal plating. If several types of treatments are necessary on a part, heat is the first one.

Ajax has two heat treatment lines. The parts are washed with hot water to remove lubricant and exposed to temperature between 1650 °F to 1675 °F in a furnace.

The facility has eight lines, each one with a dedicated wet scrubber, and an acid bath. Ajax has an additional small line that is used for research and development; and is uncontrolled. Of the eight lines, six are dedicated to plating, one is used for pickle and oil, and one is used for coating. All lines use hydrogen chloride diluted to 30% by volume except line 33A, which has the acid diluted to 40% by volume. The lines that plate tin-zinc (23I), zinc (23B1), and zinc-nickel (23A) have the same operational design. Line 23F used to be for manganese phosphate, but this process was replaced by pickle and oil, two or three months prior to the inspection. The newest plating line was added in 1990s. No organic solvents are used during plating. Line 43A is used for coating zinc-phosphates that uses hydrogen chloride, is controlled by a scrubber and is located next to plating lines.

The coating lines are known as "lock and seal" or "patch". There are six coating lines; four solvent-based and two water-based. Some of the lines have ovens (line 1-3). The facility has exhaust hoods for the coating and stack on the ovens. The residence time varies by line and part size.

TOUR INFORMATION

EPA toured the facility: Yes

Data Collected and Observations:
The following flow rate readings were taken from the observed scrubbers flow meters that control the plating lines, line 23F and line 43A.

Line Name	use	Value	units
23I	tin zinc	46.53	gallons per minute*
23B1	zinc	23.1	gallons per minute*
23A	zinc nickel	33.8	gallons per minute*
23E	chloride zinc	33.08	gallons per minute*
23A1	zinc nickel	71.22	gallons per minute*
23F	Pickle and oil	35.03	gallons per minute*
43A	Zinc phosphate coating line	32.79	gallons per minute*
23D1	Zinc nickel	111.88	gallons per minute *

*The facility was unable to confirm the units for the flowmeters but believed it to be gallons per minute.

Photos and/or Videos: were not taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

Requested documents:

1. 3 years of source wide emissions (including equations and assumptions used)
2. Records required by the permit related to the plating line (FGPLATINGLINES Monitoring/Recordkeeping and Reporting permit sections)
3. Records related to 40 CFR Part 63 Subpart MMMM – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products (FGMACT Monitoring/Recordkeeping and Reporting permit sections)
4. Safety Data Sheet for quench oil

Concerns: Several flow meters monitoring the scrubbers didn't have clear units. Also, EPA recommended that the facility verify what volatile organic compounds and hazardous air pollutants are present in the water exiting the heat treatment process.

SIGNATURES

Report Author: _____ Date: 12/19/19

Section Chief: _____ Date: 12/19/19

APPENDICES AND ATTACHMENTS

The facility claimed chemical suppliers and chemicals used as CBI. Material supplier informations is part of the records the facility must maintain under 40 CFR Part 63 Subpart MMMM (63.3930(b)). At this moment EPA has not received this information