

B5830

MAWILA

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: On-site Inspection

B583063325

FACILITY: AJAX METAL PROCESSING INC.		SRN / ID: B5830
LOCATION: 4651 BELLEVUE AVE, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Alexandria Muench , Compliance & Sustainability Manager		ACTIVITY DATE: 06/15/2022
STAFF: Samuel Liveson	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled inspection of a Title V source.		
RESOLVED COMPLAINTS:		

On June 15, 2022 and August 10, 2022, AQD staff Sam Liveson conducted an unannounced, scheduled inspection of Ajax Metal Processing (AMP) located on 4651 Bellevue Avenue in Detroit, Michigan. The purpose of the inspection was to determine the facility's compliance with the federal Clean Air Act; Part 55, Air Pollution Control, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended; the Michigan Air Pollution Control Rules; and the conditions of Renewable Operating Permit (ROP) No. MI-ROP-B5830-2015b.

The August 10 inspection was conducted collaboratively with United States Environmental Protection Agency (USEPA) staff Valeria Apolinario and Dan Schaufelberger from the Office of Enforcement and Compliance Assurance.

### Pre-Inspection Meeting and Facility Overview

#### 1. Scheduling, Arrival, and Safety Overview

On June 15, 2022, AQD arrived at the facility at 9:10 AM and parked in visitor parking off of Bellevue Avenue near Gratiot Avenue. Weather was clear and the temperature was 75 °F. Several stacks were visible. No opacity was observed.

AQD met with Alexandria Muench, Compliance and Sustainability Manager; Frank Buono, President; Dave Krause, General Manager; and James Cushman, Vice President. AQD provided their employee ID to Alexandria.

Personal protection equipment to have on site includes safety shoes, safety glasses, a safety vest, and hearing protection. Masks were worn during the inspection to comply with the facility COVID-19 health policy.

On August 10, 2022, AQD arrived at the facility at 9:00 AM. Weather was clear and the temperature was 68 °F. No opacity was observed upon arrival. When departing the facility, AQD observed some periodic opacity from the visitor parking area facing west towards what appeared to be facility hardening furnaces for several minutes. AQD did not take opacity readings per Method 9. Observed levels of opacity did not appear likely to exceed 20% over a 6-minute average per Rule 301(1)(a).

#### 2. General Facility Overview

Ajax Metal Processing (AMP) occupies approximately 1 square city block (about 180,000 square feet according to the facility) off of Gratiot Avenue on the east side of Detroit, less than three miles from downtown Detroit. The company has three divisions: (1) electroplating with zinc and zinc alloy finishes (FGPLATINGLINES), (2) heat treating (FGBOILERMACT), and (3) adhesive locking and sealing (FGLOCKSEAL and FGMACT).

AMP is a Title V major source due to its potential to emit (PTE) greater than 10 tons per year (tpy) of a single hazardous air pollutant (HAP), toluene, from its adhesive coating lines.

The facility's coating operations under FGMACT are subject to federal standard 40 CFR Part 63, Subpart Mmmm - National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products (40 CFR Part 63 Subpart Mmmm). As specified within the Semiannual Compliance Report for July through December of 2021, AMP chose the "emission rate without add-on controls option" per 40 CFR 63.3891 (b) to demonstrate compliance with the Subpart Mmmm emission limit.

### 3. Compliance Background

AMP's Semi-Annual Compliance Report for 40 CFR Part 63 Subpart Mmmm was received timely on March 15, 2022. The report indicated that the facility exceeded its 12-month rolling limit of 2.6 lb organic HAP per gallon of coating solids for the 12-month rolling time periods ending November 2021 and December 2021. AQD issued a violation notice for these exceedances on April 12, 2022. The facility is currently in discussions with the AQD Enforcement Unit to resolve this violation. From records received on July 8, 2022, below are 12-month rolling HAP emissions through May of 2022.

Last month of 12-month compliance period	12-month HAP emission rate calculations (pounds organic HAP per gallon of coating solids)
September 2021	2.5
October 2021	2.6
November 2021	2.7
December 2021	2.8
January 2022	2.9
February 2022	2.9
March 2022	2.9
April 2022	2.8
May 2022	2.8

### Facility Walkthrough: Process Overview and Compliance Status

#### 1. Cold Cleaner in Administrative Building

AQD observed one cold cleaner in the AMP administrative building across Bellevue. The air/vapor interface surface area appeared to be less than ten square feet. The lid was closed. AQD did not observe operating procedures posted conspicuously. On August 10, AQD provided Cold Cleaner Operating Procedures to the facility for posting. On August 12, Alexandria clarified that the facility uses K-1 Kerosene in the cold cleaner and provided the MSDS. The facility considers the cold cleaner exempt under Rule 285(2)(r)(iv) for metal cleaning released into the in-plant environment.

#### 2. Facility Furnaces and Boilers - FGBOILERMACT

The facility has two boilers EUBOILER60HP and EUBOILER150HP. They have two furnaces EUHARDENING1 and EUHARDENING2. As a part of heat treating, these furnaces use endothermic generator EUENDO. Boilers and furnaces use natural gas.

2.1 Two 11 MMBtu Heat Treating Furnaces and Endothermic Reactor – EUHARDENING1 & 2 and EUENDO

On June 15, AQD observed the two large heat treating lines at the facility (EUHARDENING1 and EUHARDENING2). EUHARDENING2 was operating; EUHARDENING1 was under maintenance. On August 10, both lines were operating. From discussions with staff on site and observations, quenching with oil occurs. Oil tanks are outside near the facility parking lot. AQD observed flares associated with the quenching oil on each line. After heat treating, parts go through a post-wash. Heat treating emissions vent to ambient air via stacks.

EUHARDENING1 & 2 were installed in 1976. Per the facility’s Michigan Air Emissions Reporting System report, they appear to be exempt from obtaining a PTI per then Rule 33 (a), effective August 15, 1967 for heat treating furnaces, the use of which does not involve molten metals. Note that the exemption at that time did not exclude oil quenching and did not limit heat input to 10 MMBtu/hr. However, because AMP is a major source of HAP, boilers and furnaces are subject to 40 CFR Part 63 Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. All boilers and process heaters were installed prior to 2010 so they are considered existing per 40 CFR 63.7490(d).

AQD also visited EUENDO. This is an endothermic generator used as part of the heat treat process. It uses a catalyst to provide an endothermic gas to the heat treat furnaces EUHARDENING1 & 2. It was running during the facility inspection. It was installed in 1980 and has a heat input of 1 MMBtu/hr. It appears to be exempt from obtaining a PTI per Rule 282(a) effective January 18, 1980 for furnaces for heat treating. This is an earlier version of current exemption 282(2)(a)(i). At the time of installation in 1980, exemption 282(a) did not exclude oil quenching.

2.2 Boilers - EUBOILER60HP and EUBOILER150HP

AQD visited the two boilers EUBOILER60HP and EUBOILER150HP. They are used to heat various parts of the facility processes. Boilers appear to be exempt from obtaining a PTI per Rule 282(2)(b)(i) for service water heating burning natural gas where the equipment’s heat input capacity is not more than 50 million British thermal units per hour (MMBtu/hr). The following information was obtained from their nameplates:

EUBOILER60HP	2.5 MMBtu/hr	7/14/1980
EUBOILER150HP	2.7 MMBtu/hr	8/29/1989

2.3 FGBOILERMACT Special Conditions and Compliance Status

SC(s)	Brief Condition Summary	Determination	Explanation
II.1	Combust only gas 1 fuels such as natural gas	Compliance	The furnaces and boilers are natural gas-fired.
III.1-6, VI.2-3	Perform one-time energy assessment, initial tune-up, and subsequent tune-	Compliance	The November 22, 2016 inspection indicates that a one-time energy assessment was conducted January 2016 and initial tune up of each affected boiler performed on January 31, 2016 and March 2016. On July 8, 2022, Alexandria provided

	ups as required; keep records.		a record of the tune-up schedule and supporting documentation. EUHARDENING1 and 2 have tune-ups annually and were last tuned up March 2022 and February 2021 respectively. (EUHARDENING2 was down in 2022. According to Alexandria, tune up occurred July 27 <sup>th</sup> since at that time the furnace was up consistently.) EUBOILER150HP has biennial tune ups (once every two years) and was last tuned up in December of 2021. EUBOILER60HP and Endothermic Generator have tune ups every 5 years and were last tuned up in March of 2021 and February 2022 respectively. Records of those tune ups were provided.
VI.1	Keep records of notifications submitted	Not evaluated	AQD did not request submitted notifications from the facility.
VII.4	Submit a signed certification in the Notification of Compliance Status that the energy assessment was completed.	Compliance	As discussed in the November 22, 2016 inspection report, the signed Notification of Compliance was submitted in March of 2016.
IX.1-3	Comply with 40 CFR Part 63, Subpart DDDDD	Compliance	The facility appears to be in compliance with Subpart DDDDD.

### 3. Four Wheel Coating Lines, Three Loctite Coating Lines, and Two Dip-Spin Coating Lines (FGLOCKSEAL, FGMACT, SOURCE-WIDE)

The facility has three types of coating lines: dip spin (EUDIPSPIN & EUDIPSPIN2), LocTite (EULOCTITE1-3), and wheel (EUWHEEL1-4). They are subject to Part 6 and 7 VOC rules via flexible group FGLOCKSEAL. They are also subject to 40 CFR Part 63 Subpart MMMM for Surface Coating of Miscellaneous Metal Parts and Products. Applicable conditions are in flexible group FGMACT.

The facility discussed how they track monthly coating usage. At the end of each month, managers take inventory of how many coatings are at the facility. This is compared to the previous month's inventory as well as to purchases to identify consumption. As part of the monthly inventory, the facility knows the gallons of coating in each 55 gallon drum based on how many inches of coating is in each drum.

#### 3.1 Four Wheel Coating Lines (EUWHEEL1-4)

AQD observed the four wheel coating lines onsite. They're all located around each other in the same area. Lines EUWHEEL1 and EUWHEEL3 were operating during the June 15 inspection. Flow coating occurs on these lines. Coating is poured in a vertical laminar flow via gravity. Bolts, which are lined up magnetically on a large horizontal spinning wheel,

slowly pass under the coating. The final products are bolts with a coating over their threads. This coating provides adhesion so bolts won't come loose over time.

Adhesive products applied to bolts on EHWHEEL1-4 include Scotch Grip, Precoat, and LocTite. These adhesive products are reduced to the desired viscosity. Three reducers among others used at the facility are toluene, butyl cellosolve, and isopropyl acetate. Toluene is a HAP, whereas butyl cellosolve and isopropyl acetate are not. Reducers are added by hand. AQD observed containers of reducer stored in a yellow flammable safety storage cabinet. To bring the reducer to the wheel line, reducer is collected in a small canteen with a lid that has a trigger to open and otherwise stays closed. Alexandria showed AQD one of the covered canteens used to carry reducers to the wheel coating lines. It appears to be able to hold a gallon or two of reducer. The operator pours the reducer into the adhesive product and checks the viscosity.

Stacks appear to be associated with EUWHEEL1-4. AQD observed fume hoods over the flow coat area. According to the facility, these hoods operate under negative pressure to collect fumes associated with EUWHEEL1-4 and exhaust them to ambient air.

### 3.2 Three LocTite Lines (EULOCTITE1-3)

AQD visited the three LocTite coating lines on site. According to the facility, coatings used in EULOCTITE lines are water-based. The provided LocTite MSDS indicates that the coating contains no hazardous components. Line 1 was running during the June 15 inspection. Line 3 has an electric oven. Isopropyl acetate is applied as a reducer at the line. This line results in a thread coating similar to the wheel coating lines, except that bolts are touching a cable line so that as the cable line moves, the bolts spin. This results in a 360-degree coating application. There don't appear to be stacks or hoods associated with the coating application. A stack was associated with line 3's electric oven.

### 3.3 Dip and Spin Coating Lines (EU-DIPSPIN & EU-DIPSPIN2)

AQD visited facility dip spin lines EU-DIPSPIN and EU-DIPSPIN2. On site, these are known as plating lines 2 and 5, and are located in the plating line area. They are top-coat lines that serve as the last optional step of the plating process at the facility (FGPLATINGLINES). But since they are a coating operation, these dip spin lines are part of flexible groups FGLOCKSEAL and FGMACT in the facility ROP. According to the facility, they are each one pot. The dip and spin coating applies a water-based paint as well as a wax coating known as a torque modifier. No reducing occurs with the coatings used on these dip spin lines. Stacks are associated with the drying ovens; no stacks or hoods are associated with the dip coating pots themselves.

### 3.4 SOURCE-WIDE Special Conditions and Compliance Status

SC(s)	Brief Condition Summary	Determination	Explanation
I.1 and VI.1	12-month rolling VOC emissions less than 30.0 tpy; keep records in an acceptable format	Compliance	For the period from January 2021 through May of 2022, the highest 12-month rolling total VOC emissions were 20.1 tpy in June of 2021.
V.1	Determine VOC content, water content, and density	Compliance	AMP requested AQD approval to determine VOC content via formulation data. On October 13, 2020, AQD

	by Method 24 unless the permittee received prior written approval by the AQD District Supervisor.		approved this request with the exception that Method 24 data be use for Precote 80 and 85 coatings. Consultant Stephanie Jarrett provided the Method 24 results for these coatings taken in 2018.
VI.2	For all metal parts coating lines per Rule 621(10)(b), keep monthly records of: gallons or pounds of VOC coatings used and reclaimed; and monthly and 12-month rolling VOC emission calculations.	Compliance	On July 8, 2022, Alexandria provided coating usages and gallons for January of 2022 through May of 2022. VOC monthly and 12-month rolling emissions calculations were provided for the period of January of 2021 through May of 2022. Records include emission units EUWAX and Tanks 26A&B. These EUs are considered exempt from obtaining a PTI per Rule 290, but are subject to Rule 621.

3.5 FGLOCKSEAL Special Conditions and Compliance Status

SC(s)	Brief Condition Summary	Determination	Explanation
I.1 and 2, VI.1 and 3	Monthly VOC emissions shall not exceed 2,000 lb per coating line; 12-month rolling shall not exceed 10 tpy per coating line. Keep records.	Compliance	VOC emission records provided for the period of January of 2021 through May of 2022 for each line indicated that the highest monthly VOC emissions were 0.7 tons, or 1,400 pounds of VOC, on EUWHEEL2 in January of 2022. This is below the facility limit of 2,000 pounds. The highest 12-month rolling emissions were 6.4 tons VOC on EUWHEEL2 in May of 2022, below the facility limit of 10 tpy. Note: Rule 290 emission units EUWAX and Tanks 26A & B also appear to be subject to these monthly and 12-month rolling VOC limits per Rule 621; however Rule 290 has stricter limits of 1000 pounds (half a ton) VOCs per month, which is discussed in the Rule 290 section below.
III.1-3	Recover, reclaim, or dispose of coatings and solvents in acceptably in accordance with rules; minimize fugitive emissions.	Compliance	The facility appeared to meet these requirements. AQD observed the coating storage room. All containers were closed. No odors were observed. Toluene was not stored here but was stored at FGLOCKSEAL. Reducer canteens have a lid. The facility does not have waste from coating operations. Coatings are collected and reused. A filter cake from wastewater treatment is the only hazardous waste.
IV.1	Use HVLP or equivalent applicator.	Compliance	HVLP applicators don't appear to be used on FGLOCKSEAL lines. Flow coating, cable coating, and dip spin coatings are collected and reused so there is no overspray.
V.1		Compliance	

	Determine VOC content via Method 24. Upon prior approval of AQD, determine VOC content via formulation data.		AMP requested AQD approval to determine VOC content via formulation data. On October 13, 2020, AQD approved this request with the exception that Method 24 data be use for Precote 80 and 85 coatings. Consultant Stephanie Jarrett provided the Method 24 results for these coatings taken in 2018.
VI.2	Maintain safety datasheets (SDS), manufacturer's formulation data, or both.	Compliance	On July 8, 2022, AMP provided SDSs for MacDermid Torque'N'Tension 12, Loctite Dri-Loc 201 20lb Part A, Toluene, and MacDermid Torque'N'Tension F103. These specific SDSs were requested by AQD.
VIII.1-16	Stack parameters	Not evaluated	AQD did not observe stacks at roof level.
IX.1	Comply with 40 CFR Part 63 Subpart A and MMMM	Non-compliance	See discussion of FGMACT.
IX.2	May change or replace coatings without applying for a new general permit	Compliance	AQD did not request a list of coating changes made at the facility; however those changes would not require an application for a new general permit according to this condition.

3.6 FGMACT Special Conditions and Compliance Status

SC(s)	Brief Condition Summary	Determination	Explanation
I.1	Use one of three options to determine compliance with the organic HAP emission rate.	Compliance	The facility has chosen the "emission rate without add-on controls option" to comply with 40 CFR Part 63 Subpart MMMM.
I.2	Be in compliance with the emission limit of 2.6 pounds organic HAP per gallon of coating solids at all times.	Non-compliance	Records provided by AMP on July 8, 2022 demonstrate that the facility exceeded its 12-month rolling limit for the 12-month time periods ending with November 2021, December 2021, January 2022, February 2022, March 2022, April 2022, and May 2022. As discussed earlier, a violation notice has been issued and the facility has been referred for escalated enforcement to resolve this violation.
I.3	Emission limit considerations if your coating line has more than one emission limit.	Not applicable	All surface coating operations at AMP are subject to one subcategory emission limit which is 2.6 pounds organic HAP per gallon of coating solids per 40 CFR 63.3890(b)(1).
II			

	Thinner restrictions when using the Compliant Material Option	Not applicable	The facility doesn't use the Compliant Material Option per SC I.1.
VI.1 & 2	Initial compliance demonstration and recordkeeping requirements under MACT MMMM	Compliance	The initial compliance demonstration was submitted February 27, 2008. Emissions appear to be calculated correctly.
VI.3 & 5	For each compliance period, maintain each notification and report; current copies of MSDSs; calculations of total mass of organic HAP emissions used each month; calculations of the volume of coating solids used each month; and calculation of each 12-month rolling organic HAP emission rate.	Compliance	The most recent semi-annual MACT MMMM report received March 15, 2022 included these calculations in a facility spreadsheet. Note: although Tanks 26A&B are exempt from obtaining a PTI per Rule 290, they use coatings which appear to be subject to Subpart MMMM. The facility Subpart MMMM calculations appear to include Torque'N'Tension 12 and 15 which are used in Tanks 26A&B.
VI.4, VII.4	Compliant coating option requirement.	Not applicable	
VII.5-7	Deviation and notification requirements.	Compliance	Semi-annual MACT MMMM reports have been received March 15, 2022 and September 15, 2021.
IX.1	Comply with applicable provisions.	Non-compliance	As discussed above, the facility exceeded its 12-month rolling organic HAP emission limit.

#### 4. Six Plating Lines (FGPLATINGLINES)

Plating lines are used to treat fasteners such as bolts, nuts, and brackets. Each line has several tanks. Fasteners are loaded into a mesh bin which is dipped into each tank sequentially as needed.

The six permitted plating lines are EUPLATINGLINE1, EUPLATINGLINE3, EUPLATINGLINE4, EUPLATINGLINE6, EUPLATINGLINE11, and EUPLATINGLINE12. Line 7 is a phosphate line known as EUPHOS1 under FGRULE290 of the facility ROP. EUPHOS2 is no longer at the facility and can be removed from the facility ROP. It was replaced by Line 8, which is a new zinc nickel plating line installed in 2020 and considered exempt under Rule 291. On June 16, 2022, Alexandria provided the exemption information for this plating line 8. Lines 2 and 5 are dip and spin coating lines EU-DIPSPIN and EU-DIPSPIN2.



Talking with facility staff, generally the parts undergo the following processes:

1. Alkaline soap cleaning (to remove any oils on the fasteners)
2. Alkaline rinse
3. Electrical current
4. Rinses
5. HCl acid tank with a packed bed scrubber with water as the control device.
6. Rinses
7. Plate tank
8. Rinses
9. Chromate conversion on nickel lines
10. Top coat or wax (this is EUDIPSPIN and EUDIPSPIN2)

According to the facility, chromate conversion are dye tanks for appearance (gold instead of purple for example). The plating lines utilizing chromate conversion are plating lines 1, 3, 4, 6, 8, 11, and 12. The facility does not appear to be subject to 40 CFR Part 63 Subpart N per 40 CFR 63.340(c). Plating lines are not subject to 40 CFR Part 63 Subpart W because they are located at a major source of HAPs and therefore not subject per 40 CFR 63.11504(a).

Operation of the plating lines is subject to the facility Malfunction Abatement Plan (MAP). According to the MAP, a warning light will flash if the recirculation tank meter reads less than 20 gallons per minute (gpm). During the inspection, AQD was able to read the following flow from tanks. Units are not displayed on the meters; however staff explained the unit is gallons per minute (gpm).

Line No.	Work Center	Description	Recirculation Flow Rate (gpm)
1	23A	Zinc Nickel	Battery dead (flowing) – 38.46 on 6/16/22
3	23B	Zinc	24.85
4	23I	Tin Zinc	35.32
6	23D1	Zinc	0.0 (acid tank empty for maintenance)
7	23F/43A	Zinc Phosphate	49.37
8	23C	Zinc Nickel	65.44
11	23A1	Zinc Nickel	Did not read
12	23E	Zinc	47.02

During the inspection, line 1's flow meter was not working because the battery was dead. There appeared to be water flowing in the scrubber. Alexandria replaced the battery and provided an image of the updated scrubber flow of 38.46 gpm on June 16, 2022.

On the HCl tank for each plating line, there appeared to be slots on one side of the tank with the scrubber, and piping on the opposite side of the tank. AMP explained that air is pushed from the opposite side of the tank towards the scrubber, and pulled from the side of the tank with the scrubber.

#### 4.1 FGPLATINGLINES Special Conditions and Compliance Status

SC(s)	Brief Condition Summary	Determination	Explanation

III.1-2	Install, maintain, and operate packed bed scrubber properly.	Compliance	AQD observed water flowing in all packed bed scrubbers on operating lines. Plating lines appear to operate according to the MAP. Scrubber flows were measured as greater than 20 gallons per minute as specified in the MAP.
III.3; VI.1,VI.2.a -c	HCl concentration below 17% (50% by volume of 20° Baume HCl); max tank surface area of 39.1 square feet; max temperature of 120 °F; keep monthly records.		The facility appears to take daily measurements of its HCl concentration and temperature. Measurements were provided from January through June of 2022 for plating lines 1, 3, 4, 7, 8, 11, and 12. The maximum concentration was 48% by volume of 20° Baume HCl on 3/22/22 for plating line 4 and on several dates for plating lines 8 and 12. The maximum temperature was 118 degrees on 3/12/22 for plating line 8. Previous inspections indicated compliance with the 39 square feet requirement. AQD did not request tank square footage.
VI.2.d-e	Record hours of operation and corrective action upon scrubber failure.		Hours of operation were provided for plating lines for January through December of 2021. Hours worked are listed on production sheets. The facility provided the production sheets from Plating Line 1 and Plating Line 3 on 6/6/2022. There is a space on work orders for corrective action. The scrubber was functioning as designed in the provided work orders.
VIII.1-11	Stack dimensions	Not evaluated	AQD did not observe stacks at roof level. Stacks observed from ground level were unobstructed.

## 5. Additional Equipment

### 5.1 Natural Gas Emergency Engine – 40 CFR Part 60 Subpart JJJJ – Rule 285(2)(g)

AQD observed the 150 kilowatt (KW) natural gas-fired Kohler emergency generator on site. It was installed on December 17, 2021. According to facility staff, it was started up a week or so before the June 15 inspection. The engine was locked at the time of the inspection so that AQD did not observe the nameplate or operating hours. According to facility staff, it appears to be used for wastewater treatment processes. The engine appears to be exempt from obtaining a PTI per Rule 285(2)(g) for internal combustion engines with a maximum heat input below 10 MMBtu/hr. (KW and MMBtu/hr are both units of power. 1 W is equal to 3.41 BTU/h. 150 KW to MMBtu/hr is  $150 \text{ KW} * [3.41 \text{ BTU}/1 \text{ W*hr}] * [1 \text{ MMBtu}/1000000 \text{ Btu}] * [1000 \text{ KW} / 1000 \text{ W}] = 0.51 \text{ MMBtu/hr.}$ ) The engine appears to be subject to federal regulation 40 CFR Part 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines per 40 CFR 60.4230(a)(4)(iv) for emergency engines with a maximum engine power greater than 19 KW.

There is no longer the existing emergency generator (EUROGEN) at the facility.

5.1.1 40 CFR Part 60 Subpart JJJJ Sections and Compliance Status

Paragraph	Brief Paragraph Summary	Determination	Explanation
§60.4233(e), 40 CFR Part 60, Subpart JJJJ, Table 1	Owner/operator must comply with emission standards specified in this subpart.	Compliance	On June 16, 2022, Alexandria provided the USEPA Certificate of Conformity for the emergency engine.
§60.4237(b)	Install a non-resettable hour meter.	Not evaluated	Due to the engine being closed, AQD was not able to view the hours of operation on the display of the emergency engine during the facility inspection.
§60.4243(d)	Limit maintenance checks and readiness testing to 100 hours per year.	Not evaluated	The engine has not operated for a full year since it was installed on December 17, 2021.

5.2 Plating Line 8 – Zinc Nickel Plating Line – Rule 291

The facility claims that the tanks in plating line 8, installed in 2020, are exempt from obtaining a PTI per Rule 290 (discussed in the next section) and Rule 291. Rule 291 was promulgated in 2016. On June 16, the facility provided their exemption analysis for zinc nickel plating line 8. The analysis is dated September 17, 2020.

The facility asserts that each tank in the plating line can be considered a separate emission unit. This is the case in other plating facilities in permits such as PTI 120-17 and 269-06C.

Page 8 of the facility’s exemption analysis discusses Rule 278 exclusions from exemptions. The facility explained that potential emissions from the proposed plating line are less than the significance thresholds, so that the activity’s actual emissions appear to be below significance levels per Rule 278(1)(b), and its potential emissions don’t appear to be subject to PSD regulations or nonattainment NSR regulations per Rule 278(1)(a).

Tanks 26A&B of the new Plating Line 8 include Torque’N’Tension coatings. These tanks appear to be coating operations subject to MACT MMMM per 40 CFR 63.3882(b)(1). (Plating tanks don’t appear to be coating operations per 40 CFR 63.3981.) Page 3 of the exemption analysis discusses how Torque’N’Tension dip coating tanks are affected sources under a NESHAP. Although tanks 26A&B are subject to MACT MMMM, on page 8 of the exemption analysis, the facility claims “The new line does not trigger preconstruction review or modification pursuant to either a Part 63 or Part 61 NESHAP” such as MACT MMMM per Rule 278(2). Although it doesn’t appear likely that the tanks are construction or reconstruction of a major source of HAPs per Rule 278(2), AQD will follow up with the facility to request supporting information.

Three methods of analysis were provided for estimating emissions: (1) Equation 4 in AP-42 Chapter 12.20; (2) the *Metal Finishing Facility Risk Screening Tool (MFFRST): Technical Documentation and User’s Guide* (USEPA/600/R-01-057 July 2001); and (3) *Estimating Releases and Waste Treatment Efficiencies for the Toxic Chemical Release Inventory*

Form, USEPA 560/4 888 002 (also used in MDEQ Emission Calculation Fact Sheet #9840 "Electroplating Operations" (Rev. 11/05). Table 7 in the facility's analysis provides the maximum emissions for each of the three methods used. Emissions appear to be within Rule 291(2) emission limits. The applicable tanks appear to be exempt from obtaining a PTI per Rule 291(2) for emission units with "de minimis" emissions.

### 5.2.1 Plating Line 8 – Rule 291 Summary and Compliance Status

Rule	Brief Rule Summary	Determination	Explanation
291(2)	Potential emissions less than Table 23 and parts (a)-(f)	Compliance	Potential emissions of each tank are less than emission limits in Table 23. The facility provided updated HCl emissions for partial pressures at 120 degrees F instead of 109 degrees F. Emissions are 0.53 tpy HCl instead of 0.149 HCl in Table 5 of the facility analysis. Potential emissions of Toxic air contaminants not listed in table 23 with any screening level still appear to be below 5 tons per year per Rule 291 (2).
291(2)(a)	Combined PTE < 0.12 tpy for contaminants with SL < 2 ug/m <sup>3</sup> and ≥ 0.04 ug/m <sup>3</sup> .	Compliance	PTE of these contaminants is 0.0033 tpy.
291(2)(b)	Combined PTE < 0.06 tpy for contaminants with SL < 0.04 ug/m <sup>3</sup> and ≥ 0.005 ug/m <sup>3</sup> .	Compliance	No contaminants on plating line 8 have a screening level in this range.
291(2)(c)	Combined PTE < 0.006 tpy for contaminants with SL < 0.005 ug/m <sup>3</sup> .	Compliance	Cobalt compounds and nickel salts have initial risk screening levels of 0.00013 and 0.006 ug/m <sup>3</sup> respectively. The combined PTE is 0.0005046 tpy.
Rule 291(d)	No potential emissions of asbestos of subtilisin proteolytic enzymes.	Compliance	Emission units on plating line 8 have no potential emissions of these contaminants.

5.3 Rule 290 – EUPHOS1, Plating Line 8 Tanks 26A&B, EUWAX, and HCl Tank  
 Plating Line 7 is a phosphate line known as EUPHOS1 under FGRULE290 of the facility ROP. EUPHOS2 is no longer at the facility. EUWAX is a topcoat that can be applied as a last step in plating. The facility HCl tank is also considered exempt under Rule 290. Per Table 8 of the facility's exemption analysis for Plating Line 8, tanks 26A and 26B of Plating Line 8 contain Torque'N'Tension coatings that are considered exempt from obtaining a PTI per Rule 290.

Emission units EUWAX and Tanks 26A and B are considered exempt from obtaining a PTI per Rule 290. However, they are still subject to Rules 621 and MACT MMMM. Because these emission units are subject to Rule 621, they are subject to the 30 TPY emission limit in the SOURCE-WIDE section of the facility ROP. The facility includes the VOC emissions from EUWAX and Tanks 26A and B in their VOC recordkeeping. Similarly, Torque'N'Tension coatings used on EUWAX and Tanks 26A&B appear to be included in the facility's MACT MMMM compliance calculations received on March 15, 2022 as part of the facility's MACT MMMM semiannual compliance report.

The facility provided emissions for EUPHOS1, Tanks 26A&B, EUWAX, and the HCl storage tank per Rule 290(2)(d) and (e). Emissions are shown in the table below. Maximum monthly emissions appear to be below the maximum allowable monthly emissions.

Emission Unit	Contaminant (CAS No.)	ITSL (ug/m3)/IRSL (ug/m3)	Applicable 290 Part	Max Allowable Monthly Emissions	Max Monthly Emissions (month of occurrence)
EUWAX	VOCs	--/--	290(2)(a)(i)	1000/500 lbs	120 lbs (May 2022)
Tanks 26A&B	VOCs	--/--	290(2)(a)(i)	1000/500 lbs	280 lbs (June and October of 2021)
EUPHOS1	HCl (7647010)	20/--	290(2)(a)(ii)	1000/500 lbs	0.36 lbs (March 2021)
HCl Tank	HCl (7647010)	20/--	290(2)(a)(ii)	1000/500 lbs	41.47 lbs/year uncontrolled (0.41 lbs/year via 99% scrubber control)

**5.4 Water Treatment – Rule 285(2)(m)**

The facility has wastewater treatment tanks to treat water with acids and rinse waters from the plating process. The treatment is pH-based. Water isn't heated. This process appears to be exempt from obtaining a Permit to Install per Rule 285(2)(m) for wastewater treatment equipment.

**Conclusion**

The facility appears to be in compliance with its ROP No. MI-ROP-B5830-2015b and with applicable state and federal standards with the exception of its exceedance of the emission limit of 2.6 pounds organic HAP per gallon of coating solids for the 12-month time periods ending with November 2021, December 2021, January 2022, February 2022, March 2022, April 2022, and May 2022. A violation notice has been issued and the facility has been referred for escalated enforcement to resolve this violation. AQD will follow up with the facility to request supporting information regarding the applicability of Rule 278(2) to new plating line 8.

NAME 

DATE 10/4/22

SUPERVISOR 