

B1657 SAR 2016/11/10

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

B165737574

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|--|-------------------------------|---------------------------|
| FACILITY: Eaton Aerospace | | SRN / ID: B1657 |
| LOCATION: 300 S EAST AVE, JACKSON | | DISTRICT: Jackson |
| CITY: JACKSON | | COUNTY: JACKSON |
| CONTACT: | | ACTIVITY DATE: 11/10/2016 |
| STAFF: Mike Kovalchick | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MINOR |
| SUBJECT: Unannounced compliance inspection | | |
| RESOLVED COMPLAINTS: | | |

Minor Source InspectionFacility ContactJames Hankins (JH)-EHS Manager jameschankins@eaton.com ph 517-789-7255Company website: <http://www.eaton.com/Eaton/ProductsServices/Aerospace/index.htm>Purpose

On November 10, 2016, I conducted an unannounced inspection of Eaton Aerospace (Company) in Jackson. The purpose of the inspection was to determine the facility's compliance status with the applicable federal and state air pollution regulations, particularly Michigan Act 451, Part 55, Air Pollution Control Act and administrative rules, Permit to Install (PTI) 14-11, and federal NESHAP Title 40, Part 63 Subparts HHHHHH & WWWWWW.

Facility Location

The facility is located in the city of Jackson. It is surrounded by commercial and residential areas on all sides with closest residence approximately 300 feet away on the East side of the building. See attached aerial image.

Facility Background

The facility was last inspected on September 9, 2010 with no violations found. The Company is involved with cleaning and surfacing coating of aluminum, stainless steel and titanium parts for the Aerospace industry. Specifically, hydraulic and pneumatic hose couplings and other small parts. The Company's only permit (PTI 14-11) was issued on March 1, 2011. It covers all emissions from all acid tanks and related metal cleaning operations. Three previous permits were all combined into the current permit.

Regulatory Applicability

Active Permits: PTI 14-11 for: Metal cleaning using tanks containing nitric acid, chromic acid, methyl phosphoric fluoric acid, hydrochloric acid, hydrofluoric acid, and phosphoric acid.

NESHAP 40 CFR Part 63 Subpart WWWWWW

NESHAP 40 CFR Part 63 Subpart HHHHHH

EUOilTester -Skydrol/Red Oil Testing Exempt per Rule 290

EUOven -Electric Heating -Exempt per Rule 282(a)(1) Ovens (<10MMBTU/Hr)

EUBUFFING0Metal Buffing-Abrasive Exempt per Rule 285(v)(i)

EUSurface Coat-Misc surface coating Exempt per Rule 287(c)

EUGrinding-Metal Grinding-Exempt per Rule 285(v)(i)

EUMOLDING-Molding Machine-Injection Molding-Exempt Rule 286(d)

EUSolvClean-Cold Solvent Cleaning-Isopropyl Alcohol-Exempt Rule 290 (a)(ii)(a)

EUSToddard-Stoddard Solvent Test Cabinet-Exempt Rule 290(a)(ii)(a)

EUSanding-Metal Sanding-Exempt Rule 285(v)(i)

EUSawing-Metal Sawing-Exempt Rule 285(v)(i)

EU Yarn Burning- Yarn Burning- Exempt Rule 290(D)

(Attachment (1) is a large spreadsheet that gives details about all the various emissions units at the facility that are considered exempt from Permitting.)

Arrival & Facility Contact

Visible emissions or odors were not observed upon my approach to the Company's facility. I arrived at approximately 9 AM, proceeded to the facility office to request access for an inspection, provided my identification, and met with James Hankins (JH) who is the new EHS manager. Several other Company personnel were also present. A pre-inspection conference was held with JH and provided a copy of the MDEQ brochure: *Rights and Responsibilities Environmental Regulatory Inspections*. I informed JH of my intent to conduct a facility inspection and to review the various records as necessary. JH extended his full cooperation during the inspection, accompanied me during the full duration of the inspection, and fully addressed my questions.

Pre-Inspection Meeting

JH outlined that the Company is currently operating 2 shifts (16 hours) per day, 5 days a week. We discussed PTI 14-11 and the various records required by the permit. JH indicated that this was his 4th day on the job and will need the assistance of several other personnel to locate/provide all the required records. Based on conversations with other facility personnel, there has been few changes at the facility since the last inspection in 2010. We then moved on to the facility tour/inspection.

Onsite Inspection

JH escorted me as I conducted the onsite tour portion of the inspection. I visited all the acid tanks, the coating operations, the roof where the 4 wet scrubbers were located, the scrubber solution tank and vicinity where the scrubber magnehelic gauges are located along with the pH meter, and walked by several other Permit exempt processes at the facility.

All the acid tanks were well maintained and well ventilated through dedicated exhausts immediately adjacent to each tank. They also had labels on the tanks that identified them and showed what the maximum acid concentration that was allowed for each tank. None of the acid tanks had covers/lids on them although many of them had lids on the floor next to the tanks. (Note: 40 CFR Part 63, Subpart WWWW - National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations does not require that the tanks have lids on them if they are exhausted to a wet scrubber.)

Purportedly, they only put the lids on when the tanks are idle at night or during a lunch break etc.

The 4 wet scrubbers for the acid tanks were easily accessible on the roof. Wet Scrubber #1 for the titanium cleaning line had a small leak of caustic scrubber fluid coming from a crack from the bottom side of the scrubber. (See attached photos) The roof/metal underneath all the scrubbers looked little rusty suggesting some possible acidic discharge. Wet Scrubber #2 through #4 (including all the associated ventilation) appeared to be in good condition. Purportedly, Wet Scrubber #2 (Stainless steel cleaning) had a similar crack to Wet Scrubber #1 last year that was identified/ fixed previously. It was confirmed that all 4 scrubbers did have circulating scrubber fluid at the time of the inspection and it did not appear that the small leak on Wet Scrubber #1 was adversely affecting the performance of the scrubber. (Note: Scrubbers 1-3 are adjacent to each other; Scrubber 4 (Passivate line) is well removed from the other 3.) The roof inspection was otherwise unremarkable.

Beneath the scrubbers on the main floor, there is a liquid tank that contains the caustic fluid that circulates through all 4 scrubbers. The pH meter read 9.7 which showed that the fluid was indeed caustic and within the required pH range. The circulating pumps were all working with a spare pump idle. The pressure magnehelic gauges for the wet scrubbers showed values of:

- # 1 2.11" H2O (Titanium cleaning-smallest scrubber)
- # 2 1.8" H2O (Stainless Steel cleaning)
- #3 1.10" H2O (Aluminum cleaning)
- #4 2.4" H2O (Passivate line)

Note that the Malfunction Abatement Plan for the scrubbers failed to identify the proper operating range for the scrubber. Discussions with facility personnel suggested that 1" to 6" is the proper range. The pressure drop across the scrubbers starts to get high after about 3 years due to plugging of the scrubber media material. They purportedly replace the scrubber media material every 3 years as a result. I recommended to Company personnel that they should consider updating the Malfunction Abatement Plan to reflect this operating range.

I spent a few minutes inspecting the Rule 287 exempt surface coating booths. All the booths contained the required fabric filters. The amount of coating being used to spray the parts appeared to be very small due to the very small size of the parts and the high level precision that the application required.

These are the active permitted processes at the facility:

| Emission Unit ID | Emission Unit Description (Process Equipment & Control Devices) | Installation Date / Modification Date | Flexible Group ID |
|------------------|---|--|-------------------|
| EUNITRICACID | Metal cleaning operation using tanks containing nitric acid. | | FGFACILITY |
| EUCHROMICACID | Metal cleaning operation using tanks containing chromic acid. | | FGFACILITY |
| EUMFACID | Metal cleaning operation using tanks containing methyl phosphonic fluoric acid. | | FGFACILITY |
| EUHYDROCHLORACID | Metal cleaning operation using tanks containing hydrochloric acid. | | FGFACILITY |
| EUHYDROFLUORACID | Metal cleaning operation using tanks containing hydrofluoric acid. | | FGFACILITY |
| EUPHOSPHORICACID | Rust inhibiting operation using tanks containing phosphoric acid. | | FGFACILITY |

| Flexible Group ID | Flexible Group Description | Associated Emission Unit IDs |
|-------------------|--|---|
| FGFACILITY | All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment. | EUNITRICACID EUCHROMICACID EUMFACID EUHYDROCHLORACID EUHYDROFLUORACID EUPHOSPHORICACID |

The following permit conditions for FGFACILITY were reviewed:

All conditions under the following Permit Sections: Emission limits, Process/Operational Restrictions, Design/Equipment Parameters, Monitoring/Recordkeeping, and Other Requirements.

The Company appeared to be in compliance with all the Permit requirements reviewed.

Recordkeeping Review

Immediately following the inspection, I followed up with the Company per the following email:

“James,

Per the AQD inspection this morning, here is a list of documents that I would like to receive no later than

9 AM Monday, November 14th.

-Copy of all documents Company has that they are required to have to comply with NESHAP HHHHHH.

(From January 1, 2015 to present)

-Copy of all documents Company has that they are required to have to comply with NESHAP WWWWWW (From January 1, 2015 to present).

-Per Permit 14-11, Condition VI. MONITORING/RECORDKEEPING. (Monthly records from January 1, 2015 to October 31, 2016) In spreadsheet form,

1. a) All chemical additions to the acid tanks
- b) Concentration of the acids in the tanks
- c) Monthly and 12-month rolling time period calculations of acid emissions
- d) Corrective action taken upon failure of all of the following:
 1. the fans drawing vacuum on the acid tanks
 2. the pumps circulating the caustic scrubber liquids through the caustic scrubbers

3. pH level of the caustic scrubber liquid falls below 7

- Facility Stack diagram (If you have more recent version than the 7/14/2009 version that you gave me.
- Copies of most recent Process Flow diagram for titanium, stainless steel, aluminum and passivate lines.
- For EUSURFACE Coat(From January 1, 2015 to October 31, 2016)

Monthly records of coating usage and calculations identifying quantity of VOC emissions

- For EUSOLVClean (From January 1, 2015 to October 31, 2016)

Monthly records of isopropyl alcohol usage (in pounds.)

Let me know if you have questions. Thanks!"

On Monday, November 14, 2016, the Company forwarded the following requested documents:

Attachment (2) is facility diagram that shows all emission points and associated stack vents in the facility.

Attachment (3) is 2015 Annual Certification of Compliance & Deviation Report-NESHAP Area Source Standards for Plating and Polishing Operations 40 CFR 63 subpart WWWW

Attachment (4) is Notification of Compliance-Paint Stripping and Miscellaneous Surface Coating Area Source Rule 40 CFR 63.11169-63.11180 Subpart HHHHHH. It shows compliance and is only submitted to EPA if there is a deviation.

Attachment (5) is the most recent Malfunction Abatement Plan for the wet scrubbers.

Attachment (6) Various print outs showing material usage/emission estimates for all the permit exempt processes at the facility that are using Rule 287 or Rule 290 as a basis for exemption. The records show compliance. Processes are either under 200 gallons of month of usage or 1000 pounds per month of VOC emissions. It appears the Company is emitting about 6 tons per year of VOC's.

Attachment (7) Spreadsheet shows monthly emission calculations for hazardous air pollutants for the month of October, 2016. (Spreadsheets for previous months look similar.) The records show compliance with the hazardous air pollutant emission limits specified in Permit 14-11 and are in the 0 to 7 pound per month range for all hazardous air pollutants that are being calculated.

Post-Inspection Meeting

I held a brief post-inspection meeting with JH. I reviewed my findings that the Company appeared to be in compliance with their Permit. However, I had concerns about Wet Scrubber #1 leaking, the fact that the Malfunction abatement plan did not contain the proper pressure operating range for the wet scrubber even though facility personnel did know what the proper range should be and about the lack of lids on the acid tanks. I also indicated that I would send an email requesting various records that I would review shortly to determine compliance. I thanked JH for his time and cooperation, and departed the facility at approximately 11:00 AM. Subsequent to the inspection, I requested that the Company notify me when the leaking wet scrubber was fixed and to send an updated Malfunction Abatement plan that includes the proper pressure drop operating range for the wet scrubbers.

Compliance Summary

Based upon the facility inspection, review of the records, and review of applicable requirements, the Company appears to be in compliance with Permit 14-11.

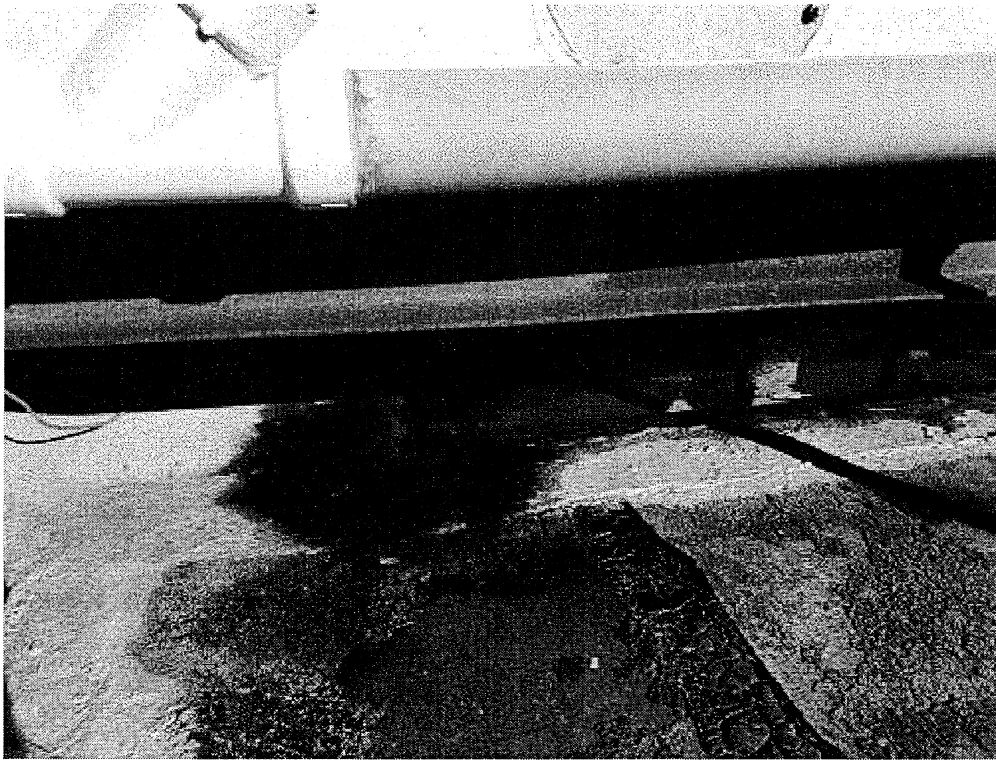


Image 1(Leak) : Leak under Wet Scrubber #1.

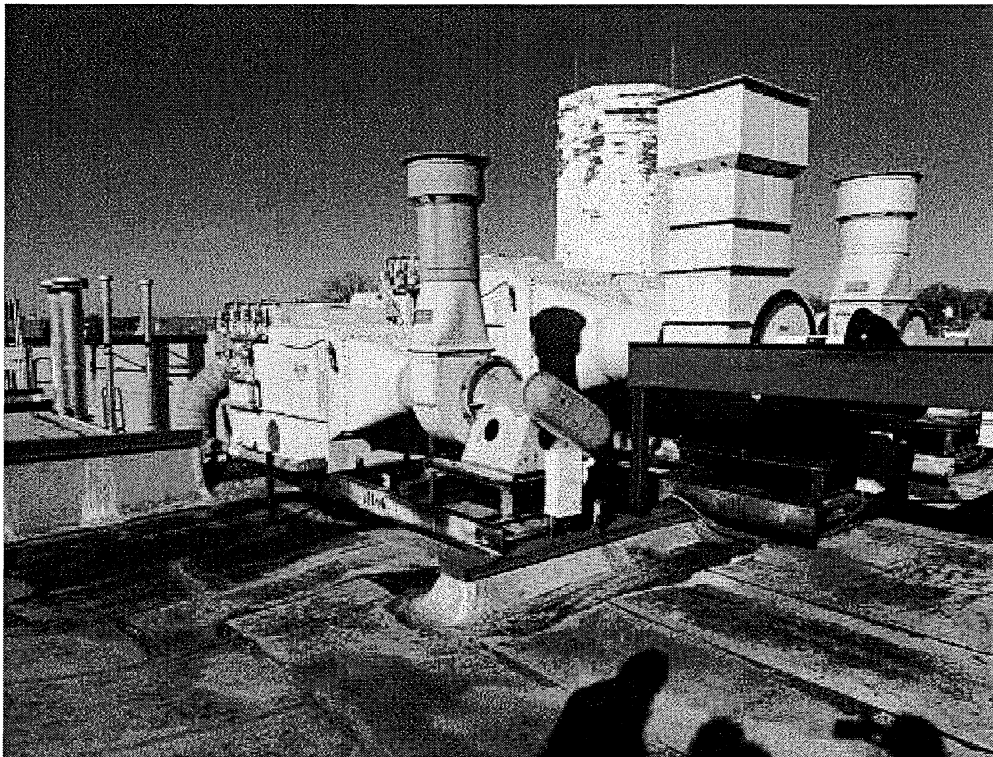


Image 2(Scrubber) : Wet Scrubber #1 on the left with 2 other scrubbers to the right. A 4th scrubber is well separated from the other 3.

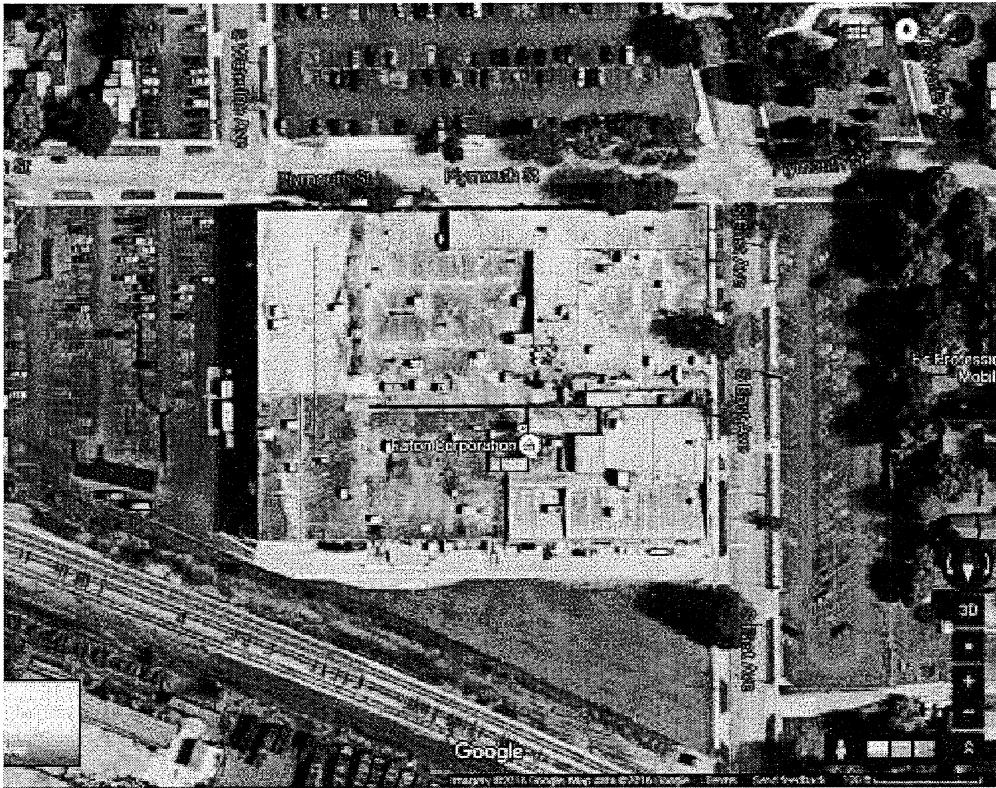


Image 3(Aerial Image) : Aerial photo of the Company

NAME M. Koralich

DATE 11/14/2016

SUPERVISOR [Signature]

On November 10, 2016, staff of the Department of Environmental Quality (DEQ), Air Quality Division (AQD), conducted an inspection of Eaton Aerospace located at 300 S. East Ave, Jackson, Michigan. The purpose of this inspection was to evaluate compliance with state and federal air quality rules and regulations.

A copy of the inspection report is attached. Please feel free to contact me if you have any questions. The report will be posted on the AQD website at [AQD Source Information](#).

Please let us know how we can improve the inspection process by completing our online customer service survey at [AQD Inspection Survey](#).

Thank you for the cooperation that was extended to me during the inspection.

Mike Kovalchick
Environmental Engineer
Air Quality Division
517-780-5496

Attachment