

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

N762240039

FACILITY: WATSON ENGINEERING		SRN / ID: N7622
LOCATION: 16455 RACHO RD, TAYLOR		DISTRICT: Detroit
CITY: TAYLOR		COUNTY: WAYNE
CONTACT: Rich Pazuchowski, Assistant Plant Manager		ACTIVITY DATE: 03/01/2017
STAFF: Katherine Koster	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY2017 Targeted Inspection		
RESOLVED COMPLAINTS:		

**REASON FOR INSPECTION: Targeted Inspection**

**INSPECTED BY: Katie Koster, AQD**

**PERSO NNEL PRESENT: Rich Parzuchowski, Assistant Plant and Operations Manager**

**FACILITY PHONE NUMBER: 734-285-2200**

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**FACILITY BACKGROUND**

Watson Engineering is a light metal fabricator producing production parts; mainly structural and bracketing. Its customers include Caterpillar, Ford, and Harley Davidson. Currently, the company operates 2 shifts per day, 5 days per week. There are about 150 employees and this is the company headquarters. The company was operating 3 shifts per day during the prior inspection.

**COMPLAINT/COMPLIANCE HISTORY**

No complaints have been received against the facility.

**OUTSTANDING CONSENT ORDERS**

None

**OUTSTANDING LOVs**

None. A violation notice was issued as the result of the prior inspection (in FY2016) but it was adequately resolved.

**INSPECTION NARRATIVE**

AQD staff, Katie Koster arrived unannounced at Watson Engineering on 3/1/17 at approximately 9:30 a.m. I met with Mr. Rich Parzuchowski, Assistant Plant Manager, and Lleana Blossom, and they accompanied me about the facility. Mr. Parzuchowski stated that no new equipment had been installed since my previous visit in March 2016 and no equipment had been modified.

**Building #1**

Building #1 has several hoists that are no longer in use; the company used to install parts in vehicles. We continued on and viewed the tube bending area, saws, tumbler, and a heated parts washer. The tumbler removes sharp burrs and edges (it is like a rock polisher) and consists only of water and rocks. The heated parts washer vents outside, and is natural gas fired to heat to 144F.

In the welding area, welding work on manifolds for Ford is ducted to a torit collector on the second floor inside of the building. TIG and stainless welding stations also vent to the indoor collector.

A Genesis robotic welder exhausts to an outside dust collector. The bags are changed once a year.

The metal fabrication area for prototype parts contains multiple CNC machines. The manual machine shop had a safety clean parts washer. There is also a CNC router in its own room for wood, plastic, etc. and a quality lab.

### Building #2

We proceeded to building #2 which contains a variety of machining equipment such as a 5 axis laser, boring mills, robotic welding stations, 3 axis lasers, and press brakes. All of this equipment vents to an outdoor baghouse. We viewed the pulse jet baghouse. The pressure drop was 5.5 in w.g. (prior inspection was 6.6 in w.g.) and the blower load current was 140 amps. The high alarm is set at 8.3 in w.g. I could hear the periodic bang of a pulse of air being released. There was a tight seal between hopper and drum and no fugitive emissions seems to be escaping. The baghouse exhausted back inside the plant. Two more lasers vented to another pulse jet baghouse. The filters were recently changed in November 2016. Pressure drop was 3 in w.c. on the magnahelic gauge (the high alarm is set at 6.7). The compressed air pressure was 110 psi. The MIG and TIG welding were tied in to the exhaust system to the baghouse about 3-4 years ago. There was also a tight seal between the hopper and drum and no fugitive emissions were observed.

### Powder Coat

This is mostly performed for Caterpillar. A collector inside the booth reclaims the excess powder for reuse. There is a main booth for robotic spray and a smaller adjacent booth for manual spraying. Parts are on hooks and then enter the curing oven. There is a 5 tank washing system before the powder coating process. The process only runs during one shift and was installed in 2006. Stage 1 is a sulfuric and phosphoric acid wash heated to 120F and vented externally. Stage 2 is a water rinse. Stage 3 is iron phosphate (chemcote 3015 plus acid) and vented externally, stage 4 is water, and stage 5 is ethanol (Gardolene D6871) and is not heated.

### Burn off oven

The oven was not in use at the time of the inspection. According to the facility, one batch takes about 3 hours and company does not process more than one batch per day. The oven is only used to burn off powder coating when it is applied incorrectly. They usually send parts out to be acid dipped, in lieu of the burn off, but some parts cannot withstand the acid dip. Also, if a part is suspected to have residual moisture, it cannot go into the burn off oven. I viewed the circular chart recorder. Previously, there was significant overlap of the markings on the circular chart indicating that it had not been changed in a long time, if ever. However, the company has now implemented a system to change the chart recorder paper daily and to keep a log of the hours of operation each day. These records are maintained hard copy and scanned electronically and were presented to me during the inspection. A spot check of the records indicates that the afterburner has been maintained above the required minimum of 1400F and that the batch time is generally 3 hours for the oven. Mr. Parzuchowski stated that Webb was scheduled to inspect the oven in March and calibrate the thermocouples which would be a year from the prior calibration. He stated that Webb has a standing appointment with Watson to inspect and calibrate yearly

and they also call Webb any time there is an issue with the oven.

I mentioned that the facility needs to create and maintain a monthly and 12 month rolling log from the daily records so that they can readily show compliance with the permit limits.

I left the facility and sent a follow up records request (attached).

#### **APPLICABLE RULES/PERMIT CONDITIONS**

The following are conditions from Permit to Install # 174-06. The emission unit is EUBURNOFF and is described as a batch type natural gas-fired burnoff oven with a secondary chamber or afterburner emission control system, used to remove powder coatings from metal parts by thermal decomposition in a primary chamber.

This EU did not qualify for the general permit due to the inability to meet the stack height requirements in the general permit.

#### **The following conditions apply to: EUBURNOFF**

##### **Emission Limits**

**1.1 UNABLE TO EVALUTE.** There shall be no visible emissions from EUBURNOFF. Burn off oven was not in use at the time of the inspection.

##### **Material Usage Limits**

**1.2 IN COMPLIANCE.** The permittee shall burn only natural gas in EUBURNOFF. Burnoff oven is natural gas fired.

**1.3 IN COMPLIANCE.** The permittee shall not process any material in EUBURNOFF other than cured powder coatings on metal parts, racks and/or hangers. Burn off oven is for removing cured powder coating applied on site from metal parts, racks, and/or hangers.

##### **Process/Operational Limits**

**1.4 IN COMPLIANCE.** The permittee shall not use EUBURNOFF for the thermal destruction or removal of rubber, plastics, uncured paints, or any other materials containing sulfur or halogens (chlorine, fluorine, bromine, etc.) such as plastisol, polyvinyl chloride (PVC), or Teflon. There was no evidence during the on site inspection that the burn off oven was used for anything other than powder coating removal.

**1.5 IN COMPLIANCE.** The permittee shall not load any transformer cores, which may be contaminated with PCB-containing dielectric fluid, wire or parts coated with lead or rubber, or any waste materials such as paint sludge or waste powder coatings into EUBURNOFF. There was no evidence during the on site inspection that the burn off oven is used for anything other than metal parts and racks.

**1.6 IN COMPLIANCE.** The permittee shall not operate EUBURNOFF for more than four hours per day, nor 520 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. Records are being maintained. See attached. One batch takes 3 hours and the total hours run in 2016 was 131.5. I will inform the facility that the recordkeeping format needs to be adjusted to show a 12 month rolling value.

##### **Equipment**

**1.7, 1.8 and 1.9 IN COMPLIANCE.** Required equipment is in place.

**1.7** The permittee shall not operate EUBURNOFF unless a secondary chamber or afterburner is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the secondary chamber or afterburner includes maintaining a minimum temperature of 1400°F and a minimum retention time of 0.5 seconds.

- 1.8 The permittee shall not operate EUBURNOFF unless an automatic temperature control system for the primary chamber and secondary chamber or afterburner is installed, maintained, and operated in a satisfactory manner.
- 1.9 The permittee shall not operate EUBURNOFF unless an interlock system that shuts down the primary chamber burner when the secondary chamber or afterburner is not operating properly, is installed, maintained and operated in a satisfactory manner.

**Monitoring**

- 1.10 **IN COMPLIANCE.** The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to continuously monitor the temperature in the burnoff oven secondary chamber or afterburner and record the temperature at least once every 15 minutes. The device to monitor temperature was being operating in a satisfactory manner as the circular chart is changed daily and all charts are retained.
- 1.11 **IN COMPLIANCE.** The permittee shall calibrate the thermocouples associated with the primary and secondary chambers at least once per year. The company calibrated the equipment in March 2017. The 2017 records are attached. Pyro Service Company performed the calibrations.

**Recordkeeping/Reporting/Notification**

- 1.12 **IN COMPLIANCE.** The permittee shall keep, in a satisfactory manner, temperature data records for the burnoff oven secondary chamber or afterburner. All records shall be kept on file for a period of at least five years and made available to the Department upon request. Records were being kept in a satisfactory manner as the circular chart recorder paper is changed daily and maintained.
- 1.13 **IN COMPLIANCE.** The permittee shall keep, in a satisfactory manner, records of the date, duration, and description of any malfunction of the control equipment, any maintenance performed and any testing results for EUBURNOFF. All records shall be kept on file for a period of at least five years and made available to the Department upon request. Maintenance records are now being maintained as a result of the prior AQD inspection and Violation Notice.
- 1.14 **IN COMPLIANCE.** The permittee shall maintain a current listing from the manufacturer of the chemical composition of each powder coating processed in EUBURNOFF, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both. All records shall be kept on file for a period of at least five years and made available to the Department upon request. The MSDS is the same for all powder coating except for the pigment. MSDS's were provided in the prior inspection and have not changed.
- 1.15 **IN COMPLIANCE.** Facility is now maintaining a log with this information. At this time, there is no variation in coating burned off; it is all powder coat. Examples of the required recordkeeping for oven usage and chart recorder values are attached to the report. The permittee shall keep a record of the operation of EUBURNOFF on a calendar month basis including the following:
  - a) Date of each burnoff oven operation cycle.
  - b) Duration of each burnoff oven operation cycle.
  - c) Identification of coating type removed for each burnoff oven operation cycle.
  - d) A compilation of the calendar day, calendar month, and rolling 12-month calendar year totals of hours of operation for the process.

The permittee shall keep the records on file at the facility, in a format acceptable to the AQD District Supervisor, for a period of at least five years and make them available to the Department upon request.

**Stack/Vent Restrictions**

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.16	SVBURNOFF	14	29.5	R336.1225, R336.1901, 40 CFR 52.21 (c) & (d)
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

UNABLE TO DETERMINE – AQD did not measure the stack.

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**EXEMPT EQUIPMENT - IN COMPLIANCE**

Powder coating and associated ovens – Exempt per Rule 336.1287(2)(d)

Pre cleaning – MSDS's were provided in the prior inspection and have not changed. All stages are for washing parts before powder coating. Rule 336.1281(2)(e) exempts equipment used for washing and drying equipment if the material itself cannot become an air contaminant (the metal part), if no VOC's with pressure greater than 0.1 mm Hg at standard conditions are used (no VOC's are listed in the MSDS's, and no oil or solid fuel is burned (heated by natural gas) and 285(2)(l)(iii) exempts equipment for surface preparation of metals by use of aqueous solutions, except acid solutions (applies to phosphate and ethanol tanks).

**Polisher – Exempt per 336.1285(2)(r), surface treatment of metal exhausted in plant.**

**Welding – Exempt per Rule 336.1285(2)(i).**

**Machining equipment – Exempt per Rule 336.1285(2)(l)(i), (vi)(B) and (C)**

**Heated parts washer** - Rule 336.1281(2)(e) exempts equipment used for washing and drying equipment if the material itself cannot become an air contaminant (the metal part), if no VOC's with pressure greater than 0.1 mm Hg at standard conditions are used (no VOC's are listed in the MSDS's, and no oil or solid fuel is burned (heated by natural gas).

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**APPLICABLE FUGITIVE DUST CONTROL PLAN CONDITIONS**

N/A

**MAERS REPORT REVIEW**

Facility is minor and does not appear to be subject to MAERS.

**FINAL COMPLIANCE DETERMINATION**

**At the time of the inspection, this facility appears to be in compliance with the conditions evaluated in this report.**

**(Note: Due to formatting issues with this report writing program, some of the font is unintentionally bolded while some is not.)**

NAME *Kate K...*

DATE 6/5/17

SUPERVISOR *W.M.*