

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

N139662724

FACILITY: KALAMAZOO STRIPPING & DERUSTING		SRN / ID: N1396
LOCATION: 3921 E CENTRE STREET, PORTAGE		DISTRICT: Kalamazoo
CITY: PORTAGE		COUNTY: KALAMAZOO
CONTACT: Jon Paul , Owner		ACTIVITY DATE: 04/26/2022
STAFF: Rachel Benaway	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: On-site inspection to verify compliance with all state and federal air use regulations.		
RESOLVED COMPLAINTS:		

Michigan Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) staff (Rachel Benaway) completed an unannounced air quality inspection of Kalamazoo Stripping & Derusting Co. (KSD) (N1396), a metal parts paint and grease removal operation located in Portage, MI, on 4/26/2022. The purpose of this inspection was to verify KSD is in compliance with their Permits to Install (PTI) #419-86A (2001) and #122-07 (2007) and all state and federal air use regulations. KSD is considered a minor source of particulate matter (PM) and is not subject to any New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAP). Jon Paul is the owner of the facility, responsible for submitting requested records, and was present for the on-site inspection. Vickie Crowe is the facility Controller. Personal protection equipment includes a safety glasses and safety shoes.

The facility employs approximately 15 people operating one shift per day, 5 days a week, with an occasional skeleton crew shift on weekends. There are no boilers, cold cleaners, or emergency generators on-site. The last inspection was completed at the facility on 1/10/2012 and the facility was in compliance at that time. Besides regular maintenance and repairs to existing equipment, no new equipment has been installed, modified, relocated, or reconstructed since the last inspection.

#	Equipment at Facility
3	Natural gas-fired pyrolysis paint bake-off ovens, each with a secondary combustion chamber (SCC) after burner control devices

KSD receives approximately 40% of its batch work from a one-piece bumper manufacturer. The remainder of work processed is refurbish work for the public, (auto parts, registers, rusty steel parts, etc.) and paint hooks from different industrial processes.

The facility operates 3 pyrolysis paint bake-off ovens to remove paint and other organic material (such as polymer, grease, oil, and varnish) from metal parts. After baking in the ovens, there are 3 bay areas (1 for large parts, 2 for smaller) where parts are further processed. The facility applies a pickling solution (sulfuric acid) to remove ash from the ovens and then a rust inhibitor. Finally, parts are power washed with city water and racked for removal from the facility. There is an area where the H2SO4 pickling solution is processed. US Ecology provides their chemicals and disposes of the used liquid and sludge. Tanks are changed approximately every 5 to 6 months.

EU-OVEN1, EU-OVEN2, and EU-OVEN3

Bake-off is accomplished by a natural gas burner bringing the furnace temperatures to a range of 800 deg F to 900 deg F. Each oven has a natural gas-fired secondary combustion chamber (SCC),

an afterburner control device, where smoke from the process is directed out the three stacks. The SCC is a part of the bake-off oven and has a minimum proper operating temperature of 1500F and a minimum retention time of 0.5 second. Temperatures above approximately 1550 deg F will enable the sprinkler system fail-safe operation mode of each oven.

The typical baking time for larger parts, like bumpers, is 3 to 4 hours. The facility runs 3 to 4 batches in each oven per day. At the time of this inspection, all 3 ovens were running. No visible emissions were observed from the stacks.

	Oven 1	Oven 2	Oven 3
Operating Temperature Observed (deg F):	1510	1505	1530
Process Time:	3.5	4	4.5

The following are special conditions (SC) listed in the PTIs for each emission unit and flexible group for which Staff was able to make a compliance determination.

PTI #419-86A

Flexible Group: FG-OVENS

Emission Units: EU-OVEN1 and EU-OVEN3

SC	Condition	COMPLIANT?
1	PM emission limit: 0.01 lb/ 1,000 lb exhaust gas	*NA
2&3	Shall not operate without properly installed and operating afterburner (SCC): Proper operation means minimum SCC temperature of 1500 deg F	Yes
4	Equip and maintain SCC with temperature-monitoring device	Yes

Monitoring/Recordkeeping:

SC	Condition	COMPLIANT?
5&6	Monitor and record SCC temperature at least once a day that the oven operates	Yes
7	Keep SCC temperature records on file for at least 5 years and make available to AQD	Yes

*NA: This PTI has a General Condition 14 (GC14) stipulating that AQD may require the applicant to conduct acceptable performance tests. No testing has been requested and there are no conditions requiring the permittee to submit emissions calculations. SC 1 cannot be verified for compliance at this time.

PTI #122-07

Emission Unit: EU-OVEN2

SC	Condition	COMPLIANT?
1.1	PM emission limit: 0.01 lb/ 1,000 lb exhaust gas	*NA
1.2	Visible emissions shall not exceed 6-minute average of 5% opacity	Yes
1.3	Shall not operate w/out properly installed, maintained, and operating (SCC): Proper operation means minimum SCC temp of 1500 deg F and minimum retention time of 0.5 sec	Yes

*NA: This PTI has a General Condition 13 (GC13) stipulating that AQD may require the applicant to conduct acceptable performance tests. No testing has been requested and there are no conditions requiring the permittee to submit emissions calculations. SC 1.1 cannot be verified for compliance at this time.

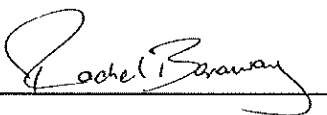
Monitoring/Recordkeeping:

SC	Condition	COMPLIANT?
----	-----------	------------

- 1.4 Equip and maintain SCC with temperature-monitoring device and record temperature on a continuous basis during operation Yes
- 1.5 Keep SCC temperature records on file for at least 5 years and make available to AQD Yes

Each oven is clearly labeled with a number and has its own circular chart monitoring device to record temperature continuously during operation. Staff confirmed the facility is keeping circular charts on file for at least five years. The charts are clearly marked with the corresponding oven number and also indicate consistently proper processing cycles of bake-off at approximately 800 deg F and afterburn at 1500 deg F.

The facility appears to be in compliance with all permit conditions and all state and federal air quality regulations at this time.

NAME 

DATE 4/29/2022

SUPERVISOR RIC 5/8/22