

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

N369451981

FACILITY: FREEDOM FINISHING		SRN / ID: N3694
LOCATION: 2755 MEADOWBROOK RD, BENTON HARBOR		DISTRICT: Kalamazoo
CITY: BENTON HARBOR		COUNTY: BERRIEN
CONTACT: Erik Ender , President/Owner		ACTIVITY DATE: 12/12/2019
STAFF: Rachel Benaway	COMPLIANCE STATUS: Unknown	SOURCE CLASS: MINOR
SUBJECT: Inspection completed to evaluate compliance with air use permit requirements, consisting of a facility tour and records review.		
RESOLVED COMPLAINTS:		

Staff (Rachel Benaway and Chance Collins) completed an unannounced inspection of Freedom Finishing (N3694) on 12-12-2019 to verify compliance with air use Permits to Install (PTI) #195-12 and #211-01. No visible emissions were observed from the stacks before entry. Staff arrived at 8:52am and was given a tour of the facility by Erik Ender (former President). Erik and Gloria Ender (current President) furnished some of the requested records at the time of the inspection.

Freedom Finishing is a powder coating and electro-deposition (e-coating) operation with a total of 45-50 employees working 1 powder coat shift and 2 E-coating shifts per day, 5 days a week. The facility utilizes 5-8 powder coatings and one E-coat, as well as 6 solvents along the E-coat line for cleaning and rinsing of parts prior to paint application. The plant coats automotive parts exclusively from various clients and can also accommodate random custom powder coat jobs for other clients. The majority of the plant production is through the E-coating process.

The plant has two operations that appear to meet exemptions. The shot blasting unit (Rule 285(l)(vi)) uses plastic beads, has a bag filter, and ventilates in-plant. There are two stand-alone powder coating booths (Rule 287(d)) with fabric filters that are changed as needed. The powder coating line (also Rule 287(d)) uses an iron phosphate wash and two city water rinses before powder coat application and then baking and drying in a natural gas-fired oven.

The burn off oven was in operation during the inspection. Staff recorded an operating temperature of 445. The oven is supposed to have a temperature monitor that tracks the temperature for record keeping. The facility could not provide this information and will receive a violation for it.

The E-coat line is a conveyor system where parts are loaded, dipped in various solvents, spray rinsed, electro-deposition coated, and then cured and dried in an oven system located above the solvent application line. One batch takes approximately 2 hours to complete. The process with associated solvents proceeds as follows:

	Stage	Solution	MSDS Provided?
1	Immersion cleaning- 4% alkaline cleaner solution in 1,522 gal tank @160F	PARCO Cleaner ZX-6	Y
2	Spray with alkaline cleaner		
3	City water rinse in 1,372 gal tank		
4	Titanium conditioning rinse in 1,372 gal tank	Prepalene X	Y
5	Zinc phosphate rinse in 1,681 gal tank at 140F to build zinc phosphate layer	ACCELERATOR 131	Y
6	City water rinse in 1,372 gal tank		
7	Non-chrome seal bath in 1,372 gal tank	Parcolene 50NC	Y
8	Dionized water rinse in 1,152 gal tank		
9	Paint coating (E-coat) in 1,520 gal tank with 20% solids at 90F	Prep-N-Cote GS 755 CORMAX	Y Y
	Permeate closed loop rinse system:		
10	Immersion rinse 1,372 gal tank		
11	Spray rinse		
12	R.O. water rinse in 1,372 gal tank		
13	Drying oven at 250F by 1.3mill BTU natural gas burner for about 9 minutes	Exhaust mixed with cure oven to outside	
14	Electrocoat Curing oven at 375F for 36min by 2.6mill BTU natural gas burner		
	Parts cooling tunnel	17,600 CFM fan	

Heat for stages 1, 2, and 5 are provided by a 1.6 MMBTU gas-fired boiler (from name plate: Model 200 WG,

Serial No. 28221) and hot water is pumped to heat exchangers for the heated E-coat line baths. Extra solvents are stored in tanks behind the E-coat line where the water treatment equipment is kept.

Records Review:

From PTI#211-01:

SC 1.5: The facility was able to produce the appropriate MSDS sheets at the time of inspection for materials listed in table above and sent electronic copies, included with this report.

SC 1.6(A): The facility could not submit records to demonstrate they are tracking the gallons of each reducing solvent and clean-up solvent on a monthly basis and will receive a violation for it.

SC 1.6(B): Staff had to search the MSDS sheets to find the VOC content of all solvents but the facility submitted a spreadsheet with the VOC content of the E-coating.

SC 1.6(C): The facility submitted a calculation spreadsheet but it does not demonstrate VOC mass emissions calculations in tons per month. They are not tracking this information properly and will receive a violation for this.

SC 1.6(D): The facility could not submit records to demonstrate they are tracking VOC mass emission calculations determining the yearly emission rate in tons per 12-month rolling time period as determined at the end of each calendar month. Compliance with their permit limits could not be determined at this time. They will receive a violation for this.

From PTI#195-12:

SC VI: The facility could not confirm that records are being kept on file for five years. They will receive a violation for this.

SC VI.1: The facility was unable to confirm the burn off oven has a device to continuously monitor the temperature in the secondary chamber or afterburner and record the temperature at least once every 15 minutes.

SC VI.3: The facility could not submit records to demonstrate they are tracking temperature data records for the burn off oven secondary chamber or afterburner. They will receive a violation for this.

An email was sent to the facility detailing the records they are required to keep and the format in which they are to keep them. They should no longer make claims that they are unable to retrieve records due to recently departed employees. They have received violation notices for not maintaining 12-month rolling time records twice now. Staff has instructed them how to do it.

Violations were sent for:

Not tracking gallons per month of every solvent used.

Not tracking the 12-month rolling time period. Compliance with the monthly and 12-month rolling VOC emission rates listed in SCs 1.1 and 1.2 (PTI#211-01) could not be determined.

Not tracking temperature data from the burn off oven.

Not maintaining records properly for five years on site.

NAME Rachel Sonaway

DATE 1-9-2020

SUPERVISOR RIL 1/10/20