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

B169264076

FACILITY: HECO		**SRN / ID:** B1692
LOCATION: 3509 S. BURDICK STREET, KALAMAZOO		**DISTRICT:** Kalamazoo
CITY: KALAMAZOO		**COUNTY:** KALAMAZOO
CONTACT: Allen Jeske , Vice President of Operations		**ACTIVITY DATE:** 08/17/2022
STAFF: Monica Brothers	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Unannounced inspection in response to a complaint received on August 16, 2022.		
RESOLVED COMPLAINTS:		

Staff, Monica Brothers, arrived on-site at 1:45 pm and met with Allen Jeske, the Vice President of Operations. This inspection was conducted in response to an odor and opacity complaint that was received by EGLE on August 16, 2022. Upon arrival, no visible emissions were observed from any of the stacks at the facility. There was one stack with a visible heat signature. HECO is an electric motor repair shop that commenced operations sometime in the 1950s. They currently have about 45 employees that work two ten-hour shifts, six days a week, with occasional weekends. They do not have any boilers or emergency generators at the facility, but they do have a few parts washers. They are currently operating under three Permits to Install, PTI #168A, PTI #188-93, and PTI #247-77 for three natural gas-fired burn-off ovens. These burn-off ovens are used to remove hydrocarbon materials from metal parts, mostly motor stators.

We began the inspection by taking a walk-through of the facility and then reviewed the required recordkeeping. I discussed the odor and opacity complaint with Allen, and he said that he was aware that they had an issue with their large Bayco burn-off oven the day the complaint was made. He said that they put a larger-than-usual motor stator into that burn-off oven, which caused much more smoke and odor than smaller stators. I reminded him that PTI #188-93 requires that their opacity for that burn-off oven is required to stay under 20% for a 6-minute average. I suggested that the facility be careful about what size stators they put in that burn-off oven in the future, in order to prevent a reoccurrence. I told him that if more complaints are received by EGLE, and if EGLE staff observes opacity above 20%, HECO will be given a Violation Notice. He said that he understood and would make sure to not let this happen in the future.

<u>Burn-Off Ovens:</u>

We took a look at the large Bayco burn-off oven, but it was not running at that time. It still had the very large motor stator inside of it. This burn-off oven has an afterburner, and Allen said that the entire oven will shut down if the afterburner is not working properly. The temperature for the afterburner is set to be above 1,400°F, however, it does not have a continuous temperature monitor like the newer Guspro burn-off oven does. We then went over to see the other two burn -off ovens. Allen said that the much smaller Bayco oven has not been used in 5 or 6 years. The newest burn-off oven, which is operated under PTI #168-13A, was running at the time of the inspection. The afterburner temperature was 1,460°F at that time, and their PTI requires that the afterburner temperature be maintained above 1,400°F. The oven also has an automatic temperature control system and an interlock system that shuts down the primary oven if the afterburner is not operating properly. Allen said that the primary chamber typically operates at 550-750°F, and the parts can stay in the oven any from 8-18 hours. He said that it is usually during the first 6 hours when they get the most opacity and odor. The burn-off ovens are inspected monthly.

Only the Guspro burn-off oven is required to keep records. According to PTI #168-13A, they are required to keeping continuous temperature records for the afterburner. I reviewed the circular charts for the past couple of years and they looked to be in compliance with the 1,400°F minimum temperature requirement. They are keeping track of how many batches are performed each month. However, they need to start doing a 12-month rolling calculation each month. I can tell from their records that they are below the maximum number of batches allowed on a 12-month rolling time basis of 104 batches per year, but they need to make this more apparent by doing the full calculation. No Violation Notice will be sent for this at this time, but this should be looked for in future inspections. They are also required to calibrate the thermocouples in both chambers once per year. Allen showed me the most recent thermocouple calibration which was done in February 2022. They are not allowed to put any bromine, uncured paints, PCB materials, lead materials, asbestos, rubber, or transformer cores in the burn-off ovens. Allen said that they do not load any transformers into the burn-off ovens, and therefore do not load any PCBs in them either. He also said that they look for any asbestos material on the items before they are put into the burn-off ovens. If asbestos is found, it is either sent back to the client or sent to DeLisle for removal before it is put into the ovens. Allen also showed me some maintenance records for the burn-off ovens.

VPI Epoxy System:

This is a vacuum pressure impregnation (VPI) vat that applies varnish to windings. It is a completely enclosed system that uses pressure to impregnate the part with varnish. The vacuum is then removed, and the excess varnish is drained with low pressure back into the enclosed varnish storage tank. The part is then cured in a cure oven. They are currently operating under the Rule 287(2)(c) exemption and are keeping varnish usage records. Their records show that they are under the 200 gallon per month limit.

Varnish Dip Tank:

This is a dip tank for varnish that Allen said holds about 525 gallons. This uses different varnish than the VPI system. This can be considered exempt under Rule 287(2)(c), and records show that they are under the 200 gallon per month limit for varnish usage.

Cure Ovens:

They have four cure ovens, two small ones, one medium (10'X10'X10'), and one large (14'X17'X17'). These are used to cure varnish and to dry water off parts. The cure ovens are operated between 250°F and 500°F. When the ovens are used for drying, they can be considered exempt under Rule 281(2)(e), and when they are used for curing varnish, they can be considered exempt and part of the painting line under Rule 287(2)(c).

Paint Booth:

They have one paint booth with a manometer that is checked daily. They have a sign at the paint booth that reminds the workers to change the filters if the manometer reads above 0.15". The booth was not operating at the time of the inspection, but the filters looked to be in good condition and appropriately installed. This can be considered exempt under Rule 287(2)(c). They are keeping records of their paint usage, which includes many aerosol cans, and are consistently under the 200 gallon per month limit.

Parts Washers:

They have one stationary parts washer and two smaller portable units. Each had the lid closed and rules posted during the inspection. These are maintained by Safety Kleen. These units can be considered exempt under Rule 281(2)(h).

Sandblasting, welding and machining:

They have a room for sandblasting, which is completely enclosed and internally vented as well as some machining equipment. These can be considered exempt under Rule 285(2)(vi). They also have some welding machines which are exempt under Rule 285(2)(i).

I thanked Allen for his time and left the facility at 4:00 pm. The facility seemed to be in compliance at the time of the inspection. However, it is recommended that the facility install a temperature recorder for the afterburner on the large Bayco burn-off oven and maintain the temperature above 1400°F at all times. The facility should also start keeping 12-month rolling records of the number of batches performed in the medium Guspro burn-off oven.

NAME Monica Brothers DATE 9/19/22 SUPERVISOR RJL 9/20/22