

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

N690846377

FACILITY: A & C Electric		SRN / ID: N6908
LOCATION: 41225 Irwin Road, HARRISON TWP		DISTRICT: Southeast Michigan
CITY: HARRISON TWP		COUNTY: MACOMB
CONTACT: Dan Arker ,		ACTIVITY DATE: 08/16/2018
STAFF: Kerry Kelly	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

**On August 16, 2018, I (Kerry Kelly) conducted a scheduled inspection of A & C Electric located at 41225 Irwin Road, Mt. Clemens, Michigan. This facility is identified by the State of Michigan with the State Registration Number (SRN) N6908. The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules; and Permit to Install (PTI) Number 344-00.**

A & C Electric operates an electric motor repair facility in Macomb County. The facility is immediately surrounded by industrial and commercial properties. The nearest residential area is approximately three-tenths of a mile south-southeast of A & C Electric. Equipment permitted in PTI 344-00 is a Bayco model BB-252 heat cleaning oven.

#### INSPECTION

I arrived at A & C Electric, entered the office and explained the purpose of the inspection to Mr. Dan Arker, A & C Electric. Mr. Arker answered questions and guided me during the facility walk through.

During the facility walk-through I inspected one permitted burn-off oven (EUHEATCLEAN), two bake ovens, a varnish dip tank, an aqueous based parts washer, a cold cleaner, a saw mill, a sand blast unit, balancers, 2 presses, 3 lathes, a milling machine, and a mig, tig, and arc welder. The equipment at the facility is used to dismantle, clean, wind, and assemble electric motors.

#### **PTI 344-00**

PTI 344-00 was issued to A & C Electric on December 19, 2000. This permit contains requirements for one emission unit: EUHEATCLEAN. EUHEATCLEAN is a Bayco model BB-252 and is permitted in PTI 344-00. EUHEATCLEAN was not operating at the time of the inspection.

Particulate emissions are limited to 0.05 lbs/1000 lbs of exhaust gases and 0.17 pounds/hour respectively in PTI 344-00. Compliance with the emission rates are to be demonstrated by operating the afterburner above 1400 degrees Fahrenheit, not opening the oven after the cleaning cycle has started, and keeping the following records:

- Total hours of operation of EUHEATCLEAN
- Operating temperature of the afterburner while EUHEATCLEAN is operating
- Pounds of coated wire processed in EUHEATCLEAN.

During the inspection I verified that A & C is keeping records of the operating hours, the primary burner and afterburner temperatures, and the pounds of material processed. The temperature records on site indicate the afterburner temperature was above 1400 degrees Fahrenheit while EUHEATCLEAN was operating. Mr. Arker provided records of the temperature charts for dates I requested (Attachment 1).

The processing of asbestos or chloride containing wire insulation in the Bayco oven is prohibited in PTI 344-00. Mr. Arker stated only copper, no asbestos or chloride containing insulation, is processed in the Bayco oven.

A & C is only permitted to process 300 pounds or less of coated wire in any given batch according to Special Condition 5. Records of the amount of coated wire processed per batch were provided by Mr. Arker for September 2018 (Attachment 1). These records indicate the maximum amount of wire processed in EUHEATCLEAN was 100 pounds. It appears the amount of wire processed per batch is less than the permit limit.

Opening the door on EUHEATCLEAN after the cleaning cycle has started is prohibited in the permit and operating procedures for EUHEATCLEAN are required to be posted in a conspicuous place near the oven. During the inspecting I saw operating procedures posted in a conspicuous area near the Bayco oven. These instructions include the statement "DO NOT OPEN DOORS DURING OPERATION". A copy of the instructions is attached (Attachment 2).

The stack height for EUHEATCLEAN is required to be at least 27 feet above ground level and the stack diameter be no more than 16 inches. Visible emissions from the EUHEATCLEAN are limited to 5 percent opacity. EUHEATCLEAN was not operating during the inspection and I was unable to see the stack to evaluate approximate dimension. Compliance with the stack dimensions and opacity limit was not evaluated during the inspection.

### **UNPERMITTED EQUIPMENT/PROCESSES**

#### **WIRE COATING PROCESS**

I inspected an unpermitted wire coating process. The process involves dipping wire, using a hoist, into an approximately 500 gallon tank filled with varnish. During the inspection the lid to the varnish tank was open and it appeared an operator was preparing to coat some wire. Mr. Arker provided an SDS for the varnish used (Attachment 3). The SDS states the varnish is made up of 26 percent naphtha and 26 percent xylene. After parts are removed from the varnish tank they are placed in an electric drying oven with emissions released, uncontrolled to the ambient air. According to Mr. Arker, the varnish coated parts are heated for about 12 hours in at about 210 degrees Fahrenheit.

During the May 10, 2017 inspection I observed another varnish coating and drying process. This varnish coating process was done using a combined dip and dry unit where parts were first lowered to the dip tank then lifted, automatically, to the dryer. Mr. Arker explained during the August 16, 2018 inspection that he removed this varnish tank and now the oven is used for drying motor linings. According to Mr. Arker, varnish is air dried. On August 16, 2018 I saw that this varnish tank had been removed.

It appears all varnish application and drying processes at the facility need to be permitted. I referred Mr. Arker to the AQD's Office of Environmental Assistance for help with the permitting process.

#### **AQUEOUS BASED PARTS WASHER**

A & C Electric uses a two-part aqueous-based parts washer to clean parts. According to Mr. Arker, this process involves washing parts in a wash tanks filled with water and detergent then steaming parts using an evaporator. Mr. Arker provided the SDS for the cleaning product used in this parts washer (Attachment 4). The SDS indicates the product contains zero grams/liter VOC. This parts washer appears to be exempt from PTI requirements per Rule 281(2)(k).

#### **DISMANTLING AND ASSEMBLY PROCESS**

In the dismantle and assembly area of the facility I inspected a saw mill, a sand blast unit, balancers, 2 presses, 3 lathes, a milling machine, and a mig, tig, and arc welder. The emissions from each of these pieces of equipment were released into the general in-plant environment. This equipment appears to be exempt per Rule 285(2)(i) and Rule 285(2)(l).

#### **COLD CLEANER**

I observed a 55-gallon drum of xylene with a spout on it during the inspection. Under the spout there was a 5 gallon bucket. Near the xylene there was a garbage can containing used rags with xylene on them. According to Mr. Arker, the xylene is used to clean parts and employees' hands. Initially the cover to the 5 gallon bucket was not covered, nor was the garbage can containing used rags. I advised Mr. Arker to cover the bucket and garbage can. Mr. Arker immediately had an employee cover the bucket and garbage can and a sign to keep the containers covered. The containers were covered at that time. Mr. Arker put operation instructions for a cold cleaner in plain site near the xylene station. I also advised Mr. Arker that xylene is known to be harmful to human health and should not be used as a hand cleaner. The xylene cleaning may meet the definition of cold cleaner if it is only being used to clean metal or plastic parts. The definition of cold cleaner in Rule 103 (aa) means a tank containing organic solvent with a volatile organic compound content of 5 % or more, by weight, and at a temperature below its boiling point that is used to spray, brush, flush, or immerse metallic and/or plastic objects for the purpose of cleaning or degreasing.

#### **RESOLVED VIOLATIONS**

During the May 10, 2017 inspection a second burn-off oven was observed installed at the facility. This oven was a "Cramer" oven. This oven was unpermitted and, as a result, a notice of violation was issued for failure to obtain

a permit to install. On August 16, 2018 I inspected the area where the Cramer oven used to be and noted the space was empty. Mr. Arker said it was outside and we went to see it dismantled. The Cramer oven was not outside and an A & C employee standing nearby said it had be picked up by scrapers. It appears the violation for installation of the Cramer oven can be resolved since the equipment has been removed.

CONCLUSION

Based on the information gathered during this inspection, it appears A & C Electric is in violation of Rule 201 for installing a wire coating process. A violation notice will be issued.

NAME K. Kelly

DATE 10/11/18

SUPERVISOR Joyce A

