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

P038430142

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| **FACILITY:** American Rack Company | | **SRN / ID:** P0384 |
| **LOCATION:** 4910 Kraft Ave SE, GRAND RAPIDS | | **DISTRICT:** Grand Rapids |
| **CITY:** GRAND RAPIDS | | **COUNTY:** KENT |
| **CONTACT:** Matt Zomberg , Operations Manager | | **ACTIVITY DATE:** 07/10/2015 |
| **STAFF:** David Morgan | **COMPLIANCE STATUS:** Non Compliance | **SOURCE CLASS:** SM OPT OUT |
| **SUBJECT:** | | |
| **RESOLVED COMPLAINTS:** | | |

At 9:40 A.M. on July 10, 2015, Air Quality Division staff Dave Morgan and Kaitlyn Devries conducted an unannounced self-initiated inspection of American Rack Company (a Division of Associated Rack Corporation) located at 4910 Kraft Avenue in Cascade Township. The purpose of the inspection was to verify the company's compliance with state and federal air pollution regulations as well as Permit to Install (PTI) No. 151-12. Accompanying AQD staff on the inspection was Matt Zomberg, Operations Manager and Ken Haskins, Shop Supervisor.

FACILITY DESCRIPTION

American Rack Corporation (ARC) refurbishes part racks used in the electroplating process. The part racks are dipped in plastisol to protect the metal racks. The company strips off the old plastisol coating on the racks, conducts maintenance and then recoats the racks with plastisol. The coating line and burn-off oven are covered under PTI No. 151-12. The facility has opt-out limits for hazardous air pollutants, which consist primarily of hydrogen chloride.

COMPLIANCE EVALUATION

Rack Burn-Off Oven (EUBURNOFF):

Under PTI 151-12 the company operates a Guspro rack burn-off oven (EUBURNOFF) to remove the plastisol coating from plating racks that the facility refurbishes. At the time of the inspection the equipment was operating in a normal manner with four racks loaded into the oven batch. According to ARC, the unit operates at least once per day (or one batch). One batch runs approximately 8 hours with about 1 hour for heat up and 1 hour for cool down. The primary chamber is operated under different soak cycles (long, short, and clean) typically from 450°F to 800°F. At the time of the inspection the primary chamber temperature was approximately 460 °F.

The oven has a secondary afterburner with an automatic temperature control system and interlock as required by the permit. At the time of the inspection, the afterburner temperature was operating around 1,470 °F which is above the minimum temperature limit of 1,400°F in the permit. The permit requires that the primary and secondary chamber thermocouples be calibrated once per year. These thermocouples were calibrated by Consolidated Controls Inc. in April 2015.

A circular chart is used to record afterburner temperature. AQD staff reviewed these records on site. From January 2015 through June 2015 records showed many occasions where the afterburner temperature was recorded at or just below 1,400°F. Upon further inspection at the oven, a discrepancy was noted between the digital temperature display and the paper chart recorder. It appeared that the pen was maladjusted on the recorder and the digital temperature was well above the minimum required temperature. However, because the official monitoring record showed the afterburner temperature below 1,400 °F a violation will be cited.

Stack dimensions appeared to meet the minimum height requirement of 29 feet and the maximum diameter of 16 inches. At the time of the inspection, no visible smoke emissions were observed from the stack. Heat waves from the stack were observed.

In May 2013, a performance test was conducted on the burn-off oven as required under PTI No. 151-12. Results of that test determined hydrogen chloride emissions to be 1.73 pounds per hour which is below the permit limit of 16.33 pounds per hour. Although the test was conducted at maximum routine production conditions, Mr. Haskins indicated that the oven is typically operated at about 50% of oven capacity.

Company records from July 2014 through June 2015 show that 188 batches were processed which is below the permit limit of 220 batches per 12-month rolling time period. In addition, hydrogen chloride emissions for the same time period were 2,601 pounds based emission factors established during stack testing.

Sandblasting:

There is one sandblasting booth that is fully enclosed and exhausted through an internal baghouse. This unit is not exhausted out of the building. This equipment is exempt under Rule 285(I)(vi)(B).

Primer Dip Coating:
After the parts are sandblasted, a soap solution is pasted on the part clips and is readied for priming. The rack is dipped into a 650 gallon rectangular tank containing a primer and MEK mixture. The tank is not in a booth, however, there is an air handling system to allow solvent fumes to be vented to the ambient air. There are no exhaust filters, however, no coating atomization is occurring.

The company operates this tank under Rule 287(c). According to company records the highest primer usage from July 2014 through June 2015 was less than 14 gallons per month which is below the 200 gallon per month limit in Rule 287 (c).

Plastisol Coating:
The heated racks are dipped into a 2,300 gallon rectangular tank containing black plastisol and reducer. Plastisol from 275 gallon bulk totes and a small amount of reducer is added to the tanks on an as needed basis. This emission unit was originally in stalled under Rule 287(c). Records show that coating usage records are above the 200 gallons of coating per month limit. Records for July 2014 through 2015 show highest usage per month at 433 gallons. Therefore the Rule 287(c) requirements are not met. However, the emission unit can be considered exempt under Rule 290; there are no VOC emissions from the plastisol and therefore below 1,000 pounds per month. The company is using plastisol and reducer coatings manufactured by Chemionics Corporation; these have not changed since the last AQD inspection.
Curing Oven:
After the racks have been coated with plastisol, the racks are cured in a 3.5 million Btu/hour, natural gas-fired oven around 390 °F for about 40 minutes. The oven is exempt from permitting under Rule 282(b). It is noted that although the set point is around 390 °F, the primary chamber can handle a maximum temperature of 500°F. It is also noted that this oven has an afterburner control that was operating at 1,425°F on the day of the inspection. The company was advised that no destruction of plastisol coatings is to occur in this oven or a permit would be necessary. There was no evidence to indicate that this booth was being used as a burn-off oven.

Welding:
The company has various welding stations that are exempt under Rule 285(i).

Miscellaneous:
It is noted that the AQD received a complaint from the Federal Aviation Administration (FAA) in January 2013 regarding unreasonable nuisance odors and fumes generated from ARC affecting FAA employees when servicing the FAA Radar facility including the tower structure and inside the equipment facility. At that time, the AQD did not have sufficient information to verify a nuisance under Rule 901. AQD staff advised the FAA representatives that the AQD evaluates the existence of a nuisance odor based on the frequency of occurrence, duration of event and intensity of the odors. FAA representatives were also encouraged to make direct contact with AQD and ARC when the odor was occurring so a timely response could be made. Subsequent correspondence with FAA occurred in 2014 and 2015. It is noted that the FAA has taken additional steps for employee protection such as coordinating with ARC on the operation of the burn-off oven when FAA personnel are on site, implementing personal protection procedures, and conducting indoor air sampling of its facility. Mr. Zomberg indicated that ARC adjusts burn-off oven operation when requested by the FAA.

SUMMARY
American Rack Company will be sent a violation notice for the violation identified above. Attached to this report are records obtained during the inspection.

NAME [signature] DATE 7/14/15 SUPERVISOR PMB