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

N829951718

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| FACILITY: AGA MARVEL | | SRN / ID: N8299 |
| LOCATION: 1260 E VANDEINSE ST, GREENVILLE | | DISTRICT: Grand Rapids |
| CITY: GREENVILLE | | COUNTY: MONTCALM |
| CONTACT: Kent Coon , Manufacturing Director | | ACTIVITY DATE: 12/17/2019 |
| STAFF: Adam Shaffer | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MINOR |
| SUBJECT: Scheduled unannounced inspection. | | |
| RESOLVED COMPLAINTS: | | |

**Air Quality Division (AQD) staff Adam Shaffer (AS) arrived at the Marvel (formerly known as AGA Marvel) facility located in Greenville, MI on December 17, 2019, at 9:58am to complete a scheduled unannounced inspection. The weather conditions at the time of the inspection were sunny skies, temperatures in the low 20's °F and winds from the north/northwest at 5-10mph. Prior to entering the facility, offsite odors and emission observations were completed. No odors were noted coming from the site and emissions observed appeared to be steam.**

## Facility Description

**Marvel is a manufacturer of "under the counter" refrigerators. The facility this past October ceased operation of their residential stove production line. The facility is a true minor source for criteria pollutants. The site currently operates five days a week with one shift for part assembly and two shifts for part fabrication.**

## Compliance Evaluation

**Upon entering the site, AQD staff AS met with Mr. Kent Coon, Manufacturing Director, who provided a tour of the facility, answered site specific questions and provided requested records during and after the inspection. Additionally, Chris Wright, a representative of Marvel, helped answer onsite questions during the inspection.**

## Additional Observations

- **Two foam departments were observed during the inspection. Here foam insulation material is pumped into the constructed refrigeration units along with various internal components for each unit. Previously, in order to be exempt from Rule 201 permitting Marvel had utilized the Rule 290 exemption for this area. Monthly emission records were requested and provided for 2018 and 2019. Additionally, Safety Data Sheets for the two materials used were provided. In 2008, Marvel had provided documentation claiming an emission factor for methylene diphenyl diisocyanate (MDI) emissions of 0.0051 lbs of MDI per ton of isocyanate. This emission factor appears to have been determined by the Alliance for the Polyurethanes Industry. Additionally, an emission factor of 0.0077 lbs of volatile organic compound (VOC) emissions per pound of foam used was utilized and taken from previous stack testing by Electrolux for similar operations. Both emission factors were determined at the time to be acceptable and have been used since then. It was determined that the two emission factors appear to be acceptable at this time, however, if more acceptable/accurate emission factors are found then the records will be updated accordingly. Marvel staff were made aware of this following the site inspection. For the month of October 2019, approximately 99.39 lbs of VOCs were emitted and 0.02 lbs of MDI were emitted. This is within the applicable limits of 1,000 lbs and 20 lbs respectively. Previous monthly records reviewed also appeared to be within the applicable limits. Additionally, it should be noted that this is the combined usage for both lines. Based on the records reviewed, the two foam departments appear to be exempt from Rule 201 permitting under Rule 290. During the inspection the storage tanks used for the two materials were observed. Emissions from the tanks should be included with the monthly emission records. Based on how low reported emissions are from the foam departments, it is highly unlikely emissions were to exceed applicable limits.**
- **One powder coating area was observed during the site inspection. Hand / automatic application spray lines were observed in the booth. Spent powder coating material is collected by a dust collection system that vents internally. Collected material is either reused or disposed of properly. The dust collection system is a pulse jet baghouse with cartridge filters that are replaced approximately every six months. Prior to the powder coating area parts are washed in a**

wash station and following powder coat application parts are sent through a bake oven to cure the parts. The wash station, powder coating operations and bake oven appear to be exempt from Rule 201 permitting under Rule 287(2)(d). It was also determined that burn off of part hangers is completed offsite.

- One emergency generator was observed during the site inspection that is used for electric power generation during a power outage. The emergency generator is a Kohler Model # 125REZGC, 125 kw sized generator that runs on natural gas. The emergency generator was installed in October 2019. The emergency generator is subject to the New Source Performance Standards (NSPS) Subpart JJJJ for Stationary Spark Ignition Internal Combustion Engines. A non-resettable hour meter was observed on the generator at the time of the inspection that read 47.1 hours. Marvel staff stated the generator will do a test run every Monday for a half hour. Based on the length of a test run and the date of installation the total engine run hours was higher than expected and this was brought to the attention of Marvel staff. It was determined there was an issue upon installation and the engine would run eight hours a day for what appeared to be the test run. This was fixed accordingly and appeared acceptable. Due to the unit just recently being installed no maintenance has been completed yet. A certificate of conformity was requested and provided. Based on the observations made and records provided, the Emergency Generator Model # 125REZGC appeared to be in compliance with NSPS Subpart JJJJ rules and regulations. The emergency generator appears to be exempt from Rule 201 permitting under Rule 282(2)(b)(i). The emergency generator appears to be subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ – Reciprocating Internal Combustion Engines. However, the AQD has not been delegated enforcement of this NESHAP by the EPA, and an applicability determination was not completed.
- Thermoforming equipment was observed during the inspection that appears to be exempt from Rule 201 permitting under Rule 286(2)(d).
- Welding operations were observed that appear to be exempt from Rule 201 permitting under Rule 285(2)(i).
- Various metal fabrication processes including two laser cutting operations were observed that are vented inside and appear to be exempt from Rule 201 permitting under Rule 285(2)(l)(vi)(B).
- Currently, Marvel has onsite equipment used to pump refrigerant into units during the assembly process. The product currently used is 134a (1,1,1,2-tetrafluoroethane), which is not considered a VOC. Marvel is installing equipment that would also allow them to pump R600a (isobutane) refrigerate into refrigerators during assembly.

Conclusion

Based on the facility walkthrough, observations made, and records received, Marvel appears to be in compliance with applicable air pollution control rules at this time.

NAME Adam F. Huff DATE 01/10/20 SUPERVISOR