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

N742850978

FACILITY: GRAND RAPIDS FOAM TECHNOLOGIES		**SRN / ID:** N7428
LOCATION: 2788 REMICO SW, WYOMING		**DISTRICT:** Grand Rapids
CITY: WYOMING		**COUNTY:** KENT
CONTACT: Eric Eldridge , Plant Manager		**ACTIVITY DATE:** 10/15/2019
STAFF: Adam Shaffer	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Scheduled unannounced inspection.		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff Adam Shaffer (AS) arrived at the Grand Rapids Foam Technologies (GRFT) facility located in Wyoming, MI at 9:43 am on October 15, 2019, to complete a scheduled unannounced inspection. The weather conditions at the time of the inspection were partly cloudy skies, temperatures in the low 40's °F and winds from the southeast at 5-10mph. Prior to entering the facility, offsite odor evaluations and emission observations were completed. No emissions were noted from the facility. A plastic odor was noted to the northwest of the facility; however, no odor complaints have been received recently regarding this facility.

Facility Description

GRFT is a polyurethane foam part manufacturing company. The facility is an opt out source for volatile organic compounds (VOCs). The facility is in operation with Opt Out Permit to Install (PTI) No. 11-05A. Since the last inspection, no new changes have occurred to the site regarding air quality.

Offsite Compliance Evaluation

Due to the timing of the inspection, the 2018 Michigan Air Emissions Reporting System (MAERS) Report was reviewed. Emissions reported for 2018 were similar to the records that were provided. The 2018 MAERS Report was determined to be acceptable.

Compliance Evaluation

Upon entering the site, AQD staff AS met with Mr. Tom Brenner, Vice President of Sales and Product Development, and Mr. Eric Eldridge, Plant Manager, who provided a tour of the site, answered site specific questions, and provided select records onsite. Following the site inspection, follow up items requested were provided by several GRFT staff.

Opt Out PTI No. 11-05A

FG-MOLDLINES

This flexible group is for the four lines used to produce polyurethane foam parts (EU-LINE1, EU-LINE2, EU-LINE3, and EU-LINE4). Additional specifics for each line are provided below. In 2012, the entirety of EU-LINE4 had been removed. EU-LINE4 recordkeeping pertaining to PTI No. 11-05A would no longer apply. However, each specific VOC limit for the remaining three lines included in FG-MOLDLINES and overall VOC limit would still apply. In place of EU-LINE4 is the SAIP line and has been previously exempt from Rule 201 permitting under Rule 290.

The three remaining mold lines associated with FG-MOLDLINES (EU-LINE1, EU-LINE2, and EU-LINE3) were observed during the course of the site inspection with the various process steps for each line discussed at length. Each line is used to create polyurethane foam parts. The general process for each line is a mold design is heated by an electric oven or a thermolator (water heated). Once the mold design is heated, a mold release is applied to the inside of the mold design before the raw materials are added. The mold design is sealed shut and the foam materials are cured. Following curing the mold is taken out of the mold design before going through the remaining steps prior to being shipped offsite. Additional specific items for each line are discussed further below.

EU-LINE1 – At the time of the inspection GRFT staff stated that the robotic spraying portion of the line had been removed and the mold release was hand applied. The area where the robotic spraying area formerly was located was observed and the equipment removed.

EU-LINE2 – Dry filters observed for this line appeared to be acceptable. Dry filters are changed on a PM schedule but also if needed. `

EU-LINE3 – GRFT staff stated that the mold release is currently hand applied, however, they intend to switch back to robotic application. Dry filters were observed and appeared to be in need of replacement. This was discussed with GRFT staff and they planned to address this.

Per Special Condition (SC) 1.3, each spray booth shall use high volume low pressure (HVLP) applicators or comparable technology with equivalent transfer efficiency with test caps available for testing. Speaking with Mr. Eldridge, this appeared to be being completed.

FG-MOLDLINES is subject to several emission limits for each specific foam line.

EU-LINE1 is subject to a 16 ton per year (tpy) limit for VOCs per a 12-month rolling time period. Records were provided back to 2018 and reviewed. For the month of September 2019, approximately 0.20 tons of VOCs were emitted. As of September 2019, 1.84 tons of VOCs were emitted per a 12-month rolling time period, which is within the permitted limit. Previous 12-month rolling time periods reviewed were also within the permitted limit.

EU-LINE2 is subject to a 16 tpy limit for VOCs per a 12-month rolling time period. Records were provided back to 2018 and reviewed. For the month of September 2019, approximately 1.08 tons of VOCs were emitted. As of September 2019, 12.24 tons of VOCs were emitted per a 12-month rolling time period, which is within the permitted limit. Previous 12-month rolling time periods reviewed were also within the permitted limit.

EU-LINE3 is subject to a 20 tpy limit for VOCs per a 12-month rolling time period. Records were provided back to 2018 and reviewed. For the month of September 2019, approximately 0.17 tons of VOCs were emitted. As of September 2019, 2.85 tons of VOCs were emitted per a 12-month rolling time period, which is within the permitted limit. Previous 12-month rolling time periods reviewed were also within the permitted limit.

EU-LINE4 is subject to a 42 tpy limit for VOCs per a 12-month rolling time period. As stated previously, the individual limit for EU-LINE4 is no longer applicable.

FG-MOLDLINES is subject to a 73 tpy limit for VOCs per a 12-month rolling time period. The combined permitted limits of EU-LINES1-3 are less than 73 tpy and each of the three lines emissions are well within their respective permitted limits. Based on the records reviewed, GRFT appears to be meeting this 73 tpy limit of VOCs for the three remaining coating lines.

Per SC 1.4, GRFT shall determine the VOC content for any mold release, paste wax, or adhesive used, as applied and as received, using Test Method 24. Alternatively, upon written approval by the AQD District Supervisor, the permittee may use manufacturers formulation data from the supplier to determine the VOC content. In a letter to GRFT dated September 28, 2017, the request to utilize manufacturers formulation data was approved. Records were requested from GRFT to verify the VOC content for the materials utilized on the three remaining lines associated with FGMOLDLINES. Information from suppliers was provided for each material used, and after further review, appeared to be acceptable.

Per SC 1.6.a-e, GRFT shall keep for FGMOLDLINES monthly records of usages rates, VOC contents, VOC monthly / 12-month rolling time period records, and hours of operation. Records were requested and reviewed. After further review, GRFT appears to be keeping track of usage rates, VOC contents and monthly / 12-month rolling time periods of VOC emissions. Regarding the hours of operation, GRFT staff stated usages are based off sixteen hours per day five days a week. This appears to be acceptable.

There are three stacks listed in FG-MOLDLINES that are for the three remaining mold lines. The stacks were observed discharging unobstructed vertically during the site inspection. Though the exact dimensions were not measured, they appeared to be consistent with the dimensions listed in PTI No. 11-05A.

Additional Observations

- The SAIP line was observed during the site inspection. Spraying completed at this line is manual application. Dry filters are used for the spray line and were covered with large amounts of

particulate. When this was brought to the attention of staff, it was concluded that the filters would be changed at the end of the day. This line had previously utilized Rule 290 to be exempt from Rule 201 permitting. Emission records were provided at the end of the inspection and reviewed. For the month of September 2019, approximately 0.1379925 tons of VOCs were emitted which is within the applicable limit. Previous monthly emissions also appeared to be within the applicable limit. MSDS were provided for the one material used. Based on the records reviewed, the Rule 290 exemption appears to be applicable for the SAIP line.

- The Black-Jack glue application area was observed during the site inspection. The area consists of eight spray booths which vent internally. Control of the spray booths consisted of an outer cover and inner filters.
- A mutual drum usage area was observed at the time of the site inspection. This area contains drums of mold release that are used by all the lines. Previously GRFT had utilized Rule 290 to be exempt from Rule 201 permitting for this area.
- During the inspection, six additional mold lines were observed. It was verified by GRFT staff that each line is its own individual process. Mold release for each mold line is manually applied in each area. Emission records were provided at the time of the inspection. Emissions were split up by material and not per each machine. For the month of September 2019, approximately 0.1054 tons of VOCs were emitted. As of September 2019, approximately 1.2686 tons of VOCs were emitted per a 12-month rolling time period.
- Three bulk storage tanks of approximately 8,000 gallons in size containing various products used for the mold lines were observed. Additionally, what appeared to be a mixing area was observed.

Rule 278a / Potential to Emit

A Rule 278a request dated November 6, 2019, was sent to the company to determine the applicability of potential exemptions for remaining equipment on site that was not included in PTI No. 11-05A. In addition, a Potential to Emit (PTE) for the entire facility was requested for VOCs and hazardous air pollutants (HAPs). An addendum shall be made to this report once the Rule 278a demonstration and PTE response has been received and reviewed.

Conclusion

Based on the review of the records provided and the facility walk through, GRFT appears to be in compliance with PTI No. 11-05A and applicable air pollution control rules at this time. However, as stated above, an addendum will be made to the inspection report to include the results of the Rule 278a request and PTE demonstration.

Addendum December 6, 2019

A Rule 278a and PTE demonstration, dated December 6, 2019, was submitted to AQD staff AS. Upon review of the documents provided, the following items were identified and are listed below.

- Potential exemptions for each piece of equipment were provided. Additional follow up was completed on select details. It was determined that proposed exemptions provided by GRFT for each piece of equipment appeared to be applicable.
- The sitewide PTE for VOCs was 71.02 tpy, and the sitewide PTE for Aggregate HAPs was 3.5 tpy. After further review of the documentation provided, the PTE demonstration appears to be acceptable. Based on the PTE demonstration, GRFT would be considered a true minor source of criteria pollutants, however, the site is still considered an opt out source of VOCs due to PTI No. 11-05A. Moving forward, GRFT shall submit a PTI application to modify PTI No. 11-05A and remove application emission limits for equipment that is no longer onsite, thus making GRFT a true minor source of criteria pollutants.
- During the review of the PTE demonstration for each process/equipment on site it was noted that the three remaining foam production lines permitted under PTI No. 11-05A were given a PTE of 1 tpy each of Aggregate HAPs. This is due to the methylene diphenyl diisocyanate (MDI) emissions during the process and are expected to be low. Reviewing the PTI No. 11-05A / historical version of the permit documents, MDI appears to only be discussed in the process operations. After speaking with AQD Permit Staff on MDI, it was determined the 1 tpy PTE of Aggregate HAPs for each line would appear to be acceptable at this time. Since MDI is a HAP and is used during process operations, GRFT is potentially subject to the National Emission Standards for

Hazardous Air Pollutants Subpart OOOOOO – Flexible Polyurethane Foam Production and Fabrication Area Sources. The AQD has not been delegated authority over this MACT from the EPA, therefore, a determination of compliance was not completed during the course of this inspection.

The Rule 278a / PTE demonstration was determined to be acceptable. Based on the information provided, GRFT appears to be in compliance with applicable air pollution control rules.

NAME adam F. Griffith DATE 01/02/20 SUPERVISOR