

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

B620255218

<b>FACILITY:</b> E-T-M Enterprises, Inc.	<b>SRN / ID:</b> B6202
<b>LOCATION:</b> 920 N. Clinton St., GRAND LEDGE	<b>DISTRICT:</b> Lansing
<b>CITY:</b> GRAND LEDGE	<b>COUNTY:</b> EATON
<b>CONTACT:</b> Ron Clewley , Quality Environmental Manager	<b>ACTIVITY DATE:</b> 09/22/2020
<b>STAFF:</b> Daniel McGeen	<b>COMPLIANCE STATUS:</b> Compliance
<b>SOURCE CLASS:</b> MAJOR	
<b>SUBJECT:</b> Partial Compliance Evaluation (PCE) activities, conducted as part of a Full Compliance Evaluation (FCE): 1.) scheduled inspection, and 2.) review of facility recordkeeping.	
<b>RESOLVED COMPLAINTS:</b>	

**Emission Units:**

Order in report	Emission Unit* ID, and Flexible Group ID	Emission Unit description	ROP, Permit to Install (PTI) or exemption rule	Federal regulations, if applicable	Compliance Status
1.	EUFLINERBOOTH; FGMACTPPPP	Coating paint system consisting of solvent wipe/tack off, spray booth, flash off booth, and oven. Coating line used to coat plastic exterior automotive parts.	MI-ROP-B6202-2015	40 CFR Part 63, Subpart PPPP	Pending, regarding Method 24 condition
2.	EUBARRELMIXERS; FGPRESSANDMIXING	Two 300 lb capacity barrel mixers.	MI-ROP-B6202-2015	40 CFR Part 63, Subpart WWWW	Compliance
3.	EUBATCHMIXER; FGPRESSANDMIXING	2,500 lb capacity batch mix tank.	MI-ROP-B6202-2015	40 CFR Part 63, Subpart WWWW	Compliance
4.	EUHYDPRESSES; FGPRESSANDMIXING	A fiberglass parts manufacturing process with currently 18 hydraulic presses. Presses range in size from 50-1,000 tons. Presses utilize gel coat, fiberglass mat, and a catalyzed resin system to manufacture reinforced plastic composite parts.	MI-ROP-B6202-2015	40 CFR Part 63, Subpart WWWW	Compliance
5.	EUBONDING; FGMACTPPPP	Bonding and gluing operations.	MI-ROP-B6202-2015	40 CFR Part 63, Subpart PPPP	Compliance
6.	EUSANDBOOTH; FGSANDGRINDROUT	Sanding booth for sanding plastic parts. Controlled by a dust collector.	MI-ROP-B6202-2015	NA	Compliance
7.	EUROUTING; FGSANDGRINDROUT	Routing operation for plastic parts 352-83. Controlled by 3 dust collectors.	MI-ROP-B6202-2015	NA	Compliance
8.	EUGRINDING; FGSANDGRINDROUT	Grinding operation for plastic parts 354-83. Controlled by a dust collector.	MI-ROP-B6202-2015	NA	Compliance
9.	EUSEALER; FGRULE290	Operation(s) where sealers are applied to plastic parts.	MI-ROP-B6202-2015	NA	Compliance
10.	EURTM; FGFIBERGLASS	Resin transfer molding (RTM) operation to manufacture reinforced plastic parts. The resin is applied and cured under vacuum in a closed mold.	PTI No. 50-15B	40 CFR Part 63, Subpart WWWW	Compliance
11.	EUGELCOAT; FGFIBERGLASS	The application of gelcoats will be done in the open. However, the gel coat application for large parts may be done in a booth.	PTI No. 50-15B	40 CFR Part 63, Subpart WWWW	Compliance
12.	EUGELCOAT2; FGFIBERGLASS	The application of gelcoats done in the positive pressure gelcoat booth.	PTI No. 50-15B	40 CFR Part 63, Subpart WWWW	Compliance
13.	EUADHESIVE ; FGFIBERGLASS	Adhesive products used in the manufacturing of parts.	PTI No. 50-15B	40 CFR Part 63, Subpart WWWW	Compliance
14.	EUCLEANUP; FGFIBERGLASS	Miscellaneous cleanup activities.	PTI No. 50-15B	40 CFR Part 63, Subpart WWWW	Compliance
15.	EUMIXER; FGFIBERGLASS	Mixer associated with the reinforced plastic parts manufacturing process.	PTI No. 50-15B	40 CFR Part 63, Subpart WWWW	Compliance

\* An *emission unit* is any part of a stationary source that emits or has the potential to emit an air contaminant.

### Flexible Group summary table:

Flexible Group** ID	Flexible Group description	Associated Emission Unit IDs	ROP or PTI
FGPRESSANDMIXING	A reinforced plastic composite parts manufacturing process with 18 (originally 20) hydraulic presses. Presses range in size from 50-1,000 tons. Presses utilize gel-coat, fiberglass mat, and a catalyzed resin system. Two 300 lb barrel mixers and a 2,500 lb capacity batch mix tank are used to prepare the materials.	EUBARRELMIXERS, EUBATCHMIXER, EUHYDPRESSES	MI-ROP-B6202-2015
FGMACTPPPP	Each new, reconstructed, and existing affected source engaged in the surface coating of plastic parts and products, identified within each of the four subcategories listed in 40 CFR Part 63, Subpart PPPP, 63.4481(a)(2) to (5).	EUFLINERBOOTH, EUBONDING	MI-ROP-B6202-2015
FGSANDGRINDROUT	Sanding, routing, and grinding of plastic automotive parts.	EUSANDBOOTH, EURROUTING, EUGRINDING	MI-ROP-B6202-2015
FGRULE290	Operation(s) where sealers are applied to plastic parts.	EUSEALER	MI-ROP-B6202-2015
FGFIBERGLASS	Resin transfer molding (RTM) and the associated gelcoat application process to manufacture reinforced plastic parts.	EURTM, EUGELCOAT, EUGELCOAT2, EUADHESIVE, EUCLEANUP, EUMIXER	PTI No. 50-15B
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grandfathered equipment and exempt equipment.		PTI No. 50-15B

\*\*A *flexible group* is used in a permit to install (PTI) or Renewable Operating Permit (ROP) to combine two or more emission units that have common or identical requirements.

### Processes in ROP application which do not appear in ROP:

Exempt Emission Unit ID	Description of exempt Emission Unit	Rule 212(4) exemption	Rule 201 exemption
EU001TANKS	Two 6,000 gallon tanks filled with resin containing styrene	Rule 212(4)(b)	Rule 284(i)
EU001BAKEOVEN	Bake oven used to cure molds	Rule 212(4)(c)	Rule 282(a)(i)

### Introduction:

On 9/22/2020, the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD) conducted a scheduled inspection of E-T-M Enterprises, Inc. (ETM). This facility was last inspected by AQD on 8/15/2018.

### Environmental contacts:

- Ron Clewley- Quality Manager, 517-627-8461 ext 1257, [ron.clewley@etmenterprises.com](mailto:ron.clewley@etmenterprises.com)
- Jack Brockhaus- Technical Services Director, 517-925-1103, [jack.brockhaus@etmenterprises.com](mailto:jack.brockhaus@etmenterprises.com)

### Facility description:

ETM manufactures reinforced plastic composite parts for trucks and agricultural machinery.

**Regulatory overview:**

ETM is not a major source for criteria pollutants. A major source for criteria pollutants has the potential to emit (PTE) of 100 tons per year (TPY) or more of any one of the criteria pollutants; that is, those pollutants for which a National Ambient Air Quality Standard (NAAQS) exist. These include carbon monoxide, nitrogen oxides, sulfur dioxide, volatile organic compounds (VOCs) lead, particulate matter smaller than 10 microns (PM-10), and particulate matter smaller than 2.5 microns (PM2.5). ETM has an opt-out permit, PTI No. 52-15B, which limits the PTE for VOCs to 99 TPY, to keep it from becoming a major source for criteria pollutants.

A major source for hazardous air pollutants (HAPs) has the potential to emit 10 TPY or more of a single HAP, or 25 TPY of aggregate HAPs combined. ETM has the PTE to emit over 10 TPY of styrene, per the 3/3/2015 permit application for the original PTI No. 50-15. Because it is a major HAPs source, ETM is subject to the Renewable Operating Permit (ROP) program, and is regulated under ROP No. MI-ROP-B6202-2015. This will set to expire 5 years from the date of issuance, on 3/25/2020. However, by submitting a timely and complete ROP renewal application, on 3/1/2019, ETM has obtained an application shield. The existing ROP will remain in effect until the renewed ROP is issued by AQD.

On 7/9/2018, PTI No. 52-15B was issued for ETM. Upon renewal of the ROP, PTI No. 52-15B will be rolled into the ROP.

The Flexible group FGPRESSANDMIXING is subject to 40 CFR Part 63, Subparts A, *General Provisions*, and WWWW, *National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production*.

The Flexible group FGMACTPPPP is subject to 40 CFR Part 63, Subparts A, *General Provisions*, and PPPP, *National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products*.

There is a hot water heater onsite of less than 120 gallons in capacity. Per the 12/15/2015 inspection by AQD's Nathan Hude, it was initially thought to be a boiler subject to 40 CFR Part 63, Subpart DDDDD, *National Emissions Standards for Hazardous Air Pollutants For Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*. It was pointed out by a State of Michigan Licensing and Regulatory Affairs (LARA) inspector that the boiler met the exemption definition of a "Hot Water Heater" per the exemptions list in Section 63.7491(d) and the definition in Section 63.7575. It is therefore exempt from DDDDD.

The above was confirmed by a 1/8/2016 letter from Mr. Ron Clewley, Quality Manager for ETM. Please see the attached hard copy of the letter provided by Mr. Clewley during today's inspection.

**Fee status:**

ETM is a Category C fee-subject source, because it is a major source under Title I of the Clean Air act Amendments of 1990. That is, it is major for HAP emissions. ETM has the potential to emit over 10 TPY of a single HAP, styrene. Like other facilities in Michigan with ROPs, it reports air emissions annually, through the Michigan Air Emissions Reporting System (MAERS).

**Location:**

ETM is located on the north end of Grand Ledge, in Eaton County. Residential areas are located mainly to the south and west of the facility. To the north and north east of the plant is a mostly industrial area, followed by fields and a few residences. The closest residences to ETM are about 175 feet to the south of the plant, 125 feet to the west, 630 feet to the north, and about 800 feet to the east or southeast, as measured in Google Maps

**Recent history:**

**Changes authorized by PTI No. 50-15B include:**

- Addition of emission unit EUGELCOAT2 and associated stack SVBOOTH-2.
- Increased VOC emission limit from 6.2 TPY to 14.3 TPY.
- Added acetone emission limit of 9.5 TPY.
- Increased material limit of EURTM neat resin from 230,000 lbs/year to 723,624 lbs/year.
- Added material limits for clear gelcoat.
- Added source-wide material limit for styrene to the flexible group FGFACILITY.

**Note: The existing ROP, MI-ROP-B6202-2015, contains a styrene emission limit of 26.3 TPY in FGPRESSANDMIXING. PTI No. 50-15B contains a VOC emission limit of 14.3 TPY in FGFIBERGLASS. Assuming all VOC emissions from fiberglass are styrene, source wide PTE for styrene is 26.3 TPY + 14.3 TPY = 40.6 TPY.**

**Safety apparel required:**

Site requirements are to have safety glasses and ear plugs, and, for going near the VARTM equipment, hard hats. During the COVID-19 pandemic, ETM requires employees and plant visitors to socially distance, and to wear masks when social distancing of 6 feet cannot be maintained.

During the pandemic, AQD requires field staff to wear an appropriately designed mask, and to pre-arrange the inspection with the facility, so that an appropriate plan can be made to allow staff to access the site while following site-specific safety measures. I therefore contacted the company to pre-arrange the inspection. I brought a clear plastic face shield with me, to wear over my mask, but this made it hard for plant staff to hear me clearly. I therefore used the mask without the face shield.

**Odor evaluation:**

I conducted an odor evaluation in the area around the plant, before arrival. Weather conditions were partly sunny, hazy, and humid, with winds out of the southwest at 5 miles per hour.

The AQD 0 to 5 odor scale is as follows:

- 0 - Non-Detect
- 1 - Just barely detectable
- 2 - Distinct and definite odor
- 3 - Distinct and definite objectionable odor
- 4 - Odor strong enough to cause a person to attempt to avoid it completely
- 5 - Odor so strong as to be overpowering and intolerable for any length of time

At 8:44 AM, I drove north on N. Clinton Street, past ETM, detecting no odors. I turned east onto Promec Drive, which runs parallel to the ETM plant. I detected no odors until I was adjacent to a small business that is just north of ETM. There, I detected a level 2 (distinct and definite) fiberglass resin, or styrene, odor. However, the odor disappeared after 50-100 feet. I reached the east end of Promec Drive, and turned around. As I neared the east end of the ETM plant, I detected a level 1 (barely detectable) odor of fiberglass resin twice, but only briefly. These odors were not determined to be causing a violation of Rule 901(b), which prohibits unreasonable interference with the comfortable enjoyment of life and property. I could not see any visible emissions from the plant.

As I drove west on Promec Drive, passing the small business north of the plant, I noticed a level 1 odor which I could not identify, at 8:53 AM. I drove south on N. Clinton Street and followed the odor to its apparent source, a large, burned out wooden structure being demolished. The odor had a faintly burnt quality to it. The structure was a vintage storage or maintenance building along the CSX Transportation railroad line.

I turned around and drove north, on N. Clinton Street. I turned east onto Manor Drive, and entered a residential subdivision just south of the ETM property. The faintly burnt odor was barely detectable in

this neighborhood, but no ETM odors were present. The odor from the burnt structure was temporary and did not appear sufficient to cause a nuisance at this time.

#### **Arrival:**

**During the current COVID-19 pandemic, EGLE guidance to inspectors on conducting inspections is as follows:**

- pre-arrange inspections with facilities, to facilitate a plan to conduct the inspection while adhering to facility guidelines for safety,
- wear a mask, where social distancing of at least 6 feet is not possible, and
- ask if there have been any recent confirmed cases of COVID-19 at regulated facilities, upon arrival.

**Following the odor evaluation discussed above, I arrived at the plant at 8:56 AM. I could not detect any odors in the plant parking lot, next to the office. There were no visible emissions from the plant at this time. Weather conditions were partly sunny, hazy, humid, and 55 degrees F, with winds shifting to out of the west southwest at 5-10 miles per hour.**

**I met with Mr. Steve Mohnke, President. He introduced me to Mr. Mark Wyant, Human Resources Director, who took me back to meet with Mr. Ron Clewley, Quality Manager. I was informed that Mr. Clewley will be retiring at the end of the year, or possibly in early 2021, and Mr. Wyant will assume some of his duties.**

**Mr. Clewley had provided me in advance of the inspection with electronic copies of spreadsheets for ETM's recordkeeping under the ROP and PTI No. 50-15B for 2020 YTD. Please see attached digital file. The summary of the documents, below, was copied and pasted from Mr. Clewley's email to me:**

1. Page 1, 99 Ton, shows all emissions for the entire facility, this is setup for a rolling 12 months.
2. Page 2 FGPRESMIXING – this is a monthly report, has styrene and clean up emissions for a rolling 12.
3. Page 3 FGPLANTPAINTING - this is a monthly report, has VOC's and clean up emissions for a rolling 12.
4. Page 4, Gel Coat Summary Report, this report covers molding and the VARTM process, rolling 12 for each process and combined emissions.
5. Page 5, Gel Coat monthly Report, this report covers molding and the VARTM process, Shows emission factors applied to each gel coat type, rolling 12 for each process.
6. Page 6, VARTM Resin & Gel Coat, this report covers the VARTM process, Shows emission factors applied to each resin gel coat type, rolling 12 for the VARTM process.
7. Page 7, Year to date monthly paint summary
8. Page 8, PPPP July Monthly report for HAPS.
9. Page 9, PPPP HAPS rolling 12 month report.

#### **Inspection:**

**Mr. Clewley and Mr. Wyant accompanied me on the inspection.**

**Note regarding time of inspections: Plant employees takes their lunch break at 10:30 AM. The walk through part of the inspection is therefore best conducted prior to 10:30 AM, or after 11:00 AM, in order to see production.**

**ETM manufactures and coats reinforced plastic composite parts used in the motor transport industry. Manufacturing processes include resin storage and preparation, compression molding of resins into plastic parts, parts trimming and sanding, and surface coating and drying. VOCs are emitted from the coating of the plastic exterior parts, and also from manufacture of the plastic parts.**

**It is my understanding that there are 4 kinds of processes for manufacturing parts here:**

1. Cold molding (liquid compression molding)

2. Sheet Molding Compound (SMC)
3. Bulk Molding Compound (BMC)
4. Vacuum Assisted Resin Transfer Molding (VARTM)

We walked through the plant, and observed the emission units below. The order below reflects the ROP and the PTI, rather than the chronological order in which we examined these processes as we walked through the plant itself.

#### 1. EUFLINERBOOTH; FGMACTPPPP; MI-ROP-B6202-2015:

The F Liner or Freight Liner booth is a coating paint system consisting of solvent wipe/tack off, spray booth, flash off booth, and oven. The coating line is used to coat plastic exterior automotive parts. It is my understanding that it is mostly used to apply primer, either black or gray. I was told that they topcoat very few parts at ETM, as that work is usually sent out. If they do topcoat something here, it would be for black "spatter paint", which has a bumpy texture for visual effect.

Mr. Clewley advised that under 40 CFR Part 63, Subpart PPPP, they use the emission rate, and do not have any add-on controls for the booth. He said that they are not required to meet any work practice standards, but voluntarily follow the standards. They keep containers close, clean up spills, and transport chemicals in closed pipes, barrels, or cans, as I understand it. Mixers are also reported to be kept closed. He added that emissions of HAPs are minimized during cleaning and moving. For instance, paint spray gun tips are said to be soaked in acetone or Anlac cans, which are closed.

The F Liner booth was not running when we examined it, shortly after 10:30 AM, as workers were on their lunch breaks. It is my understanding that all parts are hand-sprayed in the booth. It is a downdraft booth, with air intake filters in the ceiling, and exhaust filters in the floor. I was told that the filters are changed about once per month, and the date of changing is recorded. Pressure drop for the booth was 0.1 inches water column (w.c.), at this time. Make up air unit (MUAU) pressure drop was 0.5 inches, w.c., and spray booth supply pressure drop ranged from 0.5-0.8 inches. w.c.

To purge the spray guns, I was shown a lidded acetone bucket on the wall for quickly flushing the paint spray guns. I was also shown a 55-gallon drum which is a satellite hazardous waste container. The lid was closed securely.

The booth is designed like a tunnel, and has a floor-mounted chain on edge conveyor system to move parts through the booth. It also has a flash off area, an oven, and a cool down area attached. I observed a temperature chart recorder for the oven, with a set point of 200 degrees F and an actual reading of 200 degrees F. During the 2018 inspection, the setpoint and actual temperature had been 170 and 169 degrees F, respectively. AQD considers temperatures above 194 degrees F to be for high bake coatings. There is no temperature limit in the ROP, however.

The booth is served by exhaust stacks Nos. 5-8. Earlier, there had been no visible emissions, as seen from outside the plant, prior to my 9:00 AM arrival. The F liner booth would likely have been running at that time. Stacks Nos. 1-4 were removed years ago, when an associated coating booth was removed and sold to Demmer Corporation.

The ROP Special Condition (SC) EUFLINERBOOTH I. EMISSION LIMIT(S) 1. limits VOC emissions to 63.3 lbs/hr. Page 3 of the attached spreadsheet, for FGPLANT1PAINTING for July 2020, shows that as of the end of July, their hourly emissions were 0.45 lbs/hr, well below the limit.

The ROP Special Condition (SC) EUFLINERBOOTH I. EMISSION LIMIT(S) 2. limits VOC emissions to 8.0 tons per month. For July 2020, the monthly emissions of VOCs were 0.124 tons, with an additional 0.004 tons from clean up solvents, far below the 8 tons per month limit.

The ROP Special Condition (SC) EUFLINERBOOTH I. EMISSION LIMIT(S) 3. limits VOC emissions to 85.0 TPY. As of the end of July, 2020, 12-month rolling VOC emissions were 1.67 tons, far below the 85.0 TPY limit.

Under SC FLINERBOOTH MATERIAL LIMIT(S) 2., there are 10 different materials which are limited to VOC content, on pages 15-16 of the ROP. They are listed below, though I have not tried to copy the several foot notes for the Material Limit(s) table:

1. Prime-Flexible Coating: 4.5 lbs VOC/gal of coating (minus water) as applied (GAC)
2. Prime-Non Flexible category: 3.5 lbs VOC/GAC
3. Topcoat-Basecoat Category: 4.3 lbs VOC/GAC
4. Topcoat-Clearcoat Coating: 4.0 lbs VOC/GAC
5. Topcoat-Non-Basecoat/Clearcoat Coating: 4.3 lbs VOC/GAC
6. Prime coating: 4.8 lbs VOC/GAC
7. Topcoat-Basecoat Coating: 5.0 lbs VOC/GAC
8. Topcoat-Clearcoat Coating: 4.5 lbs VOC/GAC
9. Topcoat-Non-Basecoat/Clearcoat Coating: 5.0 lbs VOC/GAC
10. Touch-up and repair coatings: 5.2 lbs VOC/GAC

AQD emailed ETM late on 9/29/2020, to ask if their coatings are complying with the limits above. Early on 9/30. Mr. Clewley emailed to me a detailed response, along with a spreadsheet, the *August 2020 HRF-640-1 Daily Paint Usage VOC Cal Report.pdf*. He provided the following description of how the daily paint usage report is used to track compliance with limits:

Please review the attached documents, we verify compliance using the Daily Paint Usage Calculation Report. The attached is for the daily emission calculations used for the entire month of August. The primer / top coat used on a daily basis is loaded into this form on a daily basis. The top portion of the form is for primers, the bottom is for top coats, we then also add in the thinners we use. In the center of the form you will see the required limits we use to verify compliance. For primers (Purple) we have a maximum 4.5 LB's per gallon limit, when you look at the Daily Coating Usage Summary it calculates the average lb's of VOC's per day. We then compare this to the limits. So for August 3rd (First spread sheet in the attached) for the average LB's of VOC's per day we were at 3.49, comparing it to the limit of 4.5 LB's per day, we comply. For top coats, bottom half of the form, the limit is 4.3 average lb's of VOC's per gallon on a daily basis, again for August 3rd it was 2.65 average LB's of VOC's per gallon per day, limit being 4.3, so we comply. I verify each spread sheet for each day that we are not over the limits for both primers & top coats.

So for the 10 items listed above, even though some of the items above such as item 6, 7 & 10 have higher VOCs above our limits, our understanding is we have to meet the primer coat limit of 4.5, top coat limit of 4.3 on a average daily basis.

On the top right of the page, it says the SDS was used to verify VOC's on 04/05/2018. Jack Brockhaus and I verified the numbers used to calculate our emissions was accurate on this spread sheet and on the PPPP spread sheet # 8. We have not made any changes since.

These daily numbers at the very bottom right of the form, is then transferred to spread sheet number 3 of the reports previously sent. This then calculates our monthly emissions. Note, the spread sheets I sent you were for July, the attached is for August but you can see the flow how the system works.

**With the detailed descriptions above, I was able to review each day of operations for August 2020, and verify that they had met the VOC lbs/gal limit for their top coats and primers, complying with the ROP.**

In 2018, Mr.Clewley had asked about the version of the Method 24 Special Condition in their ROP, for EUFLINER. The language in this condition did not appear consistent with other ROPs, as it required the testing for VOC content of the 5 most frequently used coatings plus 5 random coatings, using Method 24, on an annual basis. This was felt to be burdensome, and their coating suppliers indicated that they would not undertake such testing themselves.

Post-inspection follow up in 2018 involved review of three different PTIs which were issued to ETM for coating operations during the 1990s, to try to determine if the language came from a PTI. The PTIs contained the more common version of the Method 24 condition, however. (One PTI was for the Freight Liner booth, as it was evidently called at that time, PTI No. 178-80A. It existed at the same time as PTI No. 178-80, which had not been voided, despite an A version being issued. The third coating PTI was

No. 617-94. Ultimately, the original 178-80, and 617-94 were merged into 178-80A.)

Subsequent discussion in 2018 with AQD ROP modification expert Caryn Owens of the AQD Cadillac District Office revealed that about 14 years ago, AQD staff were instructed to put this more stringent condition into ROPs. During the current ROP renewal process, it will be determined if a different version of the Method 24 condition can be used. Further internal discussion is necessary. At this moment, ETM's compliance status with this SC is considered pending.

SC FLINERBOOTH VI. MONITORING/RECORDKEEPING 1. through 5. requires several different records to be kept on the coatings they utilize. It is my understanding that they are keeping these records, and will do so for the required period of 5 years.

## 2. EUBARRELMIXERS; FG PRESSANDMIXING; MI-ROP-B6202-2015:

Two 300 lb capacity barrel mixers. This is subject to 40 CFR Part 63 Subpart WWWW. I was shown the mixers, where polyester resin is mixed. They were not running, at the time we observed them. I was advised that they add a filler, calcium carbonate, to the resin most of the time, making up about 50% of the total volume. I was told that this reduces cost, shrinkage, and heat generated as the resin cures. I was also informed that calcium carbonate is essentially limestone. It is my understanding that for fan shrouds, carbon black pigment is added to the mix.

Flexible Group FG PRESSANDMIXING reporting requirements are discussed below. In AQD inspector Nathan Hude's 12/15/2015 inspection report, he observed that from what he could tell, all of the monitoring and recordkeeping requirements of the ROP mimicked Subpart WWWW.

Page 2 of the attached spreadsheet is titled FG PRESSMIXING, and is for the month of July 2020. It was used to check compliance with the ROP special conditions for FG PRESSANDMIXING, below.

SC FG PRESSANDMIXING I. EMISSION LIMIT(S) 1. limits VOC emissions from this flexible group to 16.5 lbs/hr from clean-up solvents. For July, 2020, hourly average VOC emissions from clean-up solvents were 0.13 lbs/hr, far below the limit.

SC FG PRESSANDMIXING I. EMISSION LIMIT(S) 2. limits VOC emissions from this flexible group to 17.4 TPY from clean-up solvents. For July 2020, year to date (YTD), VOC emissions from clean-up solvents were 0.33 tons, far below the limit. VOC emissions from clean-up solvent for the remainder of the calendar year would not be expected to put the facility even close to the 17.4 TPY limit.

SC FG PRESSANDMIXING I. EMISSION LIMIT(S) 3. limits styrene emissions from this flexible group to 10.5 lbs/hr. For July 2020, styrene emissions averaged 1.29 lbs/hr, well below the limit.

SC FG PRESSANDMIXING I. EMISSION LIMIT(S) 4. limits styrene emissions from this flexible group to 26.3 TPY. As of July 2020, the 12-month rolling value for styrene emissions was 2.12 tons styrene, well below the limit.

SC FG PRESSANDMIXING II. MATERIAL LIMIT(S) 1. limits use of polyester resin in this flexible group to 1,500 lbs/hr. For July 2020, average polyester resin used averaged 256 lbs/hr, well below the permitted maximum.

SC FG PRESSANDMIXING II. MATERIAL LIMIT(S) 2. limits use of polyester resin in this flexible group to 28,000 lbs/day. For July 2020, the daily mixed polyester resin used was 6,163.64 lbs/day, below the permitted maximum.

SC FG PRESSANDMIXING II. MATERIAL LIMIT(S) 3. limits use of polyester resin in this flexible group to 7,500,000 lbs/year. From page 1 of the attached spreadsheet titled *July 2020 - 99 Ton Environmental Summary Data*, the polyester resin used was 2,509,300 lbs, below the permitted maximum.

SC FG PRESSANDMIXING III. PROCESS/OPERATIONAL RESTRICTION(S) 1. requires that only styrene

resins be used in the process with a maximum styrene content of 40.0 percent by weight. I could not find this in the spreadsheets for FGPRESSANDMIXING. I emailed Ron Clewley on 9/28/2020, to inquire. He responded on 9/28/2020, with an email and attached record of styrene content for resin deliveries.

Mr. Clewley explained that styrene content is not recorded on FGPRESSANDMIXING, but they keep a listing of the styrene content when takers deliver shipments of resin. He also included the most recent two certification forms, and explained that they set the limit for their supplier at 38%, even though they would be allowed up to 40% by their ROP. The attached listing shows multiple deliveries, with the styrene content ranging between 33.9% and 37.1%, in compliance with the maximum allowed limit of 40%. The two most recent certifications show styrene content in the resin of 36.0% and 36.2 %, also in compliance with the ROP.

SC FGPRESSANDMIXING III. PROCESS/OPERATIONAL RESTRICTION(S) 2. requires the permittee to comply with applicable emission limits and work practice standards specified in Table 1 through 5 of 40 CFR Part 63, Subpart WWWW. Mr. Clewley had researched 40 CFR Part 63, Subpart WWWW, and explained that they comply with WWWW sections (tables) 1 and 3. He indicated that sections 2,4, 5, 6, 7, 8, and 9 do not apply to them. He indicated they do not have an emission limit under WWWW.

SC FGPRESSANDMIXING VI. MONITORING/RECORDKEEPING 1. requires the permittee to maintain records of the following on a daily and monthly basis:

a. Hours of operation. The FGPRESSANDMIXING spreadsheet for July 2020 shows 176 hours worked for the month. They are meeting this requirement.

b. Lbs of polyester resin and gel-coat used. The FGPRESSANDMIXING spreadsheet for July 2020 shows daily and monthly lbs of neat resin used, and and monthly lbs of mixed resin used, which is equal to the amount of neat resin used X 2, for a 50/50 mix. For July, 67,800 lbs of neat resin were used, and 135,600 lbs of mixed resin were used. They are meeting this requirement.

### 3. EUBATCHMIXER; FGPRESSANDMIXING;MI-ROP-B6202-2015 :

This is a 2,500 lb capacity batch mix tank. It is subject to 40 CFR Part 63 Subpart WWWW. It is my understanding that this mixer is not running at this time, and they are using the two smaller mixers, instead.

Please see the Flexible Group FGPRESSANDMIXING recordkeeping discussion, above, under item 2., EUBARRELMIXERS.

### 4. EUHYDPRESSES; FGPRESSANDMIXING; MI-ROP-B6202-2015:

This is a fiberglass parts manufacturing process with 18 hydraulic presses, I was told, down from the (20) were identified in the ROP at the time of renewal in 2015. The presses range in size from 50-1,000 tons. Presses utilize gelcoat, fiberglass mat, and a catalyzed resin system to manufacture reinforced plastic composite parts.

The process as I understand it, goes through the following steps. It begins with fiberglass cloth being inserted into a mold press. The press is then brought down, and heat is applied to help shape the cloth. A measured amount of resin in a bucket is mixed with a catalyst. For products which have a flame requirement , they add aluminum trihydrate, ATH, instead of calcium carbonate. After the bucket is poured into the mold, the press is lowered. The molds are evidently kept at a uniform temperature, and the chemical reaction of the ingredients creates heat. The amount of heat depends on the materials, and the part being made, with some reactions reaching 300 degree F. Today, I could not see visible emissions from the mixing of resin with catalyst, nor from the operation of the press.

This process is subject to 40 CFR Part 63 Subpart WWWW. Please see the Flexible Group FGPRESSANDMIXING recordkeeping discussion, above, under item 2., EUBARRELMIXERS.

My understanding is that they have one router robot, in addition to eight dual-stage water jets which perform cutting of parts. We observed cutting done with a water jet, which had no outdoor exhaust.

#### **5. EUBONDING; FGMACTPPPP; MI-ROP-B6202-2015:**

Bonding and gluing operations, subject to 40 CFR Part 63, Subpart PPPP. Due to my schedule and a shortage of time today, I did not witness this process. This will be focused on during the next inspection.

#### **6. EUSANDBOOTH; FGSANDGRINDROUT; MI-ROP-B6202-2015:**

Sanding booth for sanding plastic parts. Controlled by a dust collector. Per the 12/15/2015 inspection report by AQD's Nathan Hude, this booth has been dismantled.

#### **7. EURROUTING; FGSANDGRINDROUT; MI-ROP-B6202-2015:**

Routing operation for plastic parts 352-83. Controlled by 3 dust collectors. This unit is located on the far east end of the building. This is a booth that is approximately 60 feet long by 25 feet wide, with openings on the shorter ends. It has approx. 6 stations on each side for individuals to sand fiberglass parts by mechanical hand sanders. Prep work done here includes patching, repairing, and scuffing of parts, as I understand it, with scuffing done to promote paint adhesion.

There are 3 Torit Downflo dust collectors which exhaust the booth. The air intakes are on the side walls (east and west) of the booth. The Torits are located outside, along the east wall of the plant.

a.) Torit Downflo collector No. 1, the south unit, exhausts outdoors. There were no visible emissions from the exhaust outlet. I saw that collected particulate is ducted into a covered 55 gallon drum. There was no spilled material around the drum.

The control panel is indoors. My notes indicated that pressure drop was 0.0 inches, water column (w.c.). It was not clear to me why this reading was low. A red light on the control panel was lit up, but this merely indicates that the control device is running. Late on 9/29/2020, I emailed ETM to inquire about the pressure drop gauge further. Early on 9/30, Mr. Clewley emailed to me the attached photo (please see digital AQD file) of the pressure drop gauge, showing a reading of 0.5 inches water column (w.c.), within the desired pressure drop range marked on the gauge. This appeared indicative of proper operating conditions for the device.

b.) Torit Downflo collector No. 2 exhausts outdoors. Pressure drop was 0.0 inches, w.c. I inquired about this reading. Also, the red light bulb on the control panel was off. When we were outdoors, there were no visible emissions from the exhaust outlet. I could not hear the unit running. Mr. Clewley put a hand on the side of the control device, and indicated the fan was running, so it was drawing air through the filters. However, he noted that the pulsing mechanism was not running, for cleaning the cartridges with a pulse of air.

Mr. Clewley looked for maintenance staff, who indicated that the control panel was burned out, but they were working to repair it. Because maintenance staff were aware of and actively working on this issue, it is not being cited as a violation of Rule 910, which requires that an air pollution control device be installed, operated, and maintained in a satisfactory manner. Mr. Clewley's 9/30 email indicated that he

is expecting an update on 9/30 regarding collector No. 2. He added that the filters for all 3 collectors had been replaced within the last month.

c.) Torit Downflo collector No. 3, the north unit, exhausts back into the indoor plant environment, so Mr. Clewley indicated this should be exempt from the ROP. There were no visible emissions. Pressure drop was 2.2 inches, water column (w.c.). Collected particulate is ducted into 3 covered 55 gallon drums. There was no sign of spilled particulate. It is my understanding that they check the 55 gallon drums for all 3 Torits twice per month, to make sure they do not overflow.

#### **8. EUGRINDING; FGSANDGRINDROUT; MI-ROP-B6202-2015:**

Grinding operation for plastic parts 354-83. Controlled by a dust collector. Emissions are vented through a duct to a large dust collector located outdoors, which then exhausts back into the general, in-plant environment. It is my understanding that they would like to remove this process from the ROP as permit exempt. This process does not appear to be to be MACT-subject, so I am not aware of any obstacle to removing it from the ROP. Due to my schedule and a shortage of time, I did not examine this process during the inspection.

#### **9. EUSEALER; FGRULE290; MI-ROP-B6202-2015:**

Operation(s) where sealers are applied to plastic parts. Due to my schedule and a shortage of time, I did not observe this process, during this inspection.

#### **10. EURTM; FGFIBERGLASS; PTI No. 50-15B:**

Resin transfer molding (RTM) operation to manufacture reinforced plastic parts. The resin is applied and cured under vacuum in a closed mold. These are called Vacuum Assisted Resin Transfer Molding, or VARTM, processes.

It is my understanding that fiberglass cloth is put in a mold, the mold is closed, and a vacuum is drawn from the mold. At this point, the resin is delivered to the mold. VARTM is said to be a slower process, so they sometimes use it for new parts, until there is demand for a higher volume of that part. A benefit of the VARTM process is reported to be high quality parts, as a gelcoat is applied, and the fiberglass is put in the mold by hand.

It is my understanding that the waste acetone and resin are routed to closed containers, and that the resin solidifies as a solid waste, over time, while the acetone goes to satellite collection barrels to be sent offsite as hazardous waste. The acetone is therefore used, but not emitted at the plant.

In page 6 of the attached spreadsheets, *Monthly VARTM Resin and Gel coat Reporting System, July 2020*, there were 161.423 monthly lbs of VOC reported. The 12-month rolling styrene value for July 2020 was 0.57 tons. This below the PTI No. 50-15B FGFACILITY styrene limit of 40.6 tons.

PTI No. 50-15B, SC FGFIBERGLASS II. **MATERIAL LIMITS:** 1. states that the styrene content of any resin used in EURTM shall not exceed 50% by weight. Page 6 of the spreadsheets from ETM, *Monthly VARTM Resin and Gel coat Reporting System, July 2020*, shows that styrene content of various gelcoat materials ranged from 25.6% to 42.0%, below the permitted maximum.

PTI No. 50-15B, SC FGFIBERGLASS II. **MATERIAL LIMITS:** 2. limits the use of neat resin in EURTM per 12-month rolling time period as determined at the end of each calendar month to 723,624 lbs/year. The 12-month rolling value for throughput of neat resin for the VARTM process in July 2020 was 65,107.00

lbs, well below the permitted maximum. This was shown on page 1 of the spreadsheets from ETM, *July 2020 - 99 Ton Environmental Summary Data*.

PTI No. 50-15B, SC FGFIBERGLASS II. MATERIAL LIMITS: 3. a. through c. limit maximum styrene content in gelcoat to 26.1% for white gelcoat, 42.0% for pigmented gelcoat, and 40.0% for clear gelcoat. The highest pigmented gelcoat was 42.0 %, but most pigmented gelcoats were clearly below 42.0%. The value reported for clear gelcoat was 39.3%. No value was reported for white gelcoat, and I emailed Mr. Clewley to ask if no white gelcoat had been used in July. Mr. Clewley emailed a response on 9/30 (please see digital plant file), and indicated that they have never used white gelcoat here. He explained that they had submitted quotes for a project involving white gelcoat, but did not actually get that project. The facility is therefore in compliance with the maximum allowed styrene content limits for the two gelcoat categories they use, pigmented and clear.

#### 11. EUGELCOAT; FGFIBERGLASS; PTI No. 50-15B:

The application of gelcoats can be done in the open., or in a ventilated booth, approximately 12 feet by 12 feet in size. I was told that it was not a positive pressure booth. This booth was not in use at the moment. It has filters for incoming air, and for air being exhausted to the outside of the plant. It is my understanding that some gelcoats are primer gelcoats, while others are sanding or finishing gel coats. I did not examine this booth during the inspection, due to my schedule and a shortage of time.

#### 12. EUGELCOAT2; FGFIBERGLASS; PTI No. 50-15B:

On 8/17/2018, AQD received e-mailed notification of completion of construction/commencement of trial operation of EUGELCOAT2, pursuant to PTI No. 50-15b, Special Condition No. VII. 1. On 8/22/2018, AQD received a completed M-001 form for a Rule 215 Change Notification and C-001 Certification form, as notification that EUGELCOAT2 is now operational. The M-001 form was for a Rule 215(3) Notification of change.

During today's inspection, because operators were on lunch, we were able to enter the booth. It is my understanding that the booth is a positive pressure booth. This is to help keep dust or particulate from entering the booth, and marring the coating finishes, as I understand it. The booth is reportedly heated to a temperature of 85-90 degrees F when operating, and it is used to apply clear coats, color coats, and a print blocker coat.

A large filter panel cleans exhaust air, while overhead filters will clean incoming air from outside of the plant. The exhaust filter system consists of two layers, I was shown. The first layer is a rolled filter material, while mat/panel filters were located behind it. Sheets of a peel-apply material are used to keep the walls of the booth clean, and a clear material is used to keep the lights clean, as well.

Pressure drop was 0.01 inches water column (w.c.) on the gauge at the front of the booth. I was told that operators change the filters when they see the pressure drop increase. This is said to be every couple of weeks. The back end of the booth has its own pressure drop gauge, which, an employee said, was to monitor the air flow on the opposite side of the filters.

#### 13. EUADHESIVE; FGFIBERGLASS; PTI No. 50-15B:

An acrylic adhesive products is used to glue fiberglass parts to other fiberglass materials. Due to my schedule and a shortage of time, I did not observe this process, during today's inspection.

**14. EUCLEANUP; FGFIBERGLASS; PTI No. 50-15B:**

Miscellaneous cleanup activities. Due to my schedule and a shortage of time, I did not observe this process, during today's inspection.

**15. EUMIXER; FIBERGLASS; PTI No. 50-15B:**

Mixer associated with the reinforced plastic parts manufacturing process. Due to my schedule and a shortage of time, I did not observe this process, during today's inspection.

**16. FGFACILITY; PTI No. 50-15B:**

This flexible group covers all process equipment source-wide including equipment covered by other permits, grandfathered equipment and exempt equipment. PTI No. 50-15B, which will be rolled into the ROP on the next renewal unless it is done sooner as a ROP modification, limits FGFACILITY VOC emissions to 99.0 TPY, and limits plant-wide styrene emissions to 40.6 TPY.

The 2020 operating year spreadsheets show that 12-month rolling VOC emissions for July 2020 were 2.02 tons, and styrene emissions were 2.95 tons, well below the respective limits.

**Processes exempt from needing a PTI, and exempt from appearing in Rthe OP:****EU001TANKS; Rule 284(i):**

There are two 6,000 gallon tanks filled with resin which contain polyester resin, I was told. Due to my schedule and a shortage of time, I did not observe this process, during today's inspection. I did not examine them during this inspection.

**EU001BAKEOVEN; Rule 282(i):**

This is a bake oven used to cure molds. Due to my schedule and a shortage of time, I did not observe this process, during today's inspection. I did not examine the bake oven during the inspection.

**Miscellaneous:**

There is a wash booth, for any parts which are stored outside, so that they can be washed with water, prior to being sent to the customer. It is my understanding that city water is used, with no detergent or surfactant added. I believe this would be considered exempt under Rule 281(2)(e), which exempts:

(e) Equipment used for washing or drying materials, where the material itself cannot become an air contaminant, if no volatile organic compounds that have a vapor pressure greater than 0.1 millimeter of mercury at standard conditions are used in the process and no oil or solid fuel is burned.

**MAERS reporting:**

The MAERS report for the 2019 operating year was received timely and complete, ahead of the March 15, 2020 submittal deadline. Increases in emissions were generally very consistent with increases in throughput. EU0014 (FGPRESSANDMIXING) reported emissions of 0.71 tons VOC, well below the ROP limit for FGPRESSANDMIXING of 17.4 TPY VOC. EU0014 styrene emissions of 2.93 tons were well below the FGPRESSANDMIXING styrene limit of 26.3 TPY. EU0020 (EUVARTM&GelCoat) reported emissions of 0.69 tons styrene; well below its respective limit of 26.3 TPY styrene. EU016 (FGPLANT1PAINTING) reported VOC emissions of 1.90 tons; which were far below the EUFLINERBOOTH limit in the ROP of 85.0 TPY VOC.

**Conclusion:**

There were no instances of noncompliance found; however, compliance status is pending, regarding the FLINERBOOTH SC EUFLINERBOOTH No. V. 1, which references Method 24. It is not clear at this time if the condition can be removed from the ROP and replaced with the previous version of the standard ROP Method 24 condition.

NAME *Daniel W. Maesen* DATE 9/30/2020 SUPERVISOR *B.M.*