

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

A644448390

FACILITY: Midwest Rubber Company		SRN / ID: A6444
LOCATION: 3525 RANGELINE RD, DECKERVILLE		DISTRICT: Saginaw Bay
CITY: DECKERVILLE		COUNTY: SANILAC
CONTACT: Janet Brown , Environmental Manager		ACTIVITY DATE: 02/26/2019
STAFF: Matthew Karl	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Self Initiated Inspection to determine compliance with PTI Nos. 136-17, 276-06, 259-04A, 376-97, 375-97B, 373-97, 567-94B, 196-87, 388-86, 387-86A, and 383-86.		
RESOLVED COMPLAINTS:		

**On Tuesday (2/26/19) I (Matt Karl) conducted a self-initiated compliance inspection at the Midwest Rubber Company located at 3525 Rangeline Road, Deckerville, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Administrative Rules; Permit to Install (PTI) No. 136-17, PTI No. 276-06, PTI No. 259-04A, PTI No. 376-97, PTI No. 375-97B, PTI No. 373-97, PTI No. 567-94B, PTI No. 196-87, PTI No. 388-86, PTI No. 387-86A, and PTI No. 383-86. Ms. Janet Brown, Environmental Manager, assisted me during my inspection and provided requested records.**

**Facility Description:**

The Midwest Rubber Company is an existing rubber and plastic manufacturing facility that produces automotive, medical and other commercial products. The facility is a synthetic minor (Opt-Out) source for VOCs and HAPs. The facility operates various neoprene dip coating, plastisol dip coating and slush molding lines. Aluminum mandrels are used as molds to form parts.

During the neoprene dip coating, the mandrels are dipped into a room temperature vat of coagulant/lubricant, then dipped in neoprene coating for various amounts of time depending on the necessary thickness of the part. The parts are then cured in an oven. The facility has several manual dip coating lines as well as one automated line. An example of a part produced using the neoprene dip coating is windshield wiper blade covers.

The plastisol dip coating process involves first heating the mandrel to between 375-600°F. The mandrel is then dipped in plastisol coating for various amounts of time depending on the necessary thickness of the part. Dipped parts are then placed in a curing oven at temperatures between 375-600°F to set.

Plastisol is also often used in the rotational molding (rotocasting or rotomolding) process as well. The form is partially filled with material and is then heated in an oven while being spun on both the vertical and horizontal axes so that the material coats the form. The spinning process is continued while the form is cooled. The end result is a hollow object, for example, medical gurney rails.

The slush molding process uses a hot salt solution to cure plastisol. The mandrel is first heated up to the desired temperature. The mandrels are then filled with plastisol then dipped into the heat-treated salt for various amounts of time depending on the desired thickness of the part, some plastisol is poured off and the mandrel is dipped back into the salt bath. The part is then removed from the mandrel and is placed on a vertical conveyor system to allow the part to cool. The end result is a hollow object, for example, protective covers for arm and headrests in vehicles.

**Site Inspection:**

I arrived on site at approximately 9:30 am. I met with Janet Brown, Environmental Manager. Janet Brown informed me that Rick Bezemek had retired and that she would be the contact for future inspections.

Janet Brown was able to pull up the excel spreadsheet that they use to track emissions for the facility. She informed me that they calculate emissions based on monthly material throughput. I collected copies the emissions spreadsheet for 2017 and 2018, see the records review section below for details.

Janet Brown told me that there have been no changes to the equipment at the facility since PTI No. 136-17 was issued. She informed me that there have been no changes in production in that time either. The facility currently employees 77 staff. MIOSHA had recently conducted an inspection in August 2018.

We then proceeded with a facility tour. We started near the urethane foam molding and PVC casting lines. We

stopped and talked with the operator at one of the manual neoprene dip coating lines. The manual neoprene dip coating process currently takes approximately 24 hours to complete a batch of parts.

Next, we passed the automated neoprene dip coating line, which manufacturers windshield wiper blade covers. Janet Brown informed me that excess PVC material is recycled, while excess neoprene material is disposed of as waste.

Janet Brown and I walked through Cells 21 and 22, which are slush mold lines. Janet Brown informed me that the salt bath temperature is around 400°F.

We toured the plastisol fusion ovens (PFO) and plastisol casting line. Parts being produced consisted of rails for medical gurneys, and the rotocasting line was producing heads for duck decoys.

We inspected the spray booth Cells 40 and 99. Cell 40 is a urethane foam coating spray booth. Parts currently being produced in Cell 40 consisted of calf rests for birthing beds. Janet Brown informed me that the airless spray gun was replaced for this booth last week after being down for several days while parts came in. Janet Brown stated that the Cell 99 spray booth is only infrequently used because of lack of demand for the medical parts normally produced in that booth.

I exchanged contact information with Janet Brown and departed the site around 11:00am. As I was leaving the facility parking lot, I took a picture of the roof line because I noticed a rain cap on one of the stacks.

### **Records Review:**

I received the following records from Janet Brown during my site inspection:

- Emissions Spreadsheets for 2017 and 2018

On Wednesday (2/27/19) I emailed Janet Brown to request the material safety data sheets (SDS) used to calculate the emissions in the Emissions Spreadsheets for 2017 and 2018. I also requested some additional information about one of the stacks on the roofline that had a rain cap.

On Monday (3/4/19) Janet Brown emailed some of the items requested. Janet Brown also informed me that the parts had been ordered to upgrade the stack to remove the rain cap. She stated that as soon as the parts arrive, and the weather allows, they will install and follow up with me with photos and a description of the parts installed. The records I received included:

- MR Environmental\_05-31-2016.pdf
- Cell #21-22.png
- Air permits 12 month Rolling accumes.xls
- Material 12 Mth Rolling accume.xls

The stack with the rain cap on it was associated with PTI No. 376-97 S.C. 18., Slush Line 2 (SL 2), Cell No. 22 which is specified as having a 10" diameter stack, 19.3' from ground, with exhaust gas being discharged unobstructed vertically upwards to the ambient air (see Cell #21-22.png). A violation notice was not sent regarding this issue.

On Tuesday (3/5/19) and Thursday (3/7/19) Janet Brown emailed me material safety data sheets (SDS). She organized them by cell. Copies of the SDS are available in the district files. On Thursday (3/7/19) I followed up with Janet Brown via phone call and email to request the VOC content information for the Lakeside Plastics, Inc. Vinyl Plastisol products.

On Friday (3/8/19) Janet Brown emailed a spreadsheet from the material supplier (Lakeside Plastics, Inc.) that contained the maximum VOC content in lbs/gal and % by weight. The spreadsheet is available in the district files.

- Midwest Wt-gal and VOC listing 3-8-19.xlsx

On Wednesday (3/13/19) Janet Brown and I exchanged emails and calls to discuss the monthly material usage records. On Wednesday (3/13/19) and Thursday (3/14/19) Janet Brown emailed monthly material rolling accumulation spreadsheets. These spreadsheets are available in the district files.

On Thursday (3/21/19) Janet Brown emailed me to confirm that the stack associated with PTI No. 376-97 S.C. 18., Slush Line 2 (SL 2), Cell No. 22 had been upgraded to a no-loss stack. The email contained pictures showing the stack before and after the upgrade, and the pictures are available in the district files.

**PTI No. 136-17, Cell No. 40, EUCELL40: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, EUCELL40 used between 3.33 to 25.25 pounds of material per month, which corresponded to between 1.03 to 6.63 pounds VOC emissions per month. The 12-month rolling total VOC emissions was approximately 0.021 tons, which well below the permit limit of 6.8 tons VOC per year.

**PTI No. 276-06, Cell No. 41, EU-CL-05: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, EU-CL-05 used between 557.96 to 1644.15 pounds of material per month, which corresponded to between 5.58 to 16.44 pounds VOC emissions per month. The 12-month rolling total VOC emissions was approximately 0.074 tons, which well below the permit limit of 1.8 tons VOC per year.

**PTI No. 276-06, FGFACILITY: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, the source wide VOC emissions were approximately 2.24 tons per year. This amount of VOC emissions was fairly consistent with the 12-month period for 2018 and 2017, which were 2.95 TPY and 2.64 TPY, respectively. The VOC emissions for FGFACILITY were well below the permitted limit of 90 tons VOC per year.

The records I reviewed indicated that the HAPs emitted from the facility consisted of Toluene and Xylene. In 2018, the 12-month rolling total for Toluene was approximately 0.28 tons and Xylene was approximately 0.03 tons, for a combined HAPs total of 0.31 tons. These HAPs emissions are well below the individual HAPs limit of 9.0 tons per year and combined HAPs limit of 22.5 tons per year.

In 2017, the 12-month rolling total for Toluene was approximately 0.12 tons and Xylene was approximately 0.05 tons, for a combined HAPs total of 0.17 tons. These HAPs emissions are well below the individual HAPs limit of 9.0 tons per year and combined HAPs limit of 22.5 tons per year.

**PTI No. 259-04A, Cell No. 99, FGCOAT1: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, FGCOAT1 used between 1.32 to 311.33 pounds of material per month, which corresponded to between 0.61 to 86.14 pounds VOC emissions per month. The 12-month rolling total VOC emissions was approximately 0.18 tons, which well below the permit limit of 18 tons VOC per year.

**PTI No. 376-97, Cell Nos. 21 and 22, RGSALT1 (SL 1) and RGSALT2 (SL 2): Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, RGSALT1 (SL 1) used between 589.94 to 1759.73 pounds of material per month, which corresponded to between 5.90 to 17.60 pounds VOC emissions per month. The 12-month rolling total material use was approximately 13129.81 pounds, which was well below the material use limit of 321984 pounds per year. It appeared that the VOC contents of the materials used complied with the VOC content limit of 1% by weight. The 12-month rolling total VOC emissions was approximately 0.07 tons.

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, RGSALT2 (SL 2) used between 1103.67 to 6705.90 pounds of material per month, which corresponded to between 11.04 to 67.06 pounds VOC emissions per month. The 12-month rolling total material use was approximately 38935.24 pounds, which was well below the material use limit of 321984 pounds per year. It appeared that the VOC contents of the materials used complied with the VOC content limit of 1% by weight. The 12-month rolling total VOC emissions was approximately 0.2 tons. The 12-month rolling total VOC emissions from both RGSALT1 (SL 1) and RGSALT2 (SL 2) was 0.27 tons, which was well below the permit limit of 7.6 tons per year.

**PTI No. 375-97B, Cell No. 39, FGCELL39PDT/LOS: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, FGCELL39PDT/LOS 12-month rolling total material use was approximately 44239.26 pounds, which was well below the material use limit of 297216 pounds per year. It appeared that the VOC contents of the materials used complied with the VOC content limit of 2% by weight. The 12-month rolling total VOC emissions was approximately 0.28 tons, which was well below the VOC emission limit of 2.97 tons per year.

**PTI No. 373-97, Latex Curing Ovens (LCOs 14, 15, 16): Unknown**

Based on the records I reviewed, it appeared that the three latex curing ovens (LCOs) associated with this

permit were not operated in 2017, 2018 or 2019 to the date of the inspection.

**PTI No. 567-94B, Cell No. 45, EUPFO-12: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, EUPFO-12 used between 718.89 to 2625.60 pounds of material per month, which corresponded to between 7.19 to 26.26 pounds VOC emissions per month. The 12-month rolling total material use was approximately 20086.34 pounds. It appeared that the VOC contents of the materials used complied with the VOC content limit of 1% by weight. The 12-month rolling total VOC emissions was approximately 0.1 tons, which was well below the VOC emission limit of 2.5 tons per year.

**PTI No. 567-94B, Cell Nos. 46, 47, 48; FGPF015-16-17: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, for FGPF015-16-17 the 12-month rolling total material use was approximately 65307.25 pounds which was well below the material use limit of 215000 pounds per year. It appeared that the VOC contents of the materials used complied with the VOC content limit of 3% by weight. The 12-month rolling total VOC emissions was approximately 0.57 tons, which was well below the VOC emission limit of 3.3 tons per year.

**PTI No. 196-87, Cell No. 34, EUPFO-11: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, EUPFO-11 used between 769.65 to 7356.83 pounds of material per month, which corresponded to between 7.7 to 73.6 pounds VOC emissions per month. The 12-month rolling total material use was approximately 33279.31 pounds. The 12-month rolling total VOC emissions was approximately 0.17 tons, which was well below the VOC emission limit of 14.2 tons per year. \*This PTI and associated emission unit need to be added to the "Air Permit Rolling Accumes" emissions recordkeeping excel spreadsheet.

**PTI No. 388-86, Latex Curing Ovens (LCOs 5, 6, 7, 8, 10): Compliant**

This permit covers five latex curing ovens (LCOs) which are used to manufacture truck parts. S.C. 14. specifies that there shall be no visible emissions from the truck part ovens. At the time of my inspection, I observed no visible emissions.

**PTI No. 387-86A, Cell Nos. 36 and 37, FGPF09&10: Compliant**

Based on the records I reviewed, over the 12-month period from February 2018-January 2019, for FGPF09&10 the 12-month rolling total material use was approximately 24415.85 pounds. The 12-month rolling total VOC emissions was approximately 0.122 tons, which was well below the VOC emission limit of 7.26 tons per year.

**PTI No. 383-86, Latex Dryers 1, 2, 3: Compliant**

This permit covers three latex dryers. S.C. 14. specifies that there shall be no visible emissions from the truck part ovens. At the time of my inspection, I observed no visible emissions.

**Areas for Improvement and Recommendations:**

Based on my review of the records, there are several areas where the facility could improve recordkeeping to show compliance with the applicable permit requirements. Records are currently kept in multiple separate Excel spreadsheets and workbooks for material use and emissions tracking. Efforts should be made to consolidate material use and emissions tracking into the same Excel workbook to improve the usefulness of the records for the facility and facilitate easier review of the records to determine compliance with the applicable permit requirements. The facility should improve coordination with their material providers to ensure that the materials used at the facility comply with the VOC content limits and ensure that this information is up to date.

It was noted in the previous (2/3/16) compliance inspection that the facility didn't have a calculated hourly VOC emission rate, as required by PTI Nos. 387-86, 196-87, and 376-97. The facility has the required information necessary to calculate the hourly emission rate (the monthly VOC emission rate and monthly hours of operation) but the calculations have not been incorporated into the recordkeeping spreadsheets. The facility should include these calculations moving forward.

**Summary:**

Based on my site inspection and review of relevant records, it appears that the Midwest Rubber Co. is in compliance with PTI Nos. 136-17, 276-06, 259-04A, 376-97, 375-97B, 373-97, 567-94B, 196-87, 388-86, 387-86A, and 383-86.

NAME Matthew R. Kuehl

DATE 4/9/19

SUPERVISOR C. Allen