

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

N776443216

FACILITY: M. ARGUESO & CO., INC. (DBA PARAMELT)	SRN / ID: N7764
LOCATION: 2817 MCCrackEN ST, MUSKEGON	DISTRICT: Grand Rapids
CITY: MUSKEGON	COUNTY: MUSKEGON
CONTACT: Jonathon Draper , Environmental Manager	ACTIVITY DATE: 01/18/2018
STAFF: Chris Robinson	COMPLIANCE STATUS: Compliance
SUBJECT: FY'18 on-site inspection to determine the facility's compliance status with PTI No. 57-07A and any other applicable air quality rules and regulations.	SOURCE CLASS: MINOR
RESOLVED COMPLAINTS:	

M. Argueso & Co., Inc (DBA Paramelt, SRN N7764) is located at 2817 McCracken Street, in Muskegon, Michigan. AQD staff Chris Robinson (CR) arrived at this location at approximately 10:00 am on Thursday January 18, 2018 to conduct a scheduled unannounced inspection to determine the facility's compliance status with Permit to Install (PTI) No. 57-07A and any other applicable air quality rules and regulations.

Weather conditions were approximately 30°F cloudy with southwest winds at approximately 20 mph. CR met with Mr. Peter Silverstein, Plant Manager, and Mr. Jonathon Draper, Environmental Manager, announcing intent to inspect and providing proper identification. Mr. Silverstein and Mr. Draper generously provided a tour of the facility as well as pertinent information. No visible emissions were observed, and a very slight burnt wax odor was noticed indoors only. According to Mr. Silverstein the facility is operating three shifts, five to seven days per week.

Facility Description

Paramelt is a specialty wax formulation facility that produces advanced technology casting wax blends for the investment casting industry. Processes at this facility include melting, addition and blending of waxes, resins, filters, additives, colors and scents in steam-heated tanks. The formulated waxes are stored in holding tanks prior to being formed into pellets, slabs or flakes.

PTI No. 57-07A Compliance Evaluation

Voided PTI no. 57-07 covered emission units, EU-1 and EU-2. Since the last inspection conducted on 10/6/2016 a permit modification was completed by Paramelt and PTI no. 57-07A was issued (October 2017) covering two (2) additional process units (EU-3 and EU-4) as well as allowing the facility to reorganize existing units EU-1 and EU-2. Although the facility's Potential to Emit (PTE) is most likely below major source threshold, the facility accepted the addition of facility-wide HAP limits. Updated PTE calculations were not reviewed during the October 2017 PTI modification. Based on the facility-wide HAP limits, Paramelt is now considered a Synthetic Minor Source. Maces has been updated to reflect this change and the facility already reports to MAERS.

Emission units are as follows:

Emission Unit ID	Emission Unit Description	Flexible Group I.D
EU-1	Consists of a 7,500 cfm Tri-Mer Whirl Wet orifice type wet dust collector, designed for particulate control currently servicing tanks M-1 through M-7 and R-4.	FG-EU1-2-3-4 & FG-Facility
EU-2	Comprised of an aluminum mesh pre- filter, and a 5,000 cfm Tri-Mer Whirl Wet orifice type wet collector for particulate control, connected to a 3,000-lb. carbon adsorption bed system for VOC control. This system services tanks R-1 through R-3, R-5, and R-7 through R-10, R-13, and R-14.	
EU-3	Consists of a 4,500 cfm Tri-Mer Whirl Wet orifice type wet dust collector, designed for particulate control and services Hot Boxes HB-1 and HB-2 and tanks S-1, S-2, V-1 and V-2.	
EU-4	Consists of a 3,000 cfm Tri-Mer Whirl Wet orifice type wet dust collector, designed for particulate control and services tanks R-11 and R-12.	

Flexible Group FG-EU-1-2-3-4

• Emission Limits

The following Emission limits apply:

Equipment	Pollutant	Limit	Reported Emissions	Time Period/Operating Scenario
EU-1	PM	0.01 lbs. /1,000 lbs. of gas	--	Hourly
	PM2.5	0.31 pph	0.0082 pph	
	PM10	0.31 pph		
EU-2	PM	0.01 lbs. /1,000 lbs. of gas	--	
	PM2.5	0.20 pph	0.0370 pph	
	PM10	0.20 pph		
EU-3	PM	0.01 lbs. /1,000 lbs. of gas	--	
	PM2.5	0.18 pph	0.0060 pph	
	PM10	0.18 pph		
EU-4	PM	0.01 lbs. /1,000 lbs. of gas	--	
	PM2.5	0.12 pph	0.1092 pph	
	PM10	0.12 pph		
EU-1, EU-2, EU-3, EU-4	Opacity	10%	0%	6-min Avg
FG-EU-1-2-3-4	VOC	7.0 tpy	*0.933 tons	12-month rolling

The facility's "December 2017 Emissions Report" was provided and is included in **Attachment A** and summarized in the table above. Particulate Matter (PM) emission limits listed above are based on proper operation of the facilities control devices. All control units appeared to be functioning properly during this inspection. Per conversations with Mr. Silverstein and Mr. Draper and observations made, Paramelt has improved the ventilation system for each scrubber, replacing and reconfiguring piping and other components as needed. As indicated by Mr. Draper and observed in the records, PM2.5 and PM10 emissions for EU-4 are at approximately 91% of the limit. The facility is aware and will be submitting a permit application to increase this limit to accommodate expected future growth.

Special condition III(1) requires the permittee to recover and reclaim, recycle, or dispose of all waste waxes, resins, additives, colors, scents, etc. (materials) in an acceptable manner in compliance with all applicable state rules and federal regulations. Per Mr. Draper all waste material is sent to the landfill.

The facility also has a 10% opacity limit and a 7.0 tpy VOC limit. As noted above, no visible emissions were observed during this inspection. The facility provided "Emission Reports" tracking spreadsheets, which are included on the attached CD (**Attachment A**). Although the facility provided some rolling 12-month VOC data, AQD only considered the data from the issuance of PTI no. 57-07A (October 2017) due to the reconfiguring of exiting emission units (EU-1 and EU-2) and the addition of two new emission units (EU-3 and EU-4). Therefore, 12-month rolling data is not yet available. Based on data provided for October 2017 through December 2017 the facility's rolling sum is currently at approximately 0.933 tons/year, which also includes fugitive emissions (EU-0).

• Process/Operational Limits

M. Argueso & Co., Inc. submitted a revised Periodic Monitoring Program (EWI-31), which was required by the facility's old permit (PTI no. 57-07) in June 2010. Per discussions with Mr. Draper, the facility believed that this plan met the requirements of the now required Malfunction Abatement Plan. Discussions and a review of the minimum requirements for a Malfunction Abatement Plan (MAP) now required in Special Condition FG-EU-1-2-3-4 III(2) indicates that the current EWI-31 plan is not adequate and will need to be updated. Per Mr. Draper the EWI-31 plan will be updated to include the MAP requirements. The AQD will submit a formal request to the facility.

• Design/Equipment Parameters

The facility operates four (4) wet scrubbers (DC-1, DC-2, DC-3 and DC-4) which are operated at all times during which the respective emission unit is operated. DC-2 also has a 3,000lb carbon adsorption bed. The facility has installed and maintains a pressure gauge on the inlet of the DC-2 carbon bed. The gauge appears to be operating properly. At the time of this inspection the pressure reading was at approximately 11" Hg, which, according to personnel and attached site records, is normal.

The facility has also installed manometers on all four (4) scrubbers. During this site inspection the manometer readings were as follows:

Scrubber	Operating Range (psig)	Manometer Reading (psig)

DC-1	5.0 - 8.5	7.5
DC-2	6.0 - 9.0	8.0
DC-3	8.5 - 9.5	9.5
DC-4	8.5 - 10.5	10.5

All kettle lids are kept closed except while filling and to prevent condensation from building up on the lids of the reclaim kettles.

• Testing/Sampling

Special Condition FG-EU-1-2-3-4 V(1) requires the facility to determine the VOC content, water content and density of any material used, as applied, using federal reference method Test Method 24 or, with approval from the AQD, by manufacturers formulation data. Based on discussions with Mr. Draper, VOC emissions are currently based on either manufacturer formulation data or Safety Data Sheets (SDS). A request has not yet been submitted to the AQD by the facility to utilize manufacturer's formulation data, however, PTI 57-07 allowed the facility to utilize SDS's in the past. CR informed Mr. Draper that they would need to submit a request or Test. Per Mr. Draper, Paramelt will submit a request to use manufacturers formulation data and begin making the change.

The facility conducted a PID VOC removal efficiency test on the DC-2 carbon system as required in 2008. Permit 57-07A requires the facility to conduct additional testing within 180 days of issuance of PTI no. 57-07A. The facility is planning on conducting this test within the next two months. CR did inform Mr. Draper that a test plan is required to be submitted to the AQD's Field Office and Technical Programs Unit 30 days prior to testing and a complete report of test results within 60 days following the last day of the test.

For now, the facility is following the old Periodic Monitoring Program (EWI-31) to ensure that a 90% VOC removal efficiency is maintained, which is based on 2008 testing results. The facility submitted a revised EWI-31 to AQD in June 2010 and maintains a daily PID tracking spreadsheet to determine when to change the carbon in the DC-2 scrubber. Mr. Draper indicated that this ongoing test will be incorporated into the new MAP. The plan states that the coconut shell carbon for DC-2 will be replaced when PID readings from the carbon bed exhaust read >10ppm for more than seven (7) successive days. Site personnel record daily PID readings for days of operation. Based on this data, which is attached, the facility is following the EWI-31 guidelines. The last carbon change took place in December 2017. Daily PID readings are collected by the facility. Records were provided and are included in **Attachment B**.

At this time AQD is not requesting any PM emission testing.

• Monitoring/Recordkeeping

The facility inspects each scrubber daily, which includes visible emissions. Records were provided and are included in **Attachment D**.

The following records were received complete and in a timely manner and are included in **Attachment A**.

- Current listing and chemical composition of all materials used. Paramelt maintains a list as well as SDS' for all materials used. An SDS for the three most common materials used have been provided and are included in **Attachment C**.
- Daily pressure readings for the EU-2 carbon bed system.
- Daily visible emission records for each emission unit.
- Monthly records for:
 - a) Gallons or pounds of (with water) of each material used and reclaimed.
 - b) VOC content (with water), of each material as applied.
 - c) VOC, mass emission calculations determining the monthly emission rate in tons per calendar month.
 - d) VOC, mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

• Reporting and Stack/Vent Restrictions

AQD staff did not specifically measure the height or diameters of the four stacks (SV-1, SV-2, SV-3 & SV-4) associated with the wet scrubbers. However, stacks SV-1 and SV-2 visually appeared to meet measurements specified in the permit. Per discussions with Mr. Silverstein and Mr. Draper Stacks SV-3 and SV-4 currently have a diameter of 12-inches as specified in the permit, but stack height is less than the 43-foot requirement. The facility is in the process of raising these stacks to 43-feet. Once completed, Mr. Draper will notify AQD that

all construction activities associated with the Permit Modification (PTI No. 57-07A) have been completed as required by Special Condition FG-EU-1-2-3-4 VII(1).

Flexible Group FG-Facility

• Emission Limits

Although this facility is a true minor source, the facility discussed with AQD's permit section during the recent modification process to add facility-wide HAP limits. An individual HAP limit of 8.9tpy and an aggregate HAP limit of 22.4tpy were added. Based on the discussion above and the records provided by the facility, Paramelt appears to be well under these limits.

December 2017 Max individual Hap calculated: Vinyl Acetate 0.007 tpy*

December 2017 aggregate HAP concentration calculated: 0.016 tpy*

* Although the facility provided some rolling 12-month VOC data, AQD only considered the data from the issuance of PTI no. 57-07A (October 2017) due to the reconfiguring of existing emission units (EU-1 and EU-2) and the addition of two new emission units (EU-3 and EU-4). Therefore, 12-month rolling data is not yet available. This data is based on data provided for October 2017 through December 2017.

• Testing/Sampling

Based on discussions with Mr. Draper, HAP emissions are currently based on either manufacturer formulation data or Safety Data Sheets (SDS). The facility is reviewing chemical Technical data cards to ensure all manufacturers data is current for all chemicals used. At this time, AQD is not requesting Method 311 testing.

• Monitoring/Recordkeeping

All requested records were received complete and in a timely manner and are included in **Attachment A**.

The following records were provided:

- a) Gallons or pounds of each HAP containing material used.
- b) Where applicable, gallons or pounds of each HAP containing material reclaimed.
- c) HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.
- d) Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
- e) Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

Miscellaneous

• Rule 290 Exemption

The facility installed equipment in 2012 and 2013 under exemption Rule 290 for a process called Hotbox Reclaim. This process consists of two large modified shipping containers with electric heaters, which use steam to melt reclaimed wax originally manufactured and sold by Paramelt. The melted wax is transferred to a centrifuge to remove contaminants. Once completed, the processed wax is sent to holding tanks for reuse. Both Hotboxes are currently vented through EU-3. The October 2017 PTI modification incorporated these units into the permit.

• Boilers

The facility has two boilers on-site (Boiler A & B). Boiler B has been disconnected and removed from the facility. Boiler A is active and is a model 6-x-10W natural gas only, 8,176 MMBTU, installed in 1994, with a low NOx burner installed in 2015. Since this boiler is natural gas only and rated for 8,176 MMBTU it is not subject to NSPS, is exempt under Rule 282(2)(b)(i) and the Boiler MACT does not apply.

• Building Expansion

Paramelt began construction of a building expansion in 2017 located on the East side of the production building. This area is currently unfinished and not utilized. Per discussions with Mr. Silverstein and Mr. Draper, construction is scheduled to be completed soon. Once completed this area will initially be used for warehousing. Eventually existing equipment will be moved to this area. At this time Paramelt is unsure if new equipment will be added, however, CR did inform Mr. Draper that the addition of any new equipment or modification to existing equipment may trigger a New Source Review and a PTI may be required.

Conclusion

Based on observations made during the January 18, 2018 inspection and a subsequent records review, M. Argueso & Co. Inc. (DBA Paramelt) appears to be in compliance with PTI No. 57-07A and other applicable air quality rules and regulations.

Attachments

- A - Tracking Spreadsheets
- B - PID Readings
- C - Safety Data Sheets
- D - Inspection Records

NAME



DATE

2/28/2018

SUPERVISOR

