

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

.02750261

FACILITY: DDP Specialty Electronic Materials US, Inc.		SRN / ID: P1027
LOCATION: 633 Washington Street, MIDLAND		DISTRICT: Saginaw Bay
CITY: MIDLAND		COUNTY: MIDLAND
CONTACT: Sara Bennett , Environmental, Health, & Safety Specialist		ACTIVITY DATE: 09/05/2019
STAFF: Kathy Brewer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MEGASITE
SUBJECT: EU04 inspection		
RESOLVED COMPLAINTS:		

DDP inspection September 5, 2019

DDP Contact: Sara Bennett, Environment, Health, and Safety Specialist

EU04 is an automotive glass bonding primers manufacturing process at 100 building

The EU04 permit conditions include "flexible for toxics" provisions that use TAC Category based emission limits. The emission limits group pollutants by toxicity and period (hourly, 8 hour, 24 hour, annual).

The inspection included a review of the process flow diagram, including control devices and vents, on site records, control room process screen, organic wash solvent waste storage, and, ROP required emission control and metering devices. AQD records were also reviewed.

No direct releases found post 2016 for EU04 in AQD release report database

Based on the site visit and records review the facility appears to be in compliance with the ROP Special conditions for EU04.

The activities in EU04 operated under the Rule 290 PTI exemption until PTI No. 150-14A was issued and incorporated into the facility's ROP. PTI 191-18 was issued in January 2019 to reflect new control device configuration and has not yet been incorporated into the ROP. An internal audit recently determined that emission unit devices were subject to the MON MACT (40 CFR part 63 Subpart FFFF) and a ROP modification has been submitted.

This emission unit is subject to the NESHAP for Miscellaneous Coating Manufacturing in 40 CFR Part 63, Subpart HHHHH and to the NESHAP for Organic Liquids Distribution in 40 CFR Part 63, Subpart EEEEE, and NESHAP for Miscellaneous Organic Chemical Manufacturing in 40 CFR Part 63 Subpart FFFF. In addition, processes subject to HHHHH and FFFF are also subject to the equipment leak provisions of 40 CFR Part 63, Subpart UU (National Emission Standards for Equipment Leaks - Control level 2 Standards).

The emissions reported to MAERS in 2018 were the following:

Pollutant	Amount
VOC	280 pounds
PM10	9.3 pounds

On Site Records Review

August 2018, November 2018, March 2019. July 2019 Vessel cleaning
August 20, 2018, November 20, 2018, March 20, 2019,. July 20, 2019 Carbon Bed capacity for 9154.
April 2019 – August 2019 Carbon bed capacity/change outs for 9154

AQD File Review

MAERS 2018 emissions
CAM reports March 2018, September 2018, March 2019
ROP Annual and semi annual Deviation reports September 2017, March 2018, September 2018, March 2019
MACT Reports Subpart FFFF and Subpart HHHHH, March 2019
Permit EVAL forms for 105-14a and 191-18.

Description

The emission unit produces primer products for use with urethane adhesives. These products are used in automotive glass bonding operations. The solids primer, clear primer, and, dissolved solids primer process lines are each operated as a batch process. The three process lines share the same packaging line and some control devices and materials handling.

Raw materials are received by truck, drum or tote. Bulk unloading stations use a nitrogen balance. Material mixing, transferring, drying and packaging are process activity that generate emissions.

The emission unit uses several dust collectors and two carbon beds followed by a shared carbon bed for emission control. For clear primers, only one carbon bed is used. For suspended solids and dissolved solids primers, two beds in series are used.

Solvent cleaning is only conducted using MEK with the equipment closed and exhausted to the carbon control system. Used solvent is stored in closed waste dumpsters. The vessels are open for high-pressure washing with water only, and the used water is conveyed to the onsite wastewater treatment system.

Emissions

The emission limits include are flexible for TACs to allow the facility to use materials with a wide variety of TACs. The limits are listed by categories based on screening levels, with an emission limit proposed for each category and averaging time. Each category covers a range of screening levels, and the categories apply to all averaging times used for screening levels (1-hour, 8-hour, 24-hour, and annual). The emission limit was established using a worst-case impact of modeled emissions and lowest screening level. If the AQD has not determined a screening level the AQD Toxics Unit is able to review future facility-generated toxicity determinations.

Review of on site records found all emissions to be with in permitted limits.

Pollutant	Limit	Time Period / Operating Scenario	December 2018 value	Comment
1. VOC +	8.3 tpy ² **	12-month rolling time period as determined at the end of each calendar month	315 lbs	
2. Other volatile organics (OVO): organic compounds that are "volatile" but are not "VOC" ⁺	8.3 tpy ¹ **	12-month rolling time period as determined at the end of each calendar month	315 lbs	
3. PM	0.10 lb per 1,000 lbs of exhaust gases on a dry gas basis ²	Test protocol*	NA	NA

+ "Volatile organic compound" is a regulatory term defined in Rule 122 (R 336.1122). Acetone is an example of an organic compound that is both organic and volatile in the general chemical senses of these terms, but that Rule 122 identifies as not a VOC. Each of these emission limits (SC I.1 and I.2) applies to the total of all compounds fitting the description.

** This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

The facility tracked OVCs and all OVOs as VOCs to be conservative so VOCs emitted are used for the OVO values. The *rolling* average of the last 12 months is used for each parameter.

Pollutant	Limit (Each TAC)	Time Period / Operating Scenario	December 2018 TOTAL TAC emissions	Comment
Emission limits for TACs with a screening level based on a one-hour averaging time				
4. Each Category 1 TAC	0.00001 lb/hr ^{1, **}	Test protocol *	None emitted	

Pollutant	Limit (Each TAC)	Time Period / Operating Scenario	December 2018 TOTAL TAC emissions	Comment	
5. Each Category 2 TAC	0.0001 lb/hr ^{1, **}	Test protocol *	None emitted		
6. Each Category 3 TAC	0.001 lb/hr ^{1, **}	Test protocol *	None emitted		
7. Each Category 4 TAC	0.01 lb/hr ^{1, **}	Test protocol *	None emitted		
8. Each Category 5 TAC	0.1 lb/hr ^{1, **}	Test protocol *	None emitted		
9. Each Category 6 TAC	0.3 lb/hr ^{1, **}	Test protocol *	None emitted		
10. Each Category 7 TAC	1.0 lb/hr ^{1, **}	Test protocol *	8.26 e-6 lbs/hr		
Emission limits for TACs with a screening level based on an eight-hour averaging time					
11. Each Category 1 TAC	0.00003 lb/hr ^{a, 1, **}	Test protocol *	None emitted		
12. Each Category 2 TAC	0.0003 lb/hr ^{a, 1, **}	Test protocol *	None emitted		
13. Each Category 3 TAC	0.003 lb/hr ^{a, 1, **}	Test protocol *	1.32 e-3 lbs/hr	2 TACs	
14. Each Category 4 TAC	0.03 lb/hr ^{a, 1, **}	Test protocol *	3.5 -2 lbs/hr	7 TACs	
15. Each Category 5 TAC	0.3 lb/hr ^{a, 1, **}	Test protocol *	0.1 lbs/hr		
16. Each Category 6 TAC	0.9 lb/hr ^{a, 1, **}	Test protocol *	0.3 lbs/hr	3 TACs	
17. Each Category 7 TAC	3.0 lb/hr ^{a, 1, **}	Test protocol *	2.82 lbs/hr	6 TACs	
Emission limits for TACs with a screening level based on a 24-hour averaging time					
18. Each Category 1 TAC	0.00006 lb/hr ^{b, 1, **}	Test protocol *	None emitted		
19. Each Category 2 TAC	0.0006 lb/hr ^{b, 1, **}	Test protocol *	None emitted		
20. Each Category 3 TAC	0.006 lb/hr ^{b, 1, **}	Test protocol *	4.08 e-6	2 TACs	
21. Each Category 4 TAC	0.06 lb/hr ^{b, 1, **}	Test protocol *	None emitted		
22. Each Category 5 TAC	0.6 lb/hr ^{b, 1, **}	Test protocol *	None emitted		
23. Each Category 6 TAC	1.8 lb/hr ^{b, 1, **}	Test protocol *	None emitted		
24. Each Category 7 TAC	6.0 lb/hr ^{b, 1, **}	Test protocol *	7.2 lbs/hr	11 TACs	

Pollutant	Limit (Each TAC)	Time Period / Operating Scenario	December 2018 TOTAL TAC emissions	Comment	
Emission limits for TACs with a screening level based on an annual averaging time					
25. Each Category 1 TAC	5 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	None emitted		
26. Each Category 2 TAC	50 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	2.8 e-4	2 TACs	
27. Each Category 3 TAC	460 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	1.6 lbs/hr	18 TACs	
28. Each Category 4 TAC	4,000 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	2 lbs/hr	10 TACs	
29. Each Category 5 TAC	4,000 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	0.27 lbs/hr	2 TACs	
30. Each Category 6 TAC	4,000 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	4.4 lbs/hr	3 TACs	
31. Each Category 7 TAC	4,000 lb/yr ^{b, 1, **}	12-month rolling time period as determined at the end of each calendar month	6.6 e-3		

Pollutant	Limit (Each TAC)	Time Period / Operating Scenario	December 2018 TOTAL TAC emissions	Comment	
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All references to "a screening level" refer to any applicable AQD-established initial threshold screening level or any applicable AQD-established initial risk screening level. Secondary risk screening levels shall not be considered in these categories. This permit does not authorize emissions of any TAC with a screening level less than 0.001 microgram per cubic meter for any averaging time.

- Category 1 TACs are all TACs with a screening level of 0.001 to < 0.01
- Category 2 TACs are all TACs with a screening level of 0.01 to < 0.1
- Category 3 TACs are all TACs with a screening level of 0.1 to < 1
- Category 4 TACs are all TACs with a screening level of 1 to < 10
- Category 5 TACs are all TACs with a screening level of 10 to < 30
- Category 6 TACs are all TACs with a screening level of 30 to < 100
- Category 7 TACs are all TACs with a screening level ≥ 100

Screening levels and category criteria are in units of micrograms per cubic meter.

^a The average emission rate shall not be less than one-eighth of the maximum one-hour emission rate.

^b The average emission rate shall not be less than one-tenth of the maximum one-hour emission rate.

* Test protocol shall specify averaging time.

** This emission limit does not include fugitive emissions (i.e., emissions from leaking valves, flanges, etc.) from the emission unit.

Material limits

The ROP does not list any specified material limits

Process and Operational Restrictions

SC III.1. Cleaning of equipment is required to be done by methods and materials that minimize the emission of VOCs. and ^hVOCs. SC III.2 requires all organic was solvent to be stored in closed containers.

Cleaning using MEK is done with a vessel closed and vented to the carbon control. Used MEK is stored in a closed waste dempsters.

The facility tracks the emissions from solvent cleaning activities including adding solvent to the vessel and pressurized transfer of the liquid out of the vessel to the waste storage container and the number of rinses each month to determine the emissions from cleaning. On site records reviewed included the following.

Month	# rinses
Aug 2018	7
Nov 2018	6
March 2019	5
July 2019	5

Design and Equipment Parameters

SC IV.1 requires the facility to only operate portions of EU04 venting to the carbon beds if the carbon beds are installed, maintained and operated in a satisfactory manner and in compliance with FGCOATINGS MACT. The facility tracks the process activity emissions that are sent to the carbon beds. When the remaining carbon capacity is less than 100 lbs, the process is prevented from operating until a carbon change out has occurred. Records reviewed showed the facility maintained the carbon bed capacity above 100 lbs and performed a change out when the remaining capacity approached 100lbs. Carbon bed 9154 capacity records are attached.

SC IV.2. requires the facility to only operate portions of EU04 venting to the specified filters if the filters are installed, maintained and operated in a satisfactory manner. Process alarms for three of the devices alert operations to evaluate the device. Some have additional alarms and can shut down the process.

Filter	Differential Pressure on site Sept 5,2019	Performance criteria
FL-5410 Pulse Jet cartridge filter (SVEU04-003)	0.26 psig	Initial warning alarm at 2 psig
FL5420 Dryer Filter (SVEU04-004)	2.5 inches H2O	Initial warning alarm at 4 inches H2O
	1.0 inches H2O	

FL2490 Process dust collector (SVEU04-004)		Low alarm 0.035 inches H2O, High alarm 27 inches H2O
FL 5446 In line filter	NA	VE checked while loading

Monitoring and Recordkeeping

SC VI. 2. and VI.3 requires the facility to calculate 12 month rolling VOCs and OVOs. The facility tracked OVCs and all OVOs as VOCs to be conservative so VOCs emitted are used for the OVO values. The average of the last 12 months is used for each parameter. On site records were reviewed for August 2018, November 2018, December 2018, March 2019, and July 2019. December 2018 records were reviewed in detail while on site.

Month	12month rolling average VOCs (same value for OVOs)
Aug 2018	300 lbs
Nov 2018	304 lbs
Dec 2018	315 lbs
March 2019	312 lbs
July 2019	305 lbs

The calculations are based on the emissions of each pollutants emission rate during a process activity for manufacturing a specific product times the number of batches performed of each product or cleaning. Emissions are tracked post control device by TAC Category and if VOC.

SC VI.4 and VI.5 require the facility to keep records of emissions and production activities that emit air contaminants including raw material used. The facility keeps records of the number batches of each product. The emissions generated by each process activity used to produce each product have been determined. A Method of Change occurs if change in product, process, or procedure. The facility reviewed the current emission calculations with most recent PTI and verified they were appropriate for current process activity emission calculations. The emissions from product batches are tracked and summarized by TAC category. The emissions are based on the number of batches of each product made each month.

SC VI. 6 and VI.7 establish how the facility shall evaluate the emission of TACs not included in the SC I. Emission Limits table and that do not have a screening level. The facility appears to have performed the appropriate evaluations and maintained or submitted required information as appropriate.

SC VI.8 requires monthly VE checks for some control devices. On site VE records were reviewed and indicate the facility is in compliance with this requirement. VE records for randomly selected dates in February and November 2018 and in March and July 2019 are attached.

Primers Filter receiver Pulse jet cartridge dust collector FL-5410 (SVEU04-003)	SC IV.2 installed, maintained, and operated in a satisfactory manner SC VI.8 Conduct monthly non Method 9 VEs	VE __Pass__ Date November 5, 2018	VE __Pass__ Date February 9, 2018	VE __Pass__ Date March 3, 2019	VE __Pass__ Date July 26, 2019
Process Pulse jet cartridge dust collector FL-2490 (SVEU04-005)	SC IV.2 installed, maintained, and operated in a satisfactory manner. SC VI.8 Conduct monthly non Method 9 VEs	VE __Pass__ Date November 21, 2018	VE __Pass__ Date February 19, 2018	VE __Pass__ Date March 18, 2019	VE __Pass__ Date July 23, 2019
Primers In-line cartridge dust collector FL-5446 (SVEU04-007)	SC IV.2 installed, maintained, and operated in a satisfactory manner. SC VI.8 Conduct monthly non Method 9 VEs	VE __Pass__ Date November 13, 2018	VE __Pass__ Date February 22, 2018	VE __Pass__ Date March 24, 2019	VE __Pass__ Date July 7, 2019
FL-5420 Primers Dryer bag house filter (SVEU04-004)	SC IV.2 installed, maintained, and operated in a satisfactory	VE __Pass__ Date November 5, 2018	VE __Pass__ Date February 9, 2018	VE __Pass__ Date March 3, 2019	VE __Pass__ Date July 26, 2019

manner. SC VI.8 Conduct monthly non Method 9 VEs				
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Testing/Sampling

The ROP does not list any specified testing or sampling.

Reporting

September 2018 Deviation Report found a deviation for an incorrect configuration on the carbon bed exhaust vent. The vent was 4 inches in diameter and 8.67 feet above ground. The permit vent description was 3 inches in diameter and 9.33 feet above ground. The process was shut down and the vent changed to meet the permit requirements. Air dispersion modeling confirmed that emissions were below screening levels with the 4 inch, 8.67 feet vent.

March 2019 Deviation Report include a deviation for an EU04 control device. The facility submitted a ROP Modification to incorporate changes to the carbon beds after EPA approved the precompliance plan for MACT HHHHH (Miscellaneous Manufacturing and coatings MACT). The EPA approved configuration used two carbon beds followed by a shared carbon and removed the impinging liquid scrubber. The facility was notified they needed to submit a PTI application for the control device change. A PTI application was submitted on November 14, 2018 and approved January 11, 2019 but not prior to the facility changing the control device. The facility states that they were in compliance with all emission limits and requirements of MACT HHHHH after removing the impinging scrubber and using the carbon beds for control.

The March 2019 MACT HHHHH report included the precompliance plan change and the delay in obtaining a PTI as a Deviation.

CAM reports March 2018, September 2018, March 2019 had no excursions or exceedances reported.

SC VI II.4. requires the permittee to submit an annual list of TACs emitted for the first time. The facility has submitted the report as required.

Stack/Vent Restrictions

The following vent information was confirmed during the inspection.

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)
1. SVEU04-001 ^a (Two Carbon Beds followed by a shared carbon bed)	3	9.33
2. SVEU04-003 ^b (FL-5410-Pulse Jet Cartridge Filter)	6	77.33
3. SVEU04-004 ^b (FL-5420 Dryer Vent Reverse Pulse Jet Cartridge Filter)	6	52
4. SVEU04-005 ^b (FL-2490 Process Pulse Jet Cartridge Filter)	6 x 12	17.2
5. SVEU04-006 (Packaging Vent)	8	42.25
6. SVEU04-007 (FL-5446 Dissolved Solids Primer Resin Airvey System in line Cartridge Filter)	3.5	49

NAME

FAB

DATE

9/20/2019

SUPERVISOR

C. Chase