

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

A404348697

FACILITY: Dow Silicones Corporation		SRN / ID: A4043
LOCATION: 3901 S Saginaw Rd, MIDLAND		DISTRICT: Saginaw Bay
CITY: MIDLAND		COUNTY: MIDLAND
CONTACT: Jennifer Kraut, Air Specialist		ACTIVITY DATE: 04/26/2019
STAFF: Gina McCann	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MEGASITE
SUBJECT: EU2901-12 and EU2901-16		
RESOLVED COMPLAINTS:		

Inspection Date: 4/26/2019

Inspection Started: 8:30

Inspection Ended: 11:00

DOW Silicones/EGLE-AQD staff present during the inspection:

- Gina McCann (EGLE-AQD, Senior Environmental Quality Analyst)
- Jennifer Kraut (Air Specialist, DOW Silicones)
- Brandon Bishop (EHS Specialist, DOW MiOps)
- Holly Woloshik (2901 Production Engineer, DOW Silicones)
- Mike Harding (2901 Operations Leader, DOW Silicones)

Records reviewed as part of the inspection were:

- ROP Annual report for 2018
- 40 CFR Part 63 Subpart FFFF Annual Report for 2018

EU2901-12

Distillation pilot process consisting of distillation column and ancillary equipment. The most recent PTI for this emission unit is PTI No. 125-10A.

- Cryogenic condenser

Special Condition (SC) III.1 restricts operation of EU2901-12 unless the cryogenic condenser coolant temperature is -40°C or less, except during the phase separator cleanout operation. SC VI.1. is the associated monitoring and recordkeeping condition that requires the cryogenic condenser's coolant temperature to be monitored on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. I reviewed cryogenic condenser coolant temperature records from January 1, 2018 through April 23, 2019. The cryogenic condenser coolant temperature was -40°C or less during times of operation, except during the phase separator cleanout operation. During the inspection the instantaneous reading on the cryogenic condenser was -49.6°C . The secure process alarm (SPA) was set at -40°C .

SC IV.1. restricts operation of EU2901-12 unless the cryogenic condenser is installed, maintained, and operated in a satisfactory manner, except during the phase separator cleanout operation. The plant provided 3/22/2019 and 3/7/2018 as the two most recent calibration check dates. Additionally, the cryogenic condenser coolant temperature was -40°C or less during times of operation, except during the phase separator cleanout operation, which appears to be satisfactory operations.

SC IV.2. requires the plant to equip and maintain the cryogenic condenser with a coolant temperature indicator. As part of the records request, the last two calibrations on the coolant temperature indicators was requested. The plant provided 3/22/2019 and 3/7/2018 as the two most recent calibration check dates.

SC VI.3. requires the plant to maintain monthly and 12-month rolling time period records of the VOC emission rate from EU2901-12. SC I.1. limits VOC emissions to less than 7.5 ton per year (tpy), based on a 12-month rolling time period as determined at the end of each calendar month. I reviewed VOC emissions for the 12-month rolling time period ending February 2019. VOC emissions were 2.11 tpy.

Compliance Reporting

I reviewed the ROP Annual report for 2018 for this unit. No deviations were reported for this unit.

EU2901-16

2901 B Module Twin Screw Extruder located in the 2901 building. The extruder operates under vacuum. This emission unit is subject to the requirements of 40 CFR Part 63, Subpart FFFF. The most recent PTI for this emission unit is PTI No. 180-15A.

- Xylene contact condenser 16621

SC III.1 restricts operation of EU2901-16 unless the 16621 exhaust gas temperature is 35°C or less on an instantaneous basis. SC VI.2 is the associated monitoring and recordkeeping condition, which requires the plant to monitor and record, in a satisfactory manner, the exhaust gas temperature of condenser 16621 on a continuous basis. Monitoring and recording of data "on a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. The permittee may record block average values for 15 minute or shorter periods calculated from all measured data values during each period. I reviewed the 16621 exhaust temperature records from January 1, 2018 through April 23, 2019. The temperature was 35°C or less during times of operation. During the inspection the instantaneous reading on the 16621 exhaust temperature was 24.6°C. The SPA was set at 33°C.

During the inspection we discussed that this unit was once operated as a R290 unit and it has a torit dust collector attached to it. When the unit became permitted the plant had inadvertently left the collector out of permitting. They noticed it had been left off when they were conducting an internal review. The plant will be re-permitting this unit to include that collector (EF8). The plant operates the Torit with a differential pressure of less than 0.4 pounds per square inch (psi). We viewed the collector and I could hear the pulse jets operating. The Operations Leader relayed that the operations staff does rounds on their shift to verify visible emissions. However, the process was not operating during the inspection.

SC IV.1. restricts operation of EU2901-16 unless condenser 16621 is installed, maintained, and operated in a satisfactory manner and SC IV.2 requires the plant to install calibrate, maintain and operate, a device to monitor and record the exhaust gas temperature of condenser 16621 on a continuous basis. As part of the records request, the last two calibrations on the exhaust gas temperature condenser was requested. The plant provided 10/4/2018 and 12/20/2017 as the two most recent calibration check dates.

SC VI.3. requires the plant to calculate the VOC emission rate from EU2901-16 monthly, for the preceding 12-month rolling time period. SC I.1. restricts VOC emissions to 9.9 tpy, based on a 12-month rolling time period as determined at the end of each calendar month. VOC emissions for the 12-month rolling time period ending February 2019 was 2.82 tpy.

Compliance Reporting

I reviewed the ROP Annual report for 2018 for this unit. Two deviations were reported for this unit.

On 1/1/2018, an internal review found that the dust collector used for particulate control was not identified in the permit. The corrective action is to re-permit this process and to include the torit dust collector.

On 1/1/2018, it was determined that some of the parametric monitoring values reported in the MON NOCS submitted on September 2018 require updating. There were administrative errors for this unit.

NAME Maria L. McCann DATE 4/30/19 SUPERVISOR C. Hare