

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

A404349566

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: 07/03/2019
STAFF: Gina McCann	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MEGASITE
SUBJECT: EU325-03		
RESOLVED COMPLAINTS:		

Inspection Date: 7/3/2019

Inspection Started: 8:30

Inspection Ended: 10:30

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

- Gina McCann (EGLE-AQD, Senior Environmental Quality Analyst)
- Jennifer Kraut (Air Specialist, DOW Silicones)
- Leah Olson Perry (EHS Specialist, DOW MiOps)
- Matt Weber (Production Engineer filling in for this unit due to holiday schedule, DOW Silicones)

Records reviewed as part of the inspection were:

- ROP Annual report for 2018

**EU325-03**

- Venturi scrubbers in series (16810, 16811) or FG337SCRUBBER
- Scrubber liquid tank

Solids recovery system. EU325-03 receives vents from different processes to recover silicon. EU325-03 is located in 348 building. This unit consists of a quench tank (16813), which utilizes water and sodium bicarbonate to quench the spent metal to recover silicon. The spent material contains residual chlorine, aluminum and chlorosilanes. The quenching process generates carbon dioxide. The most recent PTI for this emission unit is PTI No. 44-06.

Special Condition (SC) III.1. requires corrective action to be implemented when the liquid flow rate of venturi scrubber 16810 is less than 40 gallons per minute (gpm). When the liquid flow rate drops below 40 gpm the feed valve shuts down. If the venturi goes down, the process gets isolated and cannot vent through it. The valve must be manually opened if it has been shut down. This allows for the operator(s) to investigate and implement corrective action. During the inspection we viewed this data and during instances when the flow was less than 40 gpm, the lock valve closed and shut down the process. The plant appeared to be meeting this condition at the time of the inspection.

SC III.2. restricts operation of the process serviced by the spent silicon material handling operation, including recovery of direct process residue solid/fines tank and spent bed tanks, also known as "the system", unless the 348 building scrubbers (16810, 16811) are installed and operating properly. We were not able to view the process during the inspection due to onsite maintenance activities. However, we did review the maintenance activities for 2018 through current, 2019. The plant appears to be meeting this requirement.

SC III.3. requires the plant to equip and maintain scrubber 16810 with a liquid flow indicator. We reviewed the calibration records for 2017 and 2018. The flow transmitter is on a 12-month preventative maintenance (PM) cycle, which consists of calibrations. The plant appears to be meeting this requirement.

SC VI.1. requires the plant to monitor and record, on a continuous basis, the liquid flow rate of venturi scrubber (16810) and the liquid level of the scrubber tank. "On a continuous basis" is defined as an instantaneous data point recorded at least once every 15 minutes. During the inspection we reviewed records of the liquid flow rate from May 1, 2017 through May 1, 2019. The plant records data on a continuous basis and was able to demonstrate compliance with the 40 gpm restriction from SC III.1. When the liquid flow rate drops below 40 gpm the feed valve shuts down. If the venturi goes down, the process

gets isolated and cannot vent through it. The valve must be manually opened if it has been shut down. This allows for the operator(s) to investigate and implement corrective action.

The plant also maintains records of the liquid level in the scrubber. For the time period reviewed, the plant appeared to be meeting the requirements of SC VI.1.

SC VII.1. through VII.3. pertain to ROP reporting of monitoring and deviations. Prior to the inspection, I reviewed the 2018 Annual ROP Deviation Report. This emission unit did not report deviations for this time period.

NAME  DATE 7/19/19 SUPERVISOR C. Dave