

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

ACTIVITY REPORT: Scheduled Inspection

A403336493

FACILITY: The Dow Chemical Company U.S.A., Midland		SRN / ID: A4033
LOCATION: 1790 Building, MIDLAND		DISTRICT: Saginaw Bay
CITY: MIDLAND		COUNTY: MIDLAND
CONTACT: Kayla Peacock, Environmental Specialist		ACTIVITY DATE: 09/12/2016
STAFF: Kathy Brewer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MEGASITE
SUBJECT: R290 inspection of EUs at bldg. 1233 Garlon EE MON subject		
RESOLVED COMPLAINTS:		

Inspection date Sept 12, 2016
Emission units inspected: Garlon-Rule 290- Building 1233

Kathy Brewer (MDEQ-AQD)
Kayla Peacock (Dow, Air Delivery Specialist)

Description:

The Building 1233 Garlon process produces a herbicide intermediate. There are two batch reactors in sequence, continuous purification, and storage. Material handling includes raw products transferred from railcar, and catalyst from pipe and trucks. All emissions except those from storage tank V-1132 vent to a header that is controlled by a packed water scrubber followed by carbon drums in parallel. Tank V-1132 emissions go to a condenser and then atmosphere.

The emissions are regulated under Part 55 Rule 290. The process is subject to 40 CFR part 63 subpart FFFF (MON MACT)

During the inspection we reviewed on site records and viewed the process including control devices and associated flow meters.

No non compliances were found during the inspections.

Attachments

May 2015 R290 calculated emissions
2016 monthly total R290 calculated emissions by ITSL/IRSL category
May 2015 and May 2016 Carbon drum change dates
May and September 2016 flow rates for scrubber Al(393)
May and September 2016 flow rates for condenser Al(176)
September 11 and 12 2016 flow rates for scrubber Al(393) and condenser Al(176)
Process chemical list of ITSL and IRSL for emitted/tracked pollutants for Bldg 1233 Garlon process.

File review

40 CFR Part 63 Subpart FFFF annual and semi annual reports for 2015
40 CFR Part 63 Subpart FFFF semi annual reports for Jan – June 2016
ROP Annual and Semi annual deviation reports for 2015
ROP Semi annual deviation reports for Jan – June 2016

Compliance Status: Compliant

Following the batch reactors the material is sent for purification by washing, decanting, and column stripping. The intermediate is stored in a tank until sent to building 477. Emissions from the product tank are vented to a control device that is part of the R290 activities associated with building 477.

Symtet is offloaded under pressure to a tank. Offloading emissions go to a condenser and carbon drums before emitting to the atmosphere. A lbs/hr venting rate from the carbon drums during operations has been established through vent sampling.

Operating parameter records kept include the number of offloads and the operation hours. The carbon drums are changed out after each drum has 440 hours. During the inspection the carbon drums had been operating for 89 hours.

Rule 290 requires emissions of material with ITSL > 2ug/m3 is limited to <500 lbs/month, materials with ITSLs > 2 and <0.04 ug/m3 is limited to <10 lbs/month. A review of May 2015 R290 records show that the total of emitted materials with ITSL > 2ug/m3 were 106.79 lbs/month and total emitted materials with ITSLs > 2 and <0.04. were 0.27 lbs for the month.

A review of the 2016 calendar year monthly emissions found emissions were below allowed R290 limits.

Pollutant	ITSL	Averaging Time	
Butyl chloride	1500	24 hr	
ethanol	19000	8 hr	
Ethyl chloride	10000	24 hr	
Ethyl ether (diethyl ether)	12000	8 hr	
Glycolic acid	4	annual	
Hydrogen chloride	20	annual	
Tributyl amine	7	annual	
Trichloroethylene	2	24 hr	
Tetrachloroethylene (perc)	40.0	Annual	
Sodium hydroxide	20	1 hr	
Sodium carbonate (soda ash)	8.88	Annual	
Garlon EE (triclopyr ethyl ester)	59.58	Annual	
Tetraethylene glycol	95.12	Annual	
Symtet	3.61	Annual	
Sodium TCP (trichloro pyridinate)	3.17	annual	
Rule 290 limit ITSL >2 ug/m3			<500 lbs/month
Highest MONTHLY TOTAL for all pollutant emissions from records review (lb/month)			389.46

Pollutant	ITSL (ug/m3)	Averaging Time	
Carbon tetrachloride	0.17	annual	
Ethylchloroacetate	0.1	annual	
Tetrabutyl ammonia bromide	0.1	annual	
chloroform	0.40	annual	
dioxane	0.20	annual	
Monochloroacetic acid	0.10	annual	
1,1,1,2 tetrachloroethane	0.10	annual	
Rule 290 limit IRSL > 0.04 ug/m3			<10 lbs/month
Highest MONTHLY TOTAL for all pollutant emissions from records review (lb/month)			2.19

Reporting

For the Building 1233 process activities, no deviations were reported in the annual and semi annual ROP reports. No deviations or process changes were reported in the MON MACT reports.

NAME *[Signature]*

DATE 5/4/2017

SUPERVISOR *C. Howell*

