

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

A403336895

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: 09/29/2016
STAFF: Kathy Brewer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MEGASITE
SUBJECT: 499 bldg. energy & utilities HCL Tank 477 bldg. BrBCB batch productions		
RESOLVED COMPLAINTS:		

R290 emission unit inspection for 499 Building(Energy and Utilities HCL tank) and 477 building BrBCB batch processes. The BrBCB process is subject to 40 CFR 63 Subpart FFFF(MON MACT)

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

Attachments

- Building 499 HCL flow diagram for HCL
- Sept 28-29, 2016 HCL scrubber water flow
- Sept 2015, Jan 2016, April 2016 HCL acid flow to storage records
- Sept 2015, Jan 2016, April 2016 HCL HCL scrubber water flow
- Sept and October 2014 BrBCB R290 emission summaries
- October 2014 BrBCB activity R290 example calculation for isopropanol
- Sept 2014 NaOH scrubber (T960) records
- Sept 20, 2014 NaOH scrubber (T960) low flow scrubber short term alarm process detail
- Sep 29, 2016 T960 scrubber gpm flow, scrubber pH, V960 tank level

File review

- ROP Annual & Semi-annual Deviation reports for Calendar year 2015
- ROP Semi-annual Deviation report for Jan – June 2016
- MON MACT Periodic Report July –Dec 2015
- MON MACT Periodic Report Jan – June 2016
- 499 Building

Compliance status: Compliant

The Energy and Utilities 499 building HCl tanks provide the feed for the HCl dilution mixer. Dilute HCl is used for the regeneration of cation units. Vapors from the HCl storage tanks are controlled by a packed scrubber. HCl flow to the storage tanks and the scrubber water flow records were reviewed. Scrubber flow records indicate the scrubber was operating properly during periods when HCl vapor was generated due to HCl distribution activity.

Reporting

For the Building 499 process activities, no deviations were reported in the annual and semi annual ROP reports reviewed.

477 Building

Compliance status: Compliant

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. Review of site records found the following:

Pollutant	ITSL/IRSL (ug/m3)	Averaging Time
BCB	220	annual
Styrene	1000	annual
O-xylene	390	annual

Bromine	7	8 hr
BrBCB		
HBr	70	1 hr
Rule 290 limit ITSL >2 ug/m3	<500 lbs/month	
Sept 2014 MONTHLY TOTAL for all pollutant emissions from records review (lb/month)	< 4.5	
Oct 2014 MONTHLY TOTAL for all pollutant emissions from records review (lb/month)	<5.5	

Records review indicate that the facility had no emissions in exceedance of R290 emission limits and all required records were maintained.

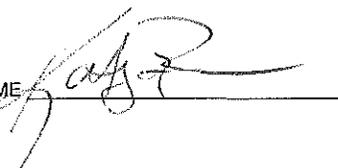
The control device for the 477 building BrBCB emissions is a caustic scrubber. The scrubber is alarmed for a pH of <12 pH and a flow of < 6.3 gpm. During the inspection the control device and instrumentation read outs indicate that the scrubber was operating and monitored properly.

Reporting

For the Building 477 process activities deviations were reported in the annual and semi annual ROP reports. During an internal audit it was determined that documentation required by 40 CFR Part 63, Subpart EEEE (OLD MACT) was incomplete. Transfer racks are now documented in site OLD MACT applicability and the NOCS September 2015 submittal included the updates. Per the MACT periodic reports the 477 building process has no Group 1 low throughput transfer racks. The ROP was modified to reflect the OLD MACT applicability as part of the ROP renewal. Deviations were reported in the MON MACT reports.

During an internal audit it was determined that pressure relief devices subject to a MACT standard were not specifically listed or identified in detailed drawings. Each piece of equipment operating in >5% OHAP service is now identified on facility piping and instrument diagrams.

There were no SSMP events or malfunction events which caused or had the potential to cause the applicable emission limit to be exceeded.

NAME 

DATE 5/6/2017 SUPERVISOR C. Blue