

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

P102858997

FACILITY: Corteva Agriscience LLC		SRN / ID: P1028
LOCATION: 701 Washington Street, MIDLAND		DISTRICT: Bay City
CITY: MIDLAND		COUNTY: MIDLAND
CONTACT: Patty Worden , Senior Environmental Specialist		ACTIVITY DATE: 06/23/2021
STAFF: Kathy Brewer	COMPLIANCE STATUS: Non Compliance	
SUBJECT: site portion FCE EU13. VN will be sent for noncompliance with monthly emission records in 2019 for methanol.		SOURCE CLASS: MEGASITE
RESOLVED COMPLAINTS:		

Emission Unit 13 is an agricultural multiproduct plant with reactors, distillation/fractionation columns, separators, storage tanks /silos, and related equipment. Manufacturing equipment is located at 680 Building. End products include pesticide active ingredients, commercial products, and intermediates that require further processing at other facilities. The facility operates 24/7.

EU13 was permitted by PTI #993-92C in 2004.

Pesticide active ingredient processes within EU13 are subject to the requirements of 40 CFR Part 63, Subparts A and MMM. Intermediates are not subject to Subpart MMM but are subject to 40 CFR Part 63, Subpart FFFF. Processes subject to Subparts MMM or FFFF are also subject to 40 CFR Part 63, Subpart EEEE and the equipment leak provisions of 40 CFR Part 63, Subpart H

EU13 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The CAM subject pollutants for this emission unit are organic HAPs and VOCs. CAM requirements are under FG954THROX.

Emissions reported for 2020 in MAERs from EU13 were 397.9 lbs VOC and no PM.

A pre-inspection overview was provided on June 17, 2021 that covered the process flow diagram, control devices and review of emission calculations including example monthly production for monthly and 12 month rolling materials and emission limit compliance records.

During the June 23, 2021 on site visit the ROP required emission control and metering devices, vents, and real time process screens were viewed. We viewed the process area, tank farms, and rail loading/unloading areas. On site records were provided for VOC and toxic screening level based emissions. Process and control device status and operating parameters records were also provided .

While reviewing records for the inspection the facility determined that emission tracking spreadsheets were missing some data associated with process that emit Methanol and Methylene Chloride. The facility will report the calculation error in the next deviation report and provide corrected emission values. A Violation Notice will be sent for noncompliance with SC VI.1 requirements for calculating and recording emissions for all SC.I emission limit table pollutants.

At the time of the inspection the facility appeared to be in compliance with the other requirements of the EU13 ROP conditions.

On Site Records Review

954 THROX

- Exhaust gas temperature
- Liquid flow rate of Scrubber
- Scrubber pH

MACES- Activity Report

- Vent valve positions
- 954 Throx bypass hours

Dust collector VE observations**Instrumentation calibration dates****TAC emissions for DFA and FLU/DCM process****AQD File Review**

ROP Semi annual Deviation report March 2020, Sept 2020, March 2021

CAM Semi annual reports March 2020, Sept 2020, March 2021

MACT Reports Subpart PAI Sept 2020, March 2021.

MACT Reports Subpart MON Sept 2020, March 2021.

Description

EU13 makes Flumetsulam, Diclosulam or Cloransulum (FLU/DCM) with one group of equipment and DFA with different group of equipment. FLU/DCM can only produce one material at a time. All process vents are collected in one of three vent headers that are sent to FG954THROX for control. Emissions sources include numerous raw materials received by tank truck and stored in tanks, several solid raw materials loaded into process vessels, process dryer, material and waste tank storage, transfer and breathing losses, and some product packaging into supersacks.

The vent valves to 954 Throx are owned & operated by 954 TTU. 954 monitors TTU parameters. If outside acceptable parameters, EU13 will lose vent permission and this will close vent valves.

Particulate form raw material loading of solids from supersacks into process vessels are controlled by dust collector DC 1300. The dust collector blower runs during the entire vessel loading period. The product line served by dust collector DC-1350 is no longer made and DC-1350 is no longer in service.

Emissions

The following emissions and associated calculations were reviewed. Emission are based on established pollutant emissions by product batch. The number of product batches is recorded and calculations applied to determine emissions.

Emissions (limit)	JULY 2019 lbs/month	Jan 2020 lbs/month	Jan 2021 lbs/month
Cat 1 TAC (37.8 lbs/yr)	0.6	0.6	0.6
Cat 2 TAC (37.8lbs/yr)	0.0	0.0	0.0
Category 3 (3800 lbs/yr)	258.7	188.9	226.3

Category 4 (38,000 lbs/yr)	55.5	8.0	28.0
Cat 5 TAC (50,000 lbs/yr)	22.0	11.8	14.2
Category 6 (12,000 lbs/yr)	0.0	0.0	0.0
Cat 7 TAC (50,000 lbs/yr)	0.0	0.0	0.0
Total VOCs (50,000 lbs/yr)	220.8	127.6	169.2

There are emission calculation workbooks for each product. The Lbs/month made for each product, batch size data to provide the number of batches/month, and emission factor per batch are inputs to determine total emissions of a chemical. For each activity w/in a process a lb/batch emission is determined with 954 Throx reduction applied. Emissions are then summed by TAC Category.

The TAC screening levels for each category are reviewed annually.

Material limits

The ROP does not list any specified material limits.

Process/Operational limits

SC III.1 requires EU13 input feed of processes that vent to 954 Throx to cease when 954 Throx is not on line. The vent valves to 954 Throx are owned & operated by 954 TTU. 954 monitors TTU parameters. If outside acceptable parameters, EU13 will lose vent permission and this will close vent valves.

SC III. 2 limits bypass of 954 Throx to a maximum of 50 hours per bypass event. SC III.3 limits bypass of 954 Throx to 150 hours per 12 month rolling time period. All bypasses combine into one bypass stack with an alarmed valve.

During 2020 the total bypass times occurred form one vale in January for 5 minutes. As of the date of the inspection no bypass of 954 Throx has occurred. During the inspection bypass valves were closed and process emissions were venting to the 954 Throx.

The MACT subject process vents are not allowed to bypass control.

Date/Time	Valve position DC 3917	DO/DI (53); DC (190)	DO/DI (57)	DO/DI (37)
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	(vent line to 954 after knock out pot)	(Organic vent line bypass	(Oxydizer vent line bypass)	(DFA vent line bypass)
July 30, 2019 3 -5 PM	open	closed	closed	closed
Feb 2, 2020 6 -8 AM	open	closed	closed	closed
April 26, 2021 8-10 PM	open	closed	closed	closed
June 23, 2021 12:05 PM	Open	closed	closed	closed

Design and Equipment Parameters

SC.1 prohibits operation of portions of EU13 that vent to the 954 TTU unless the 954 TTU is operating satisfactorily.

Date/Time	954 Throx exhaust gas temp (AI_0457/0472)	954 Throx Scrubber flow (AC_2226_)	954 Throx Scrubber pH (AI_524)
July 30, 2019 5 PM	788.72	78.66	9.61
Feb 1, 2020 1 AM	808.37	76.66	9.6
April 26, 2021 10 PM	797.12	81.96	9.2

SC. 2 prohibits the operation of particulate emission generating portions of EU13 that vent to DC -1300 unless the dust collectors are operating satisfactorily. During the inspection we viewed the particulate emitting portions of EU13 and dust collector. There were no signs of inadequate solids handling in the area.

We viewed the dust collector vent from the location where on site personnel make required VE observations. The dust collector vent is inspected monthly during process operating periods. The inspection procedure provides instructions to correct problems and shutdown if necessary if visible emissions are seen. Records from VE observations conducted during particulate emitting operations were reviewed and are attached.

Date/Time	Dust filter DC-1300 VE reading
July 2, 2019	None
Jan 14, 2020	None
April 6, 2021	None

Records from annual dust collector filter changes are attached.

Testing/Sampling

The ROP does not list any specified testing or sampling in EU13. Testing of 954 Throx is used to demonstrate compliance with emission limits and applicable requirements in 40 CFR Part 63, Subparts A, FFFF, MMM, and H.

Monitoring and Recordkeeping

SC 1. The facility calculated and emissions of VOCs and TAC that showed compliance with the emission limits in EU13.

SC.2 The facility monitored and recorded the periods of 954 Throx bypass greater than two hours as required. There were no bypass events greater than 2 hours.

SC 3. The facility monitored and recorded the number and time of each 954 Throx bypass event as required.

SC 4. The facility conducted and recorded monthly VE checks of Dust Controller DC -1300 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)	Description
1. SVDC1300	10	90	Dust Collector. No longer operated
2. SVDC1350	12	90	Dust collector.

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Description
3. SVTTUBYPASS	3	90	954 Throx bypass
4. 954THROX (see FG954THROX)	24	60	954 Throx

Deviation, CAM and MACT reports review

March 2021/Sept 2020:

The 954 Throx was operated at a minimum 760 C per the Tittle 5 operating conditions. However the 2003 test used to demonstrate 99.9% DRE was conducted at 954 Throx temperature of 789 C. A retest is occurring in 2021.

No CAM monitoring downtime or emission excursions or exceedances were reported.

FFFF No deviations, no SSM

MMM PAI MACT relief device monitoring was not conducted on 29 relief devices between May 19 and May 27, 2020 due to a 500 year flood event.

The May – June bimonthly infrared camera monitoring was also not conducted due to Covid based contractor site access limitations. The previous and subsequent monitoring found no leaks

No Excess Emissions or parameter excursions, no malfunctions.

MACT Subject process operating hours Jan – June: 1296 (FLU), 2064 (DCM), 1032 (Cloransulum); July – Dec 2020: 2904 (FLU), 1512 (DCM)

March 2020/Sept 2019:

No ROP Deviations reported for E13

No CAM monitoring downtime or emission excursions or exceedances were reported.



NAME _____

DATE 8/26/2021



SUPERVISOR _____