

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FCE Summary Report

Facility : Corteva LLC	SRN : B4942
Location : 305 N HURON AVE	District : Bay City
	County : HURON
City : HARBOR BEACH	State: MI Zip Code : 48441 Compliance Status : Non Compliance
Source Class : MAJOR	Staff : Adam Shaffer
FCE Begin Date : 8/25/2020	FCE Completion Date : 8/25/2021
Comments : 2021 FCE Report	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
08/25/2021	ROP Other	Compliance	An updated Catalyst Maintenance Plan was submitted on July 22, 2021. At this time the plan appeared acceptable, however, in the future there may be changes requested due to the discovery of formaldehyde emissions during the March / April 2021 stack testing of EUPROCESS. (AShaffer, 09/28/21)
08/25/2021	Malfunction Abatement Plan	Compliance	Updated Malfunction Abatement Plan submitted for TTU 870. Was determined to be acceptable and relayed to the company during the August 25, 2021, onsite inspection. (AShaffer, 08/25/21)
08/25/2021	ROP Other	Unknown	On July 20, 2021, an Alternative Monitoring Request (AMR) was submitted to the EPA Region 5. Notable changes proposed in the AMR were replacing EPA Method 25A with EPA Method 320, monthly sampling to quarterly sampling, and corrective action will be taken when methanol concentrations are greater than 15ppmv. (AShaffer, 09/28/21)
08/25/2021	On-site Inspection	Compliance	In-person inspection.
08/18/2021	Site Review	Unknown	EPA Region 5 site inspection.

Activity Date	Activity Type	Compliance Status	Comments
08/05/2021	Stack Test	Non Compliance	<p>Stack Test results for the March / April 2021 stack testing of EUPROCESS.</p> <p>March 2021 testing - Expand air to natural gas ratio's. Discovery of formaldehyde when reviewing data.</p> <p>April 2021 testing - Expand air to natural gas ratio's, determine formaldehyde, methanol and methane emission rates for each TTU.</p> <p>Refer to Violation Notice, dated August 5, 2021, for additional information on the results. (AShaffer, 09/28/21)</p>
07/26/2021	Stack Test Observation	Compliance	Stack test observations.

05/24/2021	ROP Annual Cert	Compliance	<p>As required by MI-ROP-B4942-2020a, an Annual Compliance Report was received by the AQD on March 15, 2021. The reporting time period was 01/01/2020 through 12/31/2020. After review, there appeared to be seven deviations for this time period . The first deviation was regarding EUPROCESS and was a process control computer data capture system failure that resulted in missing air to natural gas data and air to natural gas ratio excursions. The second deviation was for EUPROCESS and was a list of air to natural gas ratio event excursions that occurred from July 2020 through December 2020. The third deviation was for EUPROCESS and was a combustion air control valve restriction that resulted in elevated THC emission concentration measurements at approximately 25 ppmv as measured by EPA Method 25A. The fourth deviation is an expansion on the June 3, 2020 excursion for EUPROCESS. A THC emission concentration of 28.3 ppmv was noted during testing done to assess the thermal regeneration and exchanger cleanout effectiveness at the normal operating temperature of 675 degrees Fahrenheit. The fifth deviation was for EUPROCESS and was an elevated THC concentration of approximately 50 ppmv as measured by EPA Method 25A. The sixth / seventh deviations were for EUPROCESS and were described as deposits of process foam-over solid material on the TTU containment pad. The events occur during each bake out. Additional information for each deviation was provided and additional follow up was completed. At this time, the deviations were concluded to be acceptable. (AShaffer, 05/24/21) Update 09/30/21 - Select deviations were included in the Violation Notice, dated August 5, 2021, that was issued to the company. Refer to the Violation Notice, dated August 5, 2021, for additional information. (AShaffer, 09/30/21)</p>
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Activity Date	Activity Type	Compliance Status	Comments
05/24/2021	ROP SEMI 2 CERT	Compliance	<p>As required by MI-ROP-B4942-2020a, a Semi-Annual Compliance Report was received by the AQD on March 15, 2021. The reporting time period was 07/01/2020 through 12/31/2020. Errors were noted in what deviations were to be included for this time period. After further review, this was concluded to be acceptable at this time. Upon review, there appeared to be three new deviations for this time period. The first deviation was for EUPROCESS and was a list of air to natural gas ratio event excursions that occurred from July 2020 through December 2020. The second deviation is a THC emission concentration of 28.3 ppmv as measured by EPA Method 25A. The third deviation appeared to be additional bake outs completed for the TTU 870 unit. At this time, the deviations were concluded to be acceptable. (AShaffer, 09/30/21)</p> <p>Update 09/30/21 - Select deviations were included in the Violation Notice, dated August 5, 2021, that was issued to the company. Refer to the Violation Notice, dated August 5, 2021, for additional information. (AShaffer, 09/30/21)</p>

Activity Date	Activity Type	Compliance Status	Comments
05/24/2021	ROP Semi 1 Cert	Compliance	<p>As required by MI-ROP-N2614B4942-2020, a Semi-Annual Compliance Report, postmarked 08/17/2020, was submitted to the AQD. The reporting time period was from 01/01/2020 through 06/30/2020. During this time period four (4) deviations were reported. The first deviation was regarding EUPROCESS and was a process control computer data capture system failure that resulted in missing air to natural gas data and air to natural gas ratio excursions. The second deviation was a combustion air control valve restriction that resulted in elevated THC emission concentration measurements at approximately 25 ppmv as measured by EPA Method 25A. The third deviation was an elevated THC emission concentration of approximately 25 ppmv as measured by EPA Method 25A. The fourth deviation was deposits of process foam-over solid material on the TTU containment pad. Additional information was provided for each deviation and concluded to be acceptable. The report was properly certified and received on time. (AShaffer, 05/24/21)</p> <p>Update 09/30/21 - Select deviations were included in the Violation Notice, dated August 5, 2021, that was issued to the company. Refer to the Violation Notice, dated August 5, 2021, for additional information. (AShaffer, 09/30/21)</p>

Activity Date	Activity Type	Compliance Status	Comments
05/24/2021	MACT (Part 63)	Compliance	<p>As required by MI-ROP-N2614B4942-2020, a 40 CFR 63 Subpart MMM Periodic Report was submitted to and received by the AQD on March 1, 2021. The reporting time period was from 07/01/2020 through 12/31/2020. During this time period the total duration of excess emissions, excursions / exceedances to total operating hours appeared to be less than one percent. The CMS appears to have not been inoperative during the monitoring period or running out of control. No leaks appear to have been detected during the monitoring / inspection of the applicable units. Violations resulting from malfunctions have been reported as deviations. The report was received on time and properly certified. Additionally, a review of the Subpart MMM Periodic Report was completed by AQD staff Mary Breeden. Based on the report completed by Ms. Breeden, which is attached, the Subpart MMM Periodic Report appeared acceptable. (AShaffer, 05/24/21)</p>
05/11/2021	MAERS	Compliance	<p>As required by MI-ROP-B4942-2020a, a MAERS Report Certification was submitted for the 2020 MAERS Report which was submitted on 03/10/21. One minor error was noted in the report certification regarding the permit number. The 2020 MAERS Report Certification was concluded to be acceptable. (AShaffer, 05/11/21)</p> <p>04/20 Audit fail - After speaking with company staff on 04/20, errors were noted in emissions reported for EU_S_Utility and no supporting documentation was noted for EU_Solid_Hand1-3. The 2020 MAERS Report was failed in order for the company to make the appropriate corrections.</p> <p>05/10 - Errors were noted in the 2020 MAERS Report, however, the resubmitted report appears acceptable at this time. (AShaffer, 05/10/21)</p>
04/12/2021	Stack Test Observation	Compliance	April stack test observations.

Activity Date	Activity Type	Compliance Status	Comments
04/07/2021	MACT (Part 63)	Compliance	Subpart MMM Periodic Report - Required information received. June 3, 2020 violations from malfunctions reported in Title V deviation report. Catalyst hold down support compromised. Method 25A VOCs >20 ppmv. Increased temp to 900 reduced VOCs to <20 ppmv. Repairs scheduled. Prior months sampling showed compliance No monitoring or CMS downtime during this reporting period. No leaks.
04/06/2021	Rule 912	Compliance	Elevated VOC concentrations (approximately 50 ppmv) Required information received. June 3, 2020 violations from malfunctions Catalyst hold down support compromised. Method 25A VOCs >20 ppmv. Increased temp to 900 reduced VOCs to <20 ppmv. Repairs scheduled. Prior months sampling showed compliance No monitoring or CMS downtime during this reporting period. No leaks.

Activity Date	Activity Type	Compliance Status	Comments
03/31/2021	Rule 912	Compliance	<p>A Rule 912 Report was submitted to the AQD on March 23, 2021. The report was received electronically, with a paper copy also being submitted. Formaldehyde emissions were identified during FTIR testing on March 3-4, 2021. Corteva believes that based on historic emission flow rate data and an estimate formaldehyde concentration provided by the FTIR analyst, the off-site formaldehyde concentrations are below health-based screening limits. Corteva will be completing compliance testing the week of April 12, 2021, to verify formaldehyde emission concentrations to then compare to formaldehyde health-based screening level impacts. A test plan will be submitted prior to testing. No further action is necessary at this time. (AShaffer, 03/31/21)</p> <p>Update (07/26/21) - A follow up to the initial Rule 912 Report, submitted on March 29, 2021, was received from Corteva. The document provided updates to what has occurred thus far following the discovery of the formaldehyde emissions and actions being taken to prevent a reoccurrence. (AShaffer, 09/28/21)</p> <p>Update (08/05/21) - Stack testing was completed in April 2021. Based on the March / April 2021 stack test results Corteva is not in compliance and was issued a Violation Notice, dated August 5, 2021. (AShaffer, 09/27/2021)</p>
03/03/2021	Stack Test Observation	Compliance	Stack test observations March 3-4, 2021.

Name: Adam Shaffer Date: 09/30/2021

Supervisor: Chris Hare