

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

FCE Summary Report

Facility : Arkema, Inc.	SRN : E4569
Location : 1415 Steele Avenue, S.W.	District : Grand Rapids
	County : KENT
City : GRAND RAPIDS State: MI Zip Code : 49507	Compliance Status : Compliance
Source Class : SM OPT OUT	Staff : Kaitlyn DeVries
FCE Begin Date : 8/7/2018	FCE Completion Date : 8/6/2019
Comments : FY 2019 FCE	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
08/01/2019	Scheduled Inspection	Compliance	The purpose of this inspection was to determine compliance with Permit to Install Number 100-07D and other applicable air quality rules and regulations.
07/18/2019	Rule 912	Compliance	The facility is reporting a shutdown the occurred on Tuesday June 4, 2019 beginning at 2:50 am until 8:05 AM (5 hours). The shutdown was due to a failed solenoid valve. Efforts to restart were unsuccessful, so the solenoid valve was replaced. Standard Operating Procedures for this type of Malfunction was done by the facility. This meant shutting down the reactors holding six(6) process tanks and making no transfer of products. Emissions from FGRESINPROD were calculated to be 2.47 pounds of VOC during the 5 hour shutdown, which is below the permitted limit of 18.2 pounds per hour (pph). To prevent a recurrence of this malfunction, Arkema has had the manufacturer out to help investigate the cause of the valve failure.

Activity Date	Activity Type	Compliance Status	Comments
06/07/2019	Rule 912	Compliance	<p>The facility is reporting a shutdown the occurred on Wednesday May22, 2019 beginning at 9:30 pm until 4:30 AM on Thursday May 23, 2019 (7 hours). The shutdown was caused by a high LEL safety shutdown. Efforts to restart were delayed due to a sticking hydraulic valve for the bypass vent valve actuator, which required troubleshooting. Standard Operating Procedures for this type of Malfunction was done by the facility. This meant shutting down the reactors holding six(6) process tanks and making no transfer of products. Emissions from FGRESINPROD were calculated to be 1.98 pounds of VOC during the 7 hour shutdown, which is below the permitted limit of 18.2 pounds per hour (pph). To prevent a recurrence of this malfunction, Arkema purchasing spare mechanical parts to have on site in the event of this type of mechanical failure.</p>
04/24/2019	Rule 912	Compliance	<p>The facility is reporting a shutdown the occurred on Saturday April 13, 2019 beginning at 5:30 am until 2:30 pm (9 hours). The shutdown was caused by a power outage to the thermal oxidizer unit, due to scheduled maintenance. Emissions from FGRESINPROD were calculated to be 0.06 pounds during the 9 hour shutdown, which is below the permitted limit of 18.2 pounds per hour (pph). During the outage, material was held in the process tanks, in order to minimize emissions. To prevent a recurrence of this malfunction, Arkema is looking into purchasing a back-up generator for the unit so that during a scheduled outage the RTO is able to operate independently of other pieces of equipment.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/27/2019	Rule 912	Compliance	<p>The facility is reporting a shutdown the occurred on Wednesday February 6, 2019 beginning at 7:15 am until 12:30 pm (5.25 hours). The shutdown was caused by a power outage to the thermal oxidizer unit, which then caused the fuel ratio valve to not properly operate; this was possibly due to low temperatures. The facility had the manufacturer come out and they were able to fix the problem. During that time, two (2) of the reactors were processing, and the were shutdown. Emissions from FGRESINPROD were calculated to be 0.30 pounds during the 5.25 hour shutdown, which is below the permitted limit of 18.2 pounds per hour (pph). Arkema followed their standard operating procedures (SOP) through the malfunction allowing the reactors and heat to be turned off immediately to cool down and reduce all reflux and reactions. Additionally, no products were transferred during the shutdown. To prevent a recurrence of this malfunction, Arkema is looking into ways to protect the fuel ratio valve from the elements. KD will be looking for an updated malfunction abatement plan in response to the multiple malfunctions.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/04/2019	Rule 912	Compliance	<p>The facility is reporting a shutdown the occurred on January 5, 2019 from 11:15 am until 3:40 PM (4.5 hours). The shutdown was caused by a malfunction of the pump motor on the thermal oxidizer unit. Processing was occurring in two (2) of the reactors at the time of the shutdown. Emissions from FGRESINPROD were calculated to be 0.85 pounds during the 45 hour shutdown, which is below the permitted limit of 18.2 pounds per hour (pph). Arkema followed their standard operating procedures (SOP) through the malfunction allowing the reactors and heat to be turned off immediately to cool down and reduce all reflux and reactions. Additionally, no products were transferred during the shutdown. Arkema is working with an electric contractor to understand the steps to take when this type of shutdown occurs. KD will be looking for an updated malfunction abatement plan in response to the multiple malfunctions.</p>
11/08/2018	Rule 912	Compliance	<p>The facility is reporting a shutdown the occurred on October 24 from 8:10 am until 9:40 AM (90 minutes). The shutdown was due to a natural gas shutoff valve activation during a false fire alarm event. A total of 6.05 pounds of VOC during the 90 minute shutdown; the permit allows for 18.2 pph VOC emission rate. Arkema followed their standard operating procedures (SOP) through the malfunction, and has purchased spare parts to use in the event of another mechanical failure. KD will be looking for an updated malfunction abatement plan in response to the multiple malfunctions during the 2018 calendar year.</p>
10/01/2018	Rule 912	Compliance	<p>Shutdown due to area wide power failure. Calculated VOC emissions during shutdown at 6.75 pph which is below 18.2 pph limit.</p>

Activity Date	Activity Type	Compliance Status	Comments
10/01/2018	Rule 912	Compliance	Shutdown due to area wide power outage. Calculated VOC emissions during shutdown were 1.59 pph which is below 18.2 pph limit.
10/01/2018	Rule 912	Compliance	Shutdown due to mechanical part failure. Calculated VOC emissions during shutdown were 8.87 pph which is below 18.2 pph limit.
10/01/2018	Rule 912	Compliance	Shutdown due to mechanical part failure. Calculated VOC emissions during shutdown at 0.5 pph which is below 18.2 pph limit.
10/01/2018	Rule 912	Compliance	Shutdown due to an equipment fault. Calculated VOC emissions during shutdown were 1.03 pph which is below 18.2 pph limit.

Name:

Kaitlyn Dehn

Date:

8/6/2019

Supervisor:

[Signature]

