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April 17, 2023

Gina McCann
Environmental Quality Analyst
State of Michigan Department of Environment, Great Lakes, and Energy
Air Quality Division, Bay City District Office
401 Ketchum Street, Suite B
Bay City, MI 48708

Dear Gina McCann,

This letter is in response to the NOV received by POET Biorefining – Caro, LLC (POET) from EGLE on April 11, 2023. As requested, POET is providing information related to the cited violations in the letter.

MI-ROP-N6996-2018a Special Condition (SC) I.1. *Exceeded VOC limit of 19.66 lb/hr. Estimated VOC emissions were 30.09 lb/hr. On January 9, 2023, Scrubber 2 malfunctioned for 4.38 hours*

MI-ROP-N6996-2018a SC IV.2. *Permit restricts operation of FGFERM&DIST unless one of the scrubbers is installed, maintained, and operated in a satisfactory manner. Scrubber 1 was taken offline and emissions were vented to Scrubber 2, which had been inoperable since April 26, 2022, and yet was operated on January 9, 2023.*

MI-ROP-N6996-2018a SC III.3. *In the event that both associated scrubbers (CE004 and CE014) are unavailable due to maintenance or other operational reasons, the equipment in FGFERM&DIST is vented to the RTO (CE012).*

The process was not vented to the RTO when both scrubbers were offline. The plant does not have the ability to vent these emissions to the RTO.

R 336.1910 Rule 910 *requires that an air-cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the administrative rules and existing law. Malfunction of scrubber 2 had been determined on April 26, 2022. Corrective action had not been completed to resolve control efficiency prior to routing of emissions from fermentation and distillation.*

POET provides the following in response to the above four “Comments” listed in the NOV.

In preparation for a performance stack test scheduled on January 9, 2023 for Scrubber 1 (CE004), POET determined that maintenance was needed on Scrubber 1 which required it to be taken offline. While performing the maintenance, emissions from Fermentation and Distillation were routed to Scrubber 2 (CE014) from 10:32 AM until 2:55 PM on January 9th, a duration of 4 hours and 23 minutes. As previously communicated to EGLE, POET discovered mechanical limitations concerning Scrubber 2 and intended to keep Scrubber 2 offline until the mechanical issues were resolved. Due to the circumstances and timing of performance testing, the use of Scrubber 2 was necessary prior to the mechanical issues being resolved. Although POET’s ROP authorizes the fermentation and distillation emissions to be routed directly to the RTO in the event both scrubbers are unavailable, POET has determined that this is not a viable operating scenario and thus could not be used during this event.

POET requested the stack testing contractor to measure the VOC concentrations from Scrubber 2 for a portion of the time it was in use. Based on the data collected, POET estimated that VOC emissions from Scrubber 2 were 30.09 lbs/hr, which exceeded POET’s ROP limit of 19.66 lbs/hr.

The violation is not ongoing. When the maintenance on Scrubber 1 was complete, POET took Scrubber 2 offline and routed the emissions back to Scrubber 1. Scrubber 2 has not been utilized since January 9, 2023. The facility is working to correct the mechanical concerns on Scrubber 2 from April 17th – 21st, 2023 which will allow it to be operated in a satisfactory manner moving forward. POET intends to complete performance stack testing on Scrubber 2 on April 29, 2023 to demonstrate compliance with the emission limits. POET will ensure that effective communication and documentation regarding Scrubber 2 performance stack testing is provided to EGLE in a prompt manner.

General Condition 25 *Notification of emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, required not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Written reports required within 10 days after the event occurred, or within 30 days of discovery of the abnormal conditions, whichever is first. Exceedance occurred on January 9, 2023. AQD was notified by phone on January 27, 2023. Written report received April 3, 2023.*

POET will strive to meet reporting timelines for any future events through solid internal communication and understanding on Rule 912 requirements. In addition, Rule 912 overview will be added to annual employee training to improve recognition of the requirements and ensure proper communication occurs at the plant. If additional information is needed from a 3rd party contractor, POET will ensure that information is received in a timely manner to allow reporting deadlines to be met.

MI-ROP-N6996-2018a SC III.1. *Plant did not achieve a minimum VOC control efficiency of 97.0 percent across the scrubbers (CE004 and CE014).*

Neither the performance testing completed on Scrubber CE004 nor the engineering testing completed on Scrubber CE014 measured the VOC control efficiency. POET's ROP requires the permittee to verify VOC and Acetaldehyde Emission rates, but does not include the requirement to verify the VOC control efficiency through performance testing. Therefore, POET does not believe that the provided information demonstrates a failure to achieve 97.0 percent VOC control efficiency.

If you need additional information or have questions, please feel free to contact Coryn Houser at 989-286-3847 or Coryn.Houser@POET.com.

Sincerely,



Doug Deland
General Manager
POET Biorefining - Caro