

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

P119274021

FACILITY: GOMA RNG, LLC		SRN / ID: P1192
LOCATION: 3875 AITKEN ROAD, MARLETTE		DISTRICT: Bay City
CITY: MARLETTE		COUNTY: SANILAC
CONTACT: Pat Troy , Emergency Coordinator		ACTIVITY DATE: 09/10/2024
STAFF: Emily Crimmins	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: A scheduled inspection		
RESOLVED COMPLAINTS:		

A scheduled inspection was completed by Air Quality Division (AQD) staff Adam Shaffer (AS) and assisted by Emily Crimmins, Erin Sheridan, and Haley Willman at the Goma RNG, LLC (Goma) site located in Flynn Township, Sanilac County, Michigan. Applicable records were requested on September 6, 2024, to verify compliance with Permit to Install (PTI) No. 49-21A. An in-person inspection to verify onsite compliance was completed on September 10, 2024. A violation notice requesting corrective action associated with EUGCU, IV.2. was sent November 1, 2024. Details follow below.

Facility Description

Goma RNG, LLC (Goma) owns and operates an anaerobic digester facility that processes liquid cow manure to form renewable natural gas. The facility is a true minor source of criteria pollutants and an area minor source of HAPs and operates under PTI No. 49-21A.

Offsite Compliance Review

At the time of inspection, there were no open violation notices or enforcement actions for this site. The 11 months of data received from Goma will show an exceedance of H₂S concentration in digester biogas directed to the EUFLARE in early October. This exceedance has been recognized and received a violation notice in March 2024 by AQD Bay City District Office staff. This violation has since been resolved. There are no current open complaints for this site.

Compliance Evaluation

A request was sent to Pat Troy, Sr. Project Manager for RevLNG, LLC on September 6, 2024, for records required by PTI No. 49-21A. The onsite inspection was completed on September 10, 2024. AQD staff Adam Shaffer (AS), Emily Crimmins (EC), Haley Willman (HW), and Erin Sheridan (ES) arrived at the facility at approximately 11:55am. Weather conditions at the time of the inspection were sunny skies, little to no wind and temperatures in the mid-70 degrees Fahrenheit. For the inspection AS, EC, HW, and ES were with company staff that included Pat Troy (PT) and Randy (Operator) who provided a tour of the site. Site specific questions were answered by RevLNG, LLC staff Pat Troy and Randy at the time of the inspection and follow up questions were answered by Danielle Piontkowski, Engineer II for Barton & Loguidice.

PTI No.49-21A

EUGCU

This Emission Unit includes an activated carbon filter pre-treatment and a three (3) stage membrane.

Per Special Condition II.1, the H₂S concentration of the tailgas exiting the EUGCU shall not exceed 110ppmv. Based on the records reviewed, it appears that H₂S concentrations of the tailgas did not exceed 110ppmv.

Per Special Condition II.2, the volumetric feed rate for the tailgas vented from the EUGCU shall not exceed a maximum of 230 scfm. Based on the records reviewed, it appears that the volumetric feed rate of the tailgas vented doesn't exceed 230 scfm.

Per Special Condition IV.1, Goma shall install, maintain, and operate a device to monitor the H₂S content of the tailgas exiting the EUGCU with one reading at least every 15 minutes. Monitor was present at outlet of activated carbon filters (EUGCU) and reading 0.00 ppmv at time of inspection.

Per Special Condition (SC) IV.2, Goma shall install, maintain, and operate a device to monitor the volumetric flow rate of the tailgas vented from the EUGCU. Currently, RevLNG states data is calculated offsite. The use a mass balance approach to determine the volumetric flow rate of the tailgas. Alarms to alert staff of the H₂S ppmv levels set by the RevLNG & consulting staff. A monitor is not on site. The calculation below is what is used.

$$\frac{\text{Inlet to upgrader (SCFM)}}{\text{Inlet to upgrader \% CH}_4} - \frac{\text{Outlet to upgrader (SCFM)}}{\text{Outlet to upgrader \% CH}_4} - \frac{\text{Tail gas (SCFM)}}{\text{Tail gas \% CH}_4} = 0$$

After speaking with permit section, we determined the facility is not meeting permit condition IV.2. of PTI 49-21A. The permit condition requires the facility to install, calibrate, maintain, and operate in a satisfactory manner, a device to monitor and record the volumetric flow rate of tail gas vented from EUGCU, on a continuous basis. The facility sent a letter on October 11, 2024, which stated they are calculating the volumetric flow rate of tail gas through a mass balance equation, not a device to monitor the volumetric flow rate. Monitoring requires an instrument or device used for observing, checking, or keeping a continuous record of a process or quantity.

Corrective action may include installing the monitor or revising the permit. Permit section alluded this condition may be able to be removed from the permit. More recently, they have written permits without this requirement, if the tail gas flow was limited through a design parameter **AND** the calculated potential emissions assumed the maximum flow. Alternatively, a monitor to record the volumetric flow rate of the tail gas venting could be installed.

Per SC VI. 1, Goma shall keep all records related to, or as required by the PM/MAP. PM/MAP data as required by the permit has been received by RNG operator and appear to comply with the PM/MAP as written.

Per SC VI. 2, Goma shall keep continuous records of the H₂S concentration of the tailgas vented from the EUGCU. Based on the records reviewed, it appears that H₂S concentrations of the tailgas vented from the EUGCU for Sept 30 2023 to August 31 2024 were provided as requested.

Per SC VI. 3, Goma shall keep continuous records of the volumetric flow rate of the tailgas vented from the EUGCU. Based on the records reviewed, it appears that continuous record of the volumetric flow rate of the tailgas vented from the EUGCU for Sept 30 2023 to August 31 2024 were provided as requested.

EUFLARE

This Emissions Unit consists of one (1) digester gas flare used as backup for EUGCU. It was observed that the EUFLARE was not running at the time of the visit. The EUFLARE were observed to be meeting Stack/Vent Restrictions (SC VIII.1) as stated in the permit.

Per SC II.3, Goma confirmed that only natural gas produced by the anaerobic digester was burned in the EUFLARE.

Per SC IV.2, monitor is present to record continuous volumetric flow rate of biogas being directed to the flare when necessary. Monitor reading was 0 SCF at time of inspection, but operator stated that the morning of the inspection prior to our arrival, the monitor read 125-187 SCF.

Per SC IV.3, monitor is present to record H₂S content of digester biogas sent to EUFLARE when necessary. Operator stated that the morning of the inspection, prior to our arrival, the monitor read the H₂S content of the biogas being burned at the flare was 288 ppmv.

Per SC VI. 2, Goma shall keep all records related to, or as required by, the PM/MAP. PM/MAP data as required by the permit has been received by RNG operator and appear to comply with the PM/MAP as written.

Per SC VI. 3, Goma shall keep a log of the monthly and 12 month rolling basis operating hours of the EUFLARE for each day that the flare has operated. Based on the record reviewed, it appears that a log of monthly and 12 month rolling basis operating hours of the EUFLARE were provided as requested.

Per SC VI. 4, Goma shall keep hourly records of the H₂S content of the digester biogas routed to EUFLARE for each day the flare is operated. Based on the records reviewed, it appears that hourly records of H₂S concentration of the digester biogas routed to the EUFLARE for Sept 30 2023 to August 31 2024 were provided as requested.

Per SC VI. 5, Goma shall keep the number of hours where the H₂S content of the digester biogas is greater than 500 ppmv on a monthly and 12 month rolling time period. Based on the records reviewed, it appears that the number of hours where the H₂S content of the digester biogas is greater than 500 ppmv on a monthly and 12 month rolling time period were provided as requested.

Per SC VI. 6, Goma shall keep continuous records of the volumetric flow rate of the digester biogas routed to the EUFLARE. Based on the records reviewed, it appears that continuous records of volumetric flow rate of the digester biogas routed to the EUFLARE for Sept 30 2023 to August 31 2024 were provided as requested.

Per SC VI. 7, Goma shall keep record of the total volume (MMscf) digester biogas burned in EUFLARE on a monthly and 12 month rolling time period. Based on the records reviewed, it appears that the total volume (MMscf) digester biogas burned in EUFLARE on a monthly and 12 month rolling time period were provided as requested.

Per SC VI. 8, Goma shall calculate and keep records of monthly and 12 month rolling total SO₂ mass emissions for EUFLARE, performed by using data collected through SC IV.1 and SC IV.2 as described in Appendix B. Based on the records reviewed, it appears that monthly and 12 month rolling total SO₂ mass emissions for EUFLARE were provided as requested.

Other Observations

Two other Emission Units that are present on site and are exempt from PTI No. 49-21A, includes one boiler and one back-up generator. The 3.5MMbtu/hr boiler is run on natural gas from the pre-existing local service lines and is exempt per Rule 282(2)(b)(i). No issues were observed while onsite. The Emergency/back-up 335 kw generator is diesel powered 2.99 MMbtu/hr is exempt per Rule 285(2)(g). No issues were observed while onsite.

EUGCU stack appeared consistent with PTI requirements.

Activated carbon is a dry material when removed from EUGCU and is safe to dispose of at the local landfill.

Operator and PT stated that no odor nuisance complaints about the RNG facilities have been reported and no recordkeeping for the odor nuisance minimization plan is required at this time. Procedure to prevent odor nuisance complaints includes daily morning walks around the perimeter of the site.

PT states that it takes about 2 days to fill one natural gas transport truck (depending on outside temperature).

Conclusion

Based on the observations made and records reviewed, Goma RNG, LLC was not in compliance with PTI No. 49-21A and applicable air pollution control rules. A violation notice requesting corrective action associated with EUGCU, IV.2. was sent November 1, 2024.

NAME Emily Steimmins

DATE 11/01/2024

SUPERVISOR Gina J. Farn