

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

N318866492

FACILITY: RENO GAS PLANT		SRN / ID: N3188
LOCATION: 282 M-65, WHITTEMORE		DISTRICT: Bay City
CITY: WHITTEMORE		COUNTY: IOSCO
CONTACT: Sam Matthews ,		ACTIVITY DATE: 03/01/2023
STAFF: Nathanael Gentle	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled Onsite Inspection for FY23		
RESOLVED COMPLAINTS:		

On March 1, 2023, AQD staff conducted a scheduled onsite inspection at the Cobra Oil and Gas, Reno Gas Plant, SRN N3188. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment Great Lakes and Energy, Air Quality Division (AQD) and to determine compliance with the facilities Permit to Install (PTI) PTI No. 1027-91A. AQD staff were assisted onsite by Cobra Oil and Gas personnel, Mr. Sam Matthews and Mr. Dave Eden. At the time of inspection, the facility was found to be in compliance.

Facility Description and History

The Reno Gas Plant is owned by Cobra Oil and Gas. The facility is located on M-65 in Whittemore, MI. The facility is in Reno Township of Iosco County. Coordinates for the facility are 44.268621, - 83.805820. The Reno Gas plant is used to gather, compress, and dehydrate natural gas from sweet wells.

At the time of inspection, the facility was not in operation. Facility staff report the facility has not been in full operation for years due to decreased gas volumes drawn by the company in the nearby surrounding area. According to MAERS emission reports for the facility, the engines and dehydrator at the facility were last operated during the first quarter of calendar year 2016. Emissions reported for the calendar years 2017, 2018, 2019, and 2020 included fugitive emissions from the onsite slop tank only. Cobra staff reported during those years liquids were still sent to the slop tank, while gas was not processed at the facility. The slop tank has not been utilized since 2020. The MAERS report for calendar year 2021 reports no equipment at the facility was operated. Cobra staff report there are no current plans to process gas at the facility in the future. While the facility was not operating, AQD staff took time to verify the equipment onsite to that permitted by PTI 1027-91A.

When the facility was in operation the following process was utilized. Gas entered the facility and was first passed through a slug catcher. From there the gas was sent to an ethylene glycol dehydration system to remove water. After the dehydrator, the gas was sent through a refrigeration system which removes natural gas liquids (NGLs) from the gas stream. The removed NGLs were sent to one of two NGL storage tanks. The gas stream was then compressed by one of the two onsite compressors. The compressed gas was then passed through a heater treater to remove oil. Lastly gas was passed through a separator to remove any remaining liquids before it was sent to sales.

The Reno Gas Plant is a minor source of all criteria pollutants and an area source of HAPs. PTI 1027-91A establishes a facility wide natural gas processing limit for the facility. The natural gas processing limit is in place to ensure the facility is exempt from the routine monitoring requirements of NSPS Subpart KKK (40 CFR 60.663(d)). The facility wide natural gas limit is not for the purpose of remaining below major levels for criteria pollutants.

The Reno Gas Plant was last inspected in February 2014. At the time of the 2014 inspection, the facility was found to be in compliance. No complaints are on file for the facility.

Compliance Evaluation

EUDEHY-EG

EUDEHY-EG is an ethylene glycol dehydration system utilized to remove water from the natural gas stream. The dehydrator was verified to be onsite and not operating. Young trees were growing up around the emission unit confirming the unit has not been operated for years. The unit was visually verified to be equipped with a BTEX condenser for control, S.C.IV.1. The condenser exhaust is routed to the reboiler for combustion. Onsite staff report that when the dehydrator was in operation, stripping gas was not utilized, S.C.II.1.

Special Condition V.1. stipulates that analysis of the wet gas stream shall be conducted at least once per calendar year. The permittee shall analyze the gas stream for the following, nitrogen, carbon dioxide, hydrogen sulfide, C1 through C6 series hydrocarbons, benzene, toluene, xylene, ethylbenzene, and heptanes plus. Should the facility begin to process gas at the facility again, analysis of the gas stream will need to be completed.

A VOC emission limit of 4.5 tpy is in place for EUDEHY-EG, S.C.I.1. Compliance with the emission limit is determined based on monthly and 12-month rolling VOC emission rate calculations, S.C.VI.2. According to MAERS emission reports, EUDEHY-EG has not been operated since 2016. Due to the time since the unit was last operated, AQD staff did not take time to review VOC emission records. Should the facility begin to process gas at the facility again, records of VOC emissions from EUDEHY-EG will need to be maintained.

EUENGINE1

EUENGINE1 is a White Superior 6G825, natural gas fired, 4-stroke, rich burn, reciprocating engine rated at 600 HP. The engine is used to compress natural gas. The unit is equipped with a catalytic convertor and air-to-fuel ratio controller for pollution control. The engine was verified to be onsite and not operating.

EUENGINE1 was visually verified to be equipped with a catalytic convertor, S.C.III.2. Staff report when the engine was operating, the compressor company would conduct routine maintenance to verify the catalyst was operating properly, S.C.IV.1. Additionally, the compressor company performed routine maintenance on the engine to ensure equipment was operating properly, S.C.VI.2.

EUENGINE1 has a permitted NOx emission limit of 19 tpy, S.C.I.1, and a permitted CO limit of 19 tpy, S.C.I.2. Compliance with the emission limits is demonstrated based on monthly and 12-

month rolling emission calculation records, S.C.VI.4. and S.C.VI.5. According to MAERS emission reports, EUENGINE1 has not been operated since 2016. Due to the time since the unit was last operated, AQD staff did not take time to review emission calculation records. Should the facility begin to process gas at the facility again, records of NO_x and CO emissions from EUENGINE1 will need to be maintained.

EUSLOPTANK

EUSLOPTANK is a 400 bl tank used to store recovered water and slop liquids containing hydrocarbons. The unit was verified to still be onsite. Materials are stored in the slop tank until they are loaded out and trucked offsite for proper disposal. Materials loaded out from the slop tank are done so using submerged fill piping, S.C.IV.1.

According to MAERS, the unit was last used to store liquids in calendar year 2020. Onsite staff confirmed the tank is currently not in use and there are no current plans to use the tank at the facility. A VOC emission limit of 3.3 tpy is in place for EUSLOPTANK, S.C.I.1. Compliance with the VOC emission limit is demonstrated through monthly and 12-month rolling emission calculation records, S.C.VI.1. Due to the time since the unit was last operated, AQD staff did not take time to review emission calculation records. Should the facility begin to store liquids in EUSLPPTANK again, records of VOC emissions from the unit will need to be maintained.

FGFACILITY

FGFACILITY incorporates all process equipment source-wide including equipment covered by other permits, grandfathered equipment, and exempt equipment. Special Condition III.1. stipulates the permittee shall not process more than 9.5 million standard cubic feet of field gas per day. According to the Permit Eval prepared for PTI 1027-91A, the source wide daily gas usage limit was taken by the facility to ensure the facility is exempt from the routine monitoring requirements of NSPS Subpart KKK (40 CFR 60.663(d)).

When the facility was operating, gas meters were in place at the inlet and at the sales line, S.C.IV.1. These meters were used to track the amount of field gas processed daily at the facility. Special Condition VI.1. requires records be maintained of the amount of field processed by FGFACILITY on a daily basis. According to MAERS emission reports, field gas has not been processed at the facility since calendar year 2016. Due to the time since field gas was last processed at the facility, AQD staff did not take time to review field gas records. Should the facility begin to process field gas again, daily records will need to be maintained.

Additional Equipment

A second compressor engine was installed at the Reno Gas Plant on 10/1/2015. The emission unit is a Caterpillar 3306A, natural gas-fired 4 stroke rich burn reciprocating internal combustion engine (RICE) rated at 145 HP and 1.09 MMBtu/hr. As an internal combustion engine that have less than 10,000,000 Btu/hour maximum heat input, the additional compressor engine appears to meet the exemption requirements of R.285(2)(g). The compressor engine was verified to be onsite and not in operation. AQD staff observed the exhaust stack was disconnected from the engine, evidence that the unit was no longer being operated.

A heater treater was observed onsite for the purpose of removing oil from the gas stream. The unit is natural gas fired using sweet natural gas. The unit appears to meet the exemption requirements of R282(b)(j). While the unit was still onsite, AQD staff observed the unit was no longer piped to the system.

AQD staff did not take time to review all exempt equipment onsite.

Summary

On March 1, 2023, AQD staff conducted a scheduled onsite inspection at the Cobra Oil and Gas, Reno Gas Plant, SRN N3188. Located on M-65 in Whitemore, MI, the Reno Gas plant is used to gather, compress, and dehydrate natural gas from sweet wells. The Reno Gas Plant is a minor source of all criteria pollutants and an area source of HAPs. One Permit to Install (PTI) is associated with the facility, PTI No. 1027-91A. At the time of inspection, the facility was not in operation. According to MAERS emission reports for the facility, the engines and dehydrator at the facility were last operated during the first quarter of calendar year 2016. The slop tank has not been utilized since 2020. While the facility was not operating, AQD staff took time to verify the equipment onsite to that permitted by PTI 1027-91A. At the time of inspection, the facility was found to be in compliance.

NAME Mathewes Scott

DATE 3/20/2023

SUPERVISOR Chris Lane