

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

P020260844

FACILITY: TUSCOLA ENERGY INC		SRN / ID: P0202
LOCATION: CASS CITY RD SEC 27 & 22, WISNER TWP		DISTRICT: Bay City
CITY: WISNER TWP		COUNTY: TUSCOLA
CONTACT: Jeff Adler , President		ACTIVITY DATE: 11/18/2021
STAFF: Adam Shaffer	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: On-site inspection		
RESOLVED COMPLAINTS:		

An onsite inspection and records review was conducted by Air Quality Division (AQD) staff Adam Shaffer (AS) of the Tuscola Energy, Inc. (TE) site specifically the Walat Farms et al A -6-27 and A-11-22 (off Cass Road) Wisner Township, Michigan location. Applicable records were requested and received on November 18, 2021, to verify compliance with permit to install (PTI) No. 9-11. An in-person inspection to verify onsite compliance was completed on November 18-19, 2021.

Facility Description

TE is an oil production company with various oil well sites located in Michigan. This site is in operation with PTI No. 9-11. The facility is a true minor source for all criteria pollutants.

Offsite Compliance Review

Based on the timing of the inspection, the 2020 Michigan Air Emissions Reporting System (MAERS) Report had been submitted on March 12, 2021 and was later reviewed. Upon review, the emissions reported appear similar to records requested and reviewed. After further review, the 2020 MAERS Report appeared acceptable.

Compliance Evaluation

A request was sent to Mr. Jeff Adler, President, for various records required by PTI No. 9-11. The records were received later that day and reviewed and will be discussed further in this report. An onsite inspection of the site was completed on November 18-19, 2021. AQD staff AS on November 18, 2021, arrived in the area at 1:53pm. Weather conditions at the time were cloudy skies, temperatures in the high 30's degrees Fahrenheit and winds from the west at 15-20mph. While offsite it was noted that the flare was lite and well # A-6-27 was in operation. Upon arriving onsite, AS met with Mr. Adler, and several other staff associated with TE, who provided a tour of the site and answered site specific questions. Requested records were provided by Mr. Adler.

Due to timing, well # A-11 was not operating and well # A-6 shutdown for the day shortly after arriving onsite. Since both units were offline, a partial shutdown could not be completed of the site to verify compliance with PTI No. 9-11. It was decided and agreed for a partial shutdown of the site to be completed at a later date. AS left the site at 2:18pm. The partial shutdown of the site was completed on November 19, 2021. AS arrived onsite at 9:35am on November 19, 2021. Weather conditions at the time were partly cloudy skies, temperatures in the mid 30's degrees Fahrenheit and winds from the west at 10-15mph. Upon arriving onsite, the flare was noted to be lite and both wells were in operation.

As mentioned above, TE is an oil production company. The various stages of onsite processes were reviewed during the inspection and will be discussed further below.

PTI No. 9-11**FGFACILITY**

This flexible group is for the oil production facility referred to as the Walat A-6-27 and A-11-22 Tank Battery and Flare. All process equipment source-wide including equipment covered by other permits, grand-fathered equipment, exempt equipment and control equipment. Emission units for this flexible group are EUTANK1, EUTANK2, EUSEPARATOR1, and EUSEPARATOR2.

Per Special Condition (SC) II.1, this flexible group is subject to a hydrogen sulfide material limit of 288 lbs per day. Records were requested and reviewed for select time periods. Based on the records reviewed, TE appears to be meeting this material limit.

Per SC III.1, the permittee shall not use FGFACILITY to process any wells other than the following without prior notification to and approval by the AQD: a) Walat Farms et al 6-27 and b) Walat Farms et al 11-22. At the time of the inspection, only the two wells mentioned were in operation.

Per SC IV.1, on and after April 30, 2011, the permittee shall properly operate all of the following: a) a continuously burning pilot flame at the flare. Pilot fuel shall only be sweet gas. b) a mechanism that will automatically shut off fluid flow into FGFACILITY in the event that the pilot flame is extinguished. Furthermore, the Walat 6 & 11 wells shall shut down before the pressure reaches a company-determined safety set-point. The permittee shall not resume fluid flow into FGFACILITY unless the flare pilot flame is re-ignited and maintained. TE staff verified that propane is used to fuel the pilot flame. The facility is equipped with a profire system that monitors the pilot flame temperature which is used to light the flare that controls the hydrogen sulfide emissions. The setpoint temperature for the pilot flame is 200°F. If the temperature of the pilot flame falls below this, the profire system will shut down flow from the wells into the facility. The wells will continue to attempt to pump oil into the facility until the high pressure setpoint on the murphy switch is exceeded at which point the wells will turn off and the site is shutdown. A murphy switch was noted during the inspection to be attached to well A-6 and A-11. For well A-11, the high pressure setpoint was 60 lbs and the low pressure setpoint was 0 lbs. For well A-6, the high pressure setpoint was 40 pounds and the low pressure setpoint was 0 lbs. A partial shutdown was completed on November 19, 2021. The fuel to the pilot flame was turned off at approximately 9:45am. The pilot temperature prior to the turn off was noted. It took approximately five minutes for the pilot flame temperature to fall below the 200°F setpoint at which point the spark light on the profire system panel turned on and the unit attempted to spark and turn on the pilot flame. AS noted, while the unit was attempting to turn on, the current flow rates to the facility steadily decreased. This appeared satisfactory and the pilot flame fuel was turned on and the pilot flame ignited, with temperatures then rising back to normal levels. It was noted the flare flame never went out during the partial shutdown of the site. Based on the observations made it appears that the mechanism used to shut off fluid flow to the facility appeared to be operating properly.

The following flow rates were recorded during the course of the inspection on both days.

November 18, 2021

Flow Rate (MSCF/D) – 35.6, 35.1, 34.5

Flow Today (MSCF) – 12.4, 12.4, 12.4

Flow Monthly (MSCF) – 241.1, 241.1, 241.1

Flow Yesterday (MSCF) – 20.7, 20.7, 20.7

November 19, 2021

Flow Rate (MSCF/D) – 14.8, 14.7, 14.7

Flow Today (MSCF) – 7.7, 7.7, 7.7

Flow Monthly (MSCF) – 260.1, 260.1, 260.1

Flow Yesterday (MSCF) – 18.9, 18.9, 18.9

Per SC IV.2, the flare shall be properly engineered. Based on the observations made at the time of the inspection this appeared correct.

Per SC IV.3, the permittee shall not operate FGFACILITY unless all emergency relief valves, all storage tanks, and all dehydrators are vented to a flare, an incinerator, or a vapor recovery system. Speaking with TE staff, it was determined that hydrogen sulfide emissions from the one tank in operation and the two oil / gas separators (EUSEPARATOR1 & EUSEPARATOR2) are connected to the flare. This appears acceptable.

Per SC IV.4, the permittee shall not load out EUTANK1 and/or EUTANK2 unless a vapor return system is installed, maintained and operated in a satisfactory manner. Based on the observations made at the time of the inspection and speaking with TE staff, this appears to be being completed.

Per SC VI.1, the permittee shall monitor and record the daily volumetric flow rate of sour gas going to the flare, and quarterly concentrations of hydrogen sulfide in the sour gas going to the flare with the wells pumping (or an approved alternative monitoring schedule). Daily flow rates were requested and provided for select time periods. After further review, TE appears to be keeping track of daily flow rates. The last four concentrations determined of hydrogen sulfide in the sour gas going to the flare with the wells pumping was requested and provided. Historically, testing had been completed on a quarterly basis. A letter dated November 13, 2018, had been submitted to the AQD that had listed test results since 2015 and the hydrogen sulfide concentration percentages to be used for the rest of 2018 and through the summer of 2019 in applicable calculations. In a subsequent letter dated August 6, 2021, to the AQD Bay City District Supervisor, TE had proposed annual testing and to take the median value result of the last four tests to be used when determining hydrogen sulfide concentrations that are used in applicable calculations. The proposed conditions were later approved on September 24, 2021. Additionally, historically the company had submitted to the AQD concentration values that it planned to use in calculations. It was noted that testing had not been completed in 2020. This was discussed at length with company staff and appears to have been related to the Covid-19 pandemic. After further review, this appears acceptable at this time. Overall, TE appears to be monitoring and recording the applicable items in a satisfactory manner.

Per SC VI.2, the permittee shall complete applicable calculations each calendar month. Records were requested and reviewed for select time periods. Based on the records reviewed, items listed in this condition appear to be being completed.

One stack is listed in association with this flexible group and was observed during the course of the inspection. Though the dimensions were not measured they appeared to be consistent with what is listed in PTI No. 9-11.

Additional Observations

At the time of the inspection, the propane tank used to provide fuel to the pilot flame for the flare was at 70% full.

One of the oil storage tanks under PTI No. 9-11 was not in operation at the time of the inspection. TE staff had mentioned in the future they plan to make the necessary repairs to the tank.

A wind guard was observed at the time of the inspection around the flare. Portions of the wind guard were missing. It was discussed with and moving forward the wind guard for the flare will be replaced and photo verification shall be submitted to the AQD to verify the replacement work was completed.

This site is equipped with a flame arrestor which will prevent a blowback from the flare to the oil /gas separators / tanks. Speaking with staff the unit was recently replaced two and a half years ago.

A hydrogen sulfide monitor was worn by AQD staff throughout the course of the inspection on both days. No issues were noted.

Conclusion

Based on the facility walkthrough, observations made, and records received, TE appears to be in compliance with PTI No. 9-11.

NAME Adam Shaffer

DATE 12/07/2021

SUPERVISOR Chris Hare