

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

N158673081

FACILITY: TUSCOLA ENERGY - NIXON FARMS		SRN / ID: N1586
LOCATION: 7611 BAY CITY FORESTVILLE RD, AKRON		DISTRICT: Bay City
CITY: AKRON		COUNTY: TUSCOLA
CONTACT: Jeff Adler , President		ACTIVITY DATE: 08/01/2024
STAFF: Adam Shaffer	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On site inspection		
RESOLVED COMPLAINTS:		

A full compliance evaluation (FCE) was completed by Air Quality Division (AQD) staff Adam Shaffer (AS) of the Tuscola Energy, Inc. (TE) company, specifically for the Nixon Farm Wells site located at 7611 Bay City Forestville Road Wisner Township, Michigan. Applicable records were requested on July 25, 2024, to verify compliance with Permit to Install (PTI) No. 20-12C. An in-person inspection to verify compliance was later completed on August 1, 2024.

Facility Description

TE is an oil and gas exploration and production company. The facility (specifically the Nixon Farm Wells site) is an opt out source for sulfur oxides (SOx) and is in operation under PTI No. 20-12C.

Offsite Compliance Review

Based on the timing of the inspection, TE had already submitted their State and Local Emissions Inventory System (SLEIS) Report for 2023 and the report had appeared acceptable. Records attached with the 2023 SLEIS Report appeared consistent with what was provided at the time of the inspection.

Compliance Evaluation

A request was sent to Mr. Jeff Adler, President, of TE on July 25, 2024, for records required by PTI No. 20-12C. The onsite inspection was completed on August 1, 2024. AQD staff AS and Oil Gas and Minerals Division (OGMD) staff Kasey Todd (KT) arrived at the facility at approximately 10:57am. Weather conditions at the time of the inspection were sunny skies, calm winds and temperatures in the high 70's degrees Fahrenheit. During the course of the inspection, AS and KT met with several TE staff who provided a tour of the site and answered site specific questions. Follow up records / questions were addressed by Mr. Adler.

As mentioned above TE is an oil and gas exploration and production facility. During the inspection, various components pertaining to site operations were discussed at length with company staff.

PTI No. 20-12C

FGOILTREATSYS

This flexible group includes process equipment for heat treatment of oil from offsite wells. Emission units associated with the flexible group are EUOILTREATSYSTK1, EUOILTREATSYSTK2, EUOILTREATSYSTK3, EUOILTREATSYSTK4, and EUWASTEWATERTK2.

It was initially believed that equipment on northern portions of the site was for the oil treatment system but later concluded that the heat treatment process equipment was further to the south. Company staff verified that no heat treatment of oil is completed from offsite wells.

Onsite Observations

Per Special Condition (SC) III.1, the permittee shall not burn any sour natural gas in FGOILTREATSYS. Sour gas is defined as any gas containing more than 1 grain of hydrogen sulfide (H₂S) or more than 10 grains of total sulfur per 100 standard cubic feet. Company staff verified that the equipment associated with this flexible group has not been in operation for at least 20 years.

Per SC III.2, the permittee shall submit to the AQD District Supervisor, for review and approval, a preventative maintenance / malfunction abatement plan (PM / MAP) for FGOILTREATSYS. Records were requested and provided for select time periods related to the PM / MAP. Upon review, it was determined that the most recently approved PM / MAP was not adequate, however, based on the length of time the equipment has not been operating, no changes shall be requested at this time. In the future if the equipment associated with FGOILTREATSYS will resume operation, then changes shall be requested made to the PM / MAP.

Per SC IV.1, the permittee shall not operate FGOILTREATSYS unless all emergency relief valves, all permitted storage tanks, and all dehydrators are vented to a flare, an incinerator or a vapor recovery system. It was verified by company staff that equipment associated with FGOILTREATSYS has been disconnected from the flare. Due to the length of time FGOILTREATSYS has not been in operation, no further action is necessary at this time. In the future if the company resumes operation of FGOILTREATSYS, then the requirements of this condition shall be met.

Per SC IV.2, the permittee shall load out the following permitted tanks (EUOILTREATSYSTK1, EUOILTREATSYSTK2, EUOILTREATSYSTK3, EUOILTREATSYSTK4 and EUWASTEWATERTK2) unless a vapor return system is installed, maintained and operated in a satisfactory manner. Due to the length of time FGOILTREATSYS has not been in operation, no further action is necessary at this time. In the future if the company resumes operation of FGOILTREATSYS, then the requirements of this condition shall be met.

Per SC IV.3, the permittee shall properly operate a continuously burning pilot flame at the flare with pilot fuel only being sweet gas, and a mechanism that will automatically stop flow of fuel to the FGOILTREATSYS tank oil treatment torches in the event that the flare pilot flame is extinguished. The permittee shall not resume oil circulation unless the flare pilot flame is re-ignited and maintained. As stated above, all equipment for FGOILTREATSYS has been disconnected from the flare, however, has not been in operation for a significant period of time. In the future if the company resumes operation of FGOILTREATSYS, then the requirements of this condition shall be met.

Records Review

Per SC VI.1, the permittee shall maintain a log of all maintenance activities conducted according to the PM / MAP (pursuant to SC III.2) and make it available upon request. As

stated above, FGOILTREATSYS has not been in operation for a significant period of time. In the future if the equipment associated with FGOILTREATSYS will resume operation, then changes shall be requested made to the PM / MAP.

FGOILPRODUCTION

This flexible group is for all permitted oil production equipment at the facility. Emission units for this flexible group are EUNIXON3TANK, EUNIXON3SEP, EUNIXON4TANK, EUNIXON4SEP, EUNIXON5TANK, EUNIXON5SEP, EUNIXON6TANK, EUNIXON6SEP, EUWASTEWATERTK1, and EUNIXON14TANK.

Onsite Observations

Per SC III.1, the permittee shall not use FGOILPRODUCTION to process any sour wells other than Nixon 5, Nixon 3, Nixon 4, and Nixon 6 without prior notification to and approval by the AQD. The sour wells may be left open, when not being pumped. Furthermore, the sour wells shall not be pumped simultaneously except as further described in this special condition. Upon review of records provided, it was concluded that the operating conditions of the wellheads described in this condition were not being followed. This is a violation of PTI No. 20-12C, FGOILPRODUCTION, SC III.1.

Per SC III.2, the permittee shall submit to the AQD District Supervisor, for review and approval, a PM / MAP for FGOILPRODUCTION. Records were requested and provided for select time periods related to the PM / MAP. Upon review, it was determined that the most recently approved PM / MAP was not adequate and that changes would be requested completed.

Per SC IV.1a-d, the permittee shall properly operate various items that are further described in detail in this special condition.

A propane tank was observed that 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 H₂S emissions. The setpoint for the pilot flame is 70°F. If the temperature of the pilot flame falls below the 70°F setpoint, the profire system will spark and attempt to lite the pilot flame for the flare. Speaking with company staff it appears that if after 15 minutes of attempting to lite and the temperature is still below the setpoint, 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 for each well is exceeded at which point the well will turn off and the site is shutdown. At the time of the inspection the pilot flame was 177°F. Following the inspection, company staff had stated that the thermocouple for the flare had been bad and was later fixed. Also, the flare temperature setpoint had been raised to 200°F. When raising the question of having such a low setpoint for the flare temperature, the company mentioned that weather conditions can drastically impact the range of the flare temperature. Additionally, it appears that even if the flare was lit, if the temperature is below the setpoint it would attempt to lite the flare and eventually shut down. At this time, the setpoint temperature appears acceptable.

At the time of the inspection the following readings were recorded from the PROFIRE system.

Flow Rate – 31.8 MSCF

Flow Monthly – 1020.4 MSCF

Flow Today – 15.9 MSCF

Flow Yesterday – 33.2 MSCF

Several wellheads for the site were observed during the course of the inspection and will be discussed below.

Nixon 3 – This wellhead was not operating at the time of the inspection but was turned on to initiate a shutdown to verify the murphy switch is operating. A murphy switch was observed. The high pressure setpoint was 50 psig and the low pressure setpoint was 0 psig. A shutdown was initiated by lowering the high pressure setpoint to verify the wellhead would turn off in the event of an issue. Upon tripping, the wellhead turned off indicating satisfactory operation of the murphy switch. After further review, the murphy switch appeared to be operating satisfactorily.

Nixon 4 – This wellhead was operating at the time of the inspection and a murphy switch was noted for the unit. Speaking with company staff it was determined that since approximately March 2024, the murphy switch has not been connected to and in operation on the Nixon 4 wellhead. TE staff had mentioned on waiting for an electrician to help connect the unit.

Nixon 5 – This wellhead was operating at the time of the inspection and a murphy switch was noted for the unit. The high pressure setpoint was 50 psig and the low pressure setpoint was 0 psig. A shutdown was initiated by lowering the high pressure setpoint to verify the wellhead would turn off in the event of an issue. Upon tripping, the wellhead did not shut down indicating the murphy switch is not operating in a satisfactory manner. Staff were not aware of any issues with this murphy switch.

Nixon 6 – This wellhead was not operating at the time of the inspection due to a power outage.

Based on the issues discussed above, TE does not appear to be operating / maintaining the murphy switches for the applicable wellheads in a satisfactory manner. This is a violation of PTI No. 20-12C, FGOILPRODUCTION, SC IV.1.

Per SC IV.2, the flare shall be properly engineered. The flare was observed during the course of the inspection and was lit. The shroud around the flare appeared to be in good condition.

Per SC IV.3, the permittee shall not operate FGOILPRODUCTION unless all emergency relief valves, all permitted storage tanks, and all dehydrators are vented to a flare, an incinerator or a vapor recovery system. Based on observations made and speaking with company staff it appears that all applicable equipment is connected to and controlled by the flare.

Per SC IV.4, the permittee shall not load out any permitted tanks unless a vapor recovery system is installed, maintained and operated in a satisfactory manner. During the course of the inspection, several vapor return lines were noted for the FGOILPRODUCTION equipment which appears satisfactory.

One stack is listed as associated with this flexible group. Though the dimensions were not measured at the time of the inspection they appeared to be consistent with what is listed in PTI No. 20-12C.

Records Review

This flexible group is subject to a daily H₂S material limit of 460 lbs per day. Records were requested and provided for select time periods. Upon review of the records provided, the daily H₂S emissions reported were well within the permitted limit. After further review, it appears that TE is meeting this daily H₂S material limit.

This flexible group is subject to a second H₂S material limit of 50 tons per year (typ) per a 12-month rolling time period. Records were requested and provided for select time periods. For the month of May 2024, 4,424.79 pounds of H₂S emissions were reported emitted. As of May 2024, approximately 35.62 tpy of H₂S emissions were reported emitted per a 12-month rolling time period which is within the permitted limit. Previous 12-month rolling time periods reviewed were also well within the permitted limit.

Per SC VI.1, the permittee shall monitor and record the daily volumetric flow rate of sour gas going to the flare and annual readings of H₂S concentrations in the produced sour gas from the wells while being pumped which is representative of the three wells sending the highest volume of gas to the flare. Records were requested and reviewed for select time periods. Based on the records provided, TE appears to be keeping track of daily flow rates of sour gas going to the flare. Additionally, TE has historically provided annual H₂S concentrations for each permitted well site with the most recent concentrations provided on June 22, 2023.

Per SC VI.2, the permittee shall calculate the mass flow rate of H₂S that went to the flare each day. Records were requested and provided for select time periods. After further review the records appear acceptable.

Per SC VI.3, the permittee shall keep monthly / 12-month rolling time period H₂S emission calculation records for FGOILPRODUCTION, as required by SC II.2. Records were requested and provided for select time periods. Based on the records requested and provided, TE appears to be keeping track of applicable records.

Per SC VI.4, the permittee shall record on a daily basis which well is pumping and the timeframe. Records were requested and provided for select time periods. Based on the records provided, the company appears to be keeping track of applicable records.

Per SC VI.6, the permittee shall maintain a log of all maintenance activities conducted according to the PM / MAP (pursuant to SC III.2) and be made available upon request. Records were requested and provided for select time periods. The records appear acceptable at this time; however, it should be noted that as mentioned above, a request to update the PM / MAP shall be made.

Additional Observations

A central production facility tank farm which consisted of oil storage / water tanks was noted on the north side of the site. This is used to store oil from other surrounding sites. Company staff verified that the tanks are connected to and controlled by the flare.

A partial shutdown of the flare to verify the PROFIRE system and flare are operating in compliance and would shut down if there were any issues was requested from TE staff during the course of the inspection. At the time, company staff stated they were uncomfortable with initiating a partial shutdown of the site. After further review of the flare and discussion with company staff, a partial shutdown was decided to not be completed for this inspection.

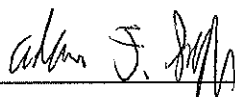
Conclusion

Based on the observations made and records reviewed, TE does not appear to be in compliance with PTI No. 20-12C and applicable air pollution control rules. A violation notice (VN) shall be issued for the following violations:

During the course of the site inspection, it was concluded that Tuscola Energy was not following the specific wellhead pumping restrictions that are required per PTI No. 20-12C. This is a violation of PTI No. 20-12C, FGOILPRODUCTION, Special Condition (SC) III.1.

During the inspection, murphy switches located on wellheads Nixon 4 and Nixon 5 were noted to not be operating properly. This is a violation of PTI No. 20-12C, FGOILPRODUCTION, SC IV.1.

NAME



DATE

10/01/24

SUPERVISOR

