

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

N322873082

FACILITY: TUSCOLA ENERGY - BOYCE B		SRN / ID: N3228
LOCATION: GARNER RD, JUST NORTH OF CASS CITY RD, AKRON		DISTRICT: Bay City
CITY: AKRON		COUNTY: TUSCOLA
CONTACT: Jeff Adler , President		ACTIVITY DATE: 08/01/2024
STAFF: Adam Shaffer	COMPLIANCE STATUS: 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 Boyce well site in Wisner Township, Michigan. Applicable records were requested on July 25, 2024, to verify compliance with Permit to Install (PTI) No. 116-12A. 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 Boyce well site) is an opt out source for sulfur oxides (SOx) and is in operation under PTI No. 116-12A.

### **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. 116-12A. 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 9:52am. Weather conditions at the time of the inspection were sunny skies, calm and variable winds and temperatures in the high 70's degrees Fahrenheit. Upon arrival, AS and KT briefly walked the site before several TE staff arrived. TE staff representative, Chris, provided a tour of the site and answered site specific questions. Follow up questions and requested records were provided 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. 116-12A**

### **FGOILPRODUCTION**

This flexible group is for all permitted oil production equipment at the facility. Emission units (EU)'s included for this flexible group are the one storage tank for oil from the Boyce B1-23 and Boyce B2-23 oil wells (EUBOYCETANK) and the two separators (EUSEPARATOR1 and EUSEPARATOR2). All three emissions units are flare controlled.

The oil tank and two separators were observed in operation at the time of the inspection. At the time only the B1-23 well was operating. The B2-23 was down until maintenance could be completed to turn the unit back on.

### Onsite Observations

Per Special Condition (SC) III.1, the permittee shall not use FGOILPRODUCTION to process any wells other than the Boyce B1-23 and the Boyce B2-23 without prior notification to and approval by the AQD. The sour wells may be left open, when not being pumped. It was verified during the course of the site inspection that only the B1-23 and B2-23 wells are for this site.

Per SC III.2, no later than 60 days after issuance of the permit, the permittee shall submit to the AQD District Supervisor for review and approval, a preventative maintenance / malfunction abatement plan (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 to the plan.

Per SC IV.1, the permittee shall properly operate the following: a). a continuously burning pilot flame at the flare with pilot fuel being only sweet gas; b). a mechanism that will automatically shut down the Boyce Farms well pump jack to stop fluid flow in the event that the flare pilot flame is extinguished. The permittee shall not resume fluid flow into FGOILPRODUCTION unless the flare pilot flame is re-ignited and maintained; and c). a mechanism that will automatically stop flow of gas to the FGOILPRODUCTION in the event that the flare pilot flame is extinguished. The permittee shall not resume gas flow into FGOILPRODUCTION unless the flare pilot flame is re-ignited and maintained. 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 hydrogen sulfide (H<sub>2</sub>S) emissions. The setpoint temperature for the pilot flame is 200°F. If the temperature of the pilot flame falls below the 200°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 flare temperature was 1,087°F. Following the inspection, company staff had stated that the thermocouple for the flare had been bad and was later fixed. When raising the question of 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 – 28.1 MSCF / d

Flow Monthly – 1,132.2 MSCF

Flow Today – 9.7 MSCF

## Flow Yesterday – 24.5 MSCF

The two wellheads were observed during the course of the site inspection and will be discussed below.

Wellhead B1-23 - This wellhead was operating at the time of the inspection. A murphy switch was noted for the wellhead. The high pressure setpoint was at 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.

Wellhead B2-23 – This wellhead was not operating at the time of the inspection and upon speaking with company staff appeared to require additional maintenance before the well could be turned on. A murphy switch was noted on the wellhead.

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 storage tanks, all oil / gas separators, and all dehydrators are vented to a flare, an incinerator or a vapor recovery system. It was verified by company staff and noted during the course of the inspection that applicable equipment is all controlled by the flare.

Per SC IV.4, the permittee shall not load out any tank unless a vapor return system is installed, maintained and operated in a satisfactory manner. A vapor return line was observed during the course of the inspection that is used during load outs of oil.

One stack is listed as associated with the flexible group and was observed during the course of the site inspection. Additionally, per SC IX.1, the permittee shall comply with the minimum height above ground for SVFLARE within 60 days of issuance of this permit or other timeframe if requested by the permittee and approved by the AQD District Supervisor. Though the dimensions were not measured they appeared to be consistent with what is listed in PTI No. 116-12A.

## Records Review

This flexible group is subject to a daily H<sub>2</sub>S material limit of 974 lbs per day. Records were requested and provided for select time periods. Based on the records reviewed, TE appears to be meeting this material limit.

This flexible group is subject to a second H<sub>2</sub>S material limit of 50 tons per year (tpy) per a 12-month rolling time period. Records were requested and provided for select time periods. For the month of May 2024, 6,259.94 lbs of H<sub>2</sub>S were reported emitted. As of May 2024, approximately 32.89 tpy of H<sub>2</sub>S emissions were reported emitted per a 12-month rolling time period which is well within the permitted limit. Previous 12-month rolling time periods reviewed also appeared to be within the permitted limit.

Per SC VI.1-2, the permittee shall keep track of the daily volumetric flow rate of sour gas going to the flare and annual readings of the concentration of H<sub>2</sub>S in the sour gas from a composite of both wells while pumping. Additionally, the permittee shall calculate the mass

flow rate of H<sub>2</sub>S that went to the flare each day using the items listed further in this special condition. Concentrations of H<sub>2</sub>S are submitted to the AQD on an annual basis with the most recent concentrations provided on June 22, 2023. Daily volume records were requested and provided for select time periods. Based on the records provided, there appeared to be no issues.

Per SC VI.3, the permittee shall keep in a satisfactory manner monthly and 12-month rolling time period H<sub>2</sub>S emission calculation records for FGOILPRODUCTION as required per SC II.2. Records were requested and provided for select time periods. Based on the records provided, TE appears to be keeping track of the applicable records.

Per SC VI.5, the permittee shall maintain a log of all maintenance activities conducted according to the PM / MAP approved by the AQD. Records were requested and provided for select time periods. Upon review of the records provided, quarterly shut down tests are completed. In June 2024, records indicated the flare had gone out, however, the wells had shut in and the flare was later relit. 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 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. Upon further discussion, the company had replaced the entire flare stack ignition system for the flare approximately three years ago and wiring for the unit appeared to be in acceptable condition. After further review, a partial shutdown was decided to not be completed for this inspection.

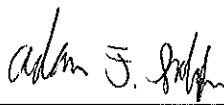
During the walk through of the site, the oil catch basin used during fuel loadouts was noted to be full and staining of the soil was also observed in the immediate area of the basin.

Minor staining was noted on the one oil storage tank being used for the site and appeared to be from cracks in the tank. Possible solutions to fix the cracks in the tank were discussed with company staff.

### **Conclusion**

Based on the observations made and records reviewed, TE appears to be in compliance with PTI No. 116-12A and applicable air pollution control rules.

NAME



DATE

10/01/24

SUPERVISOR

