

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection**

N322851159

FACILITY: TUSCOLA ENERGY - BOYCE B		SRN / ID: N3228
LOCATION: GARNER RD, JUST NORTH OF CASS CITY RD, AKRON		DISTRICT: Saginaw Bay
CITY: AKRON		COUNTY: TUSCOLA
CONTACT: Jeff Adler , President		ACTIVITY DATE: 10/08/2019
STAFF: Matthew Karl	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled inspection to determine compliance with PTI No. 116-12A.		
RESOLVED COMPLAINTS:		

On Tuesday (10/8/19) Derek Timmermann (EGLE-OGMD) and I (Matt Karl) conducted a scheduled inspection at the Tuscola Energy Inc. – Boyce B facility located northwest of the intersection of Garner Road and Cass City Road, Wisner Township, Michigan. The purpose of this 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 (EGLE-AQD) Administrative Rules and Permit to Install (PTI) No. 116-12A. Mr. Jeff Adler, President, Tuscola Energy Inc. assisted me by providing requested records.

Background:

The wells that are associated with this facility are included in the table below:

Well Identification	Well Type
B1-23	Sour Well
B2-23	Sour Well

A sour well is one where sour gas is present which contains hydrogen sulfide (H2S).

The following equipment is permitted at the facility under PTI No. 116-12A:

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUBOYCETANK	Storage tank for oil from the Boyce B1-23 and Boyce B2-23 oil wells. Flare control.	FGOILPRODUCTION
EUSEPARATOR1	Separator for the Boyce B1-23 and Boyce B2-23 oil wells. Flare control.	FGOILPRODUCTION
EUSEPARATOR2	Separator for the Boyce B1-23 and Boyce B2-23 oil wells. Flare control.	FGOILPRODUCTION

The flare control, SVFLARE, is required to be a minimum of 70 feet above the ground.

Site Inspection:

We arrived on site at approximately 11:45 am. At the time of our inspection, the temperature was ~62°F, the wind was ~6 mph from the south-southeast, and it was sunny, and the skies were clear. The attached reference photo (Photo 1) shows the storage tanks and separators as they appeared at the time of our inspection. It appears that the storage tank on the left-hand side was empty and disconnected. The right-hand storage tank and separators appeared to be actively operating. The flare control (SVFLARE) is 70 feet tall and was operating at the time of our inspection (Photo 2). We noted a broken flow line and spill located between the tanks and the flare (Photo 3). We informed Jeff Adler of the broken flow line and spill and Derek Timmermann requested that he submit a spill report to him. We did note a faint H2S gas odor on site, but neither of our personal H2S meters detected any readings.

I reviewed the on-site meter and recorded the following information about the flow of sour gas to the flare:

Flow Rate	44.7 MSCF/D
Flow Monthly	564.9 MSCF
Flow Today	38.2 MSCF

Flow Yesterday

89.0 MSCF

We departed the facility at approximately 12:15 pm.

Records Review:

I sent Jeff Adler a records request on Thursday (10/10/19) via email. Jeff Adler responded by providing the following records via email on Monday (10/14/19), which are available in the District Office files:

Records Request – 10-10-19.xlsx

FGOILPRODUCTION:

SC VI.1. The permittee shall monitor and record all of the following at the frequency indicated:

- a) Volumetric flow rate of sour gas going to the flare- daily
- b) Annual readings of the concentration of hydrogen sulfide 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- annually. Both of the following are acceptable means of determining the concentration of hydrogen sulfide in the sour gas:
 - I) Colorimetric detector tube
 - II) Laboratory gas analysis

I reviewed the spreadsheet "Records Request – 10-10-19.xlsx." I reviewed records of the volumetric flow rate of sour gas from 12/3/18 to 9/30/19. The volumetric flow rate of sour gas going to the flare ranged from 0 to 126.496 MSCF, with an average flow rate of 9.778 MSCF over the time period of the records reviewed. The latest annual reading of the concentration of H2S in the sour gas was performed on 10/1/18 and was 7.0% H2S. The requirement for determining the concentration of hydrogen sulfide in the produced sour gas is on an annual basis, so the facility is due for an updated reading for 2019 via colorimetric detector tube or laboratory gas analysis. Tuscola Energy Inc. performed H2S concentration testing on 10/29/19. Tuscola Energy Inc. will send in correspondence with the results to the EGLE-AQD District Office. A copy of the new concentration results will be on file in the District Office.

SC VI.2. Each calendar month the permittee shall calculate the mass flow rate of hydrogen sulfide (H2S) that went to the flare each day using all of the following:

- a) The most recently determined concentration of hydrogen sulfide in the sour gas
- b) The individual daily volume of sour gas that went to the flare

I reviewed the spreadsheet "Records Request – 10-10-19.xlsx." I reviewed records of the mass flow rate of H2S from 12/3/18 to 9/30/19. The most recent annual reading of the concentration of H2S was performed on 10/1/18 and was 7.0% H2S. The facility is due for an updated annual reading for 2019. Tuscola Energy Inc. performed H2S concentration testing on 10/29/19. Tuscola Energy Inc. will send in correspondence with the results to the EGLE-AQD District Office. A copy of the new concentration results will be on file in the District Office.

Over the period of 12/3/18 to 9/30/19 the mass flow rate of H2S that went to the flare each day ranged from 0 to 780.984 lbs./day and averaged 60.367 lbs./day over the time period of the records reviewed. SC II.1. specifies that the mass flow rate of hydrogen sulfide going to the flare shall not exceed 974 lbs./day. The maximum mass flow rate of H2S of 780.984 lbs./day represents approximately 80% of the 974 lbs./day emission limit.

SC VI.3. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period H2S emission calculation records for FGOILPRODUCTION, as required by SC II.2.

I reviewed the spreadsheet "Records Request – 10-10-19.xlsx." I reviewed the 12-month rolling time period H2S emissions from 12/3/18 to 9/30/19. The 12-month rolling emissions ranged from 3.788 to 19.574 tons/year and averaged 8.434 tons/year over the time period of the records reviewed. The maximum 12-month rolling mass emissions of H2S of 19.574 tons/year represents approximately 39% of the permit limit SC II.2. of 50 tons/year.

SC VI.6. The permittee shall maintain a log of all maintenance activities conducted according to the PM / MAP (pursuant to SC III.2).

On Thursday (10/24/19) Jeff Adler sent me via email with an updated "Records Request – 10-10-19.xlsx" spreadsheet with a "Maintenance" tab. I've included the section relevant to the Boyce B Facility in the table below:

B1B2 Flare	
Date	Maintenance
8/1/2019	Temp. set at 200 degrees
8/1/2019	Propane pressure above 50 lbs.

Summary:

After the scheduled inspection on Tuesday (10/8/19) and subsequent records review it appeared that Tuscola Energy Inc- Boyce B facility was in compliance with PTI No. 116-12A.

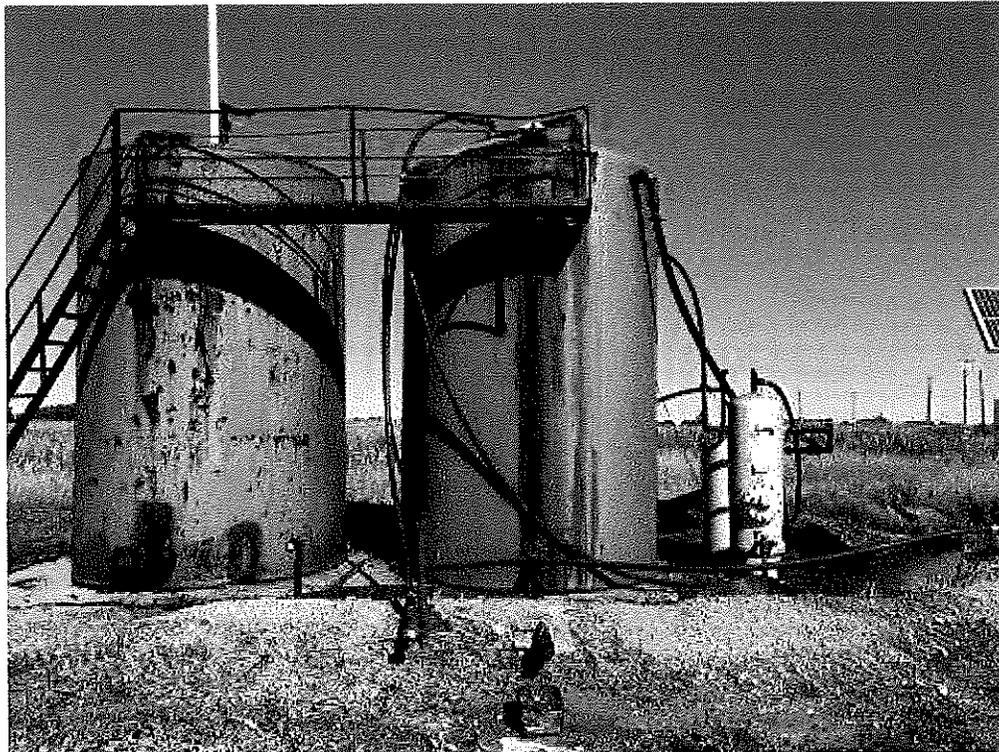


Image 1(Photo 1.) : Photo 1. Reference photo of storage tanks and separators. Perspective facing north.



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Image 3(Photo 3.) : Photo 3. Reference photo of spill from broken flow line located between storage tanks and flare control.

NAME Matthew R. Kord

DATE 10/30/19

SUPERVISOR C. Hare