DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

P019951163

FACILITY: TUSCOLA ENERGY INC		**SRN / ID:** P0199
LOCATION: ELMWOOD RD SEC 36, WISNER TWP		**DISTRICT:** Saginaw Bay
CITY: WISNER TWP		**COUNTY:** TUSCOLA
CONTACT: Jeff Adler , President		**ACTIVITY DATE:** 10/08/2019
STAFF: Matthew Karl	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Self initiated inspection to determine compliance with PTI No. 6-11.		
RESOLVED COMPLAINTS:		

On Tuesday (10/8/19) Derek Timmermann (EGLE-OGMD) and I (Matt Karl) conducted a scheduled inspection at the Tuscola Energy Inc.-Sylvester facility located northwest of the intersection of Cosens Road and West Elmwood Roads, 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. 6-11. 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
Sylvester 2-36	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. 6-11:

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUTANK	Oil storage tank.	FGFACILITY
EUSEPARATOR	Oil/gas separator.	FGFACILITY

The flare control, SVFLARE, is required to be a minimum of 40 feet above the ground.

Site Inspection:

We arrived on site at approximately 12:45 pm. At the time of our inspection, the temperature was ~62°F, the wind was ~6 mph from the east, and gusting up to ~10 mph; it was sunny, and the skies were clear. The attached reference photo (Photo 1) shows the storage tank and separator as they appeared at the time of our inspection. The flare control (SVFLARE) is 40 feet tall and was NOT operating at the time of our inspection (Photo 2). It appeared the facility was not operating at the time of our inspection. We observed 9 waste barrels located around the well head. Some of the barrels appeared to be overtopping and leaking. We noted odors around the waste barrels but recorded no readings on our personal H2S meters. I informed Jeff Adler about our observation via email and phone call and requested that he reach out to Ms. Trisha Confer, (EGLE-MMD) and discuss a plan to remove those waste barrels. We departed the facility at approximately 1:10 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

FGFACILITY:

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) **Concentration of hydrogen sulfide in the sour gas going to the flare with the well pumping – quarterly**

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**

The permittee shall perform 4 consecutive quarterly readings of the concentration of hydrogen sulfide in the sour gas. After successful completion of the 4 consecutive quarterly readings, the permittee may request an alternative monitoring schedule. Any request for an alternative monitoring schedule shall be submitted to the AQD District Supervisor for approval. The requested monitoring frequency shall be not less than annual.

I reviewed the spreadsheet "Records Request – 10-10-19.xlsx." I reviewed records of the volumetric flow rate of sour gas from 1/1/19 to 9/30/19. The volumetric flow rate of sour gas going to the flare ranged from 0 to 8.286 MSCF, with an average flow rate of 3.687 MSCF over the time period of the records reviewed. The latest reading of the concentration of H2S was performed on 10/10/18 and was 7.5% H2S. The requirement for determining the concentration of H2S 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 but was unable to get a result for the Sylvester facility. The company will re-test and provide correspondence with the results to the EGLE-AQD District Office at the next available opportunity. A copy of the new concentration results will be on file in the District Office.

SC VI.2. The permittee shall perform the following calculation each calendar month:

- **Calculate the mass flow rate of H2S going to the flare each day using all of the following:**
  I. **The most recent concentration of hydrogen sulfide in the sour gas determined with the well pumping**
  II. **The individual daily volume of sour gas going to the flare**
  III. **The following equation:**

(ft3 sour gas/day)(ft3 H2S/100ft3 sour gas)(#mol H2S/385ft3 H2S)(34# H2S/#mol H2S) = #/day H2S

I reviewed the spreadsheet "Records Request – 10-10-19.xlsx." I reviewed records of the mass flow rate of H2S from 1/1/19 to 9/30/19. The most recently determined concentration of H2S was performed on 10/10/18 and was 7.5% H2S. The facility is due for an updated annual reading for 2019. Tuscola Energy Inc. performed H2S concentration testing on 10/29/19 but was unable to get a result for the Sylvester facility. The company will re-test and provide correspondence with the results to the EGLE-AQD District Office at the next available opportunity. A copy of the new concentration results will be on file in the District Office. The mass flow rate of H2S that went to the flare each day ranged from 0 to 54.811 lbs./day and averaged 24.387 lbs./day over the time period of the records reviewed. The maximum mass flow rate of 54.811 lbs./day represents approximately 53% of the SC II.1. limit of 104 lbs./day H2S.

Summary:

After the scheduled inspection on Tuesday (10/8/19) and subsequent records review it appeared that Tuscola Energy Inc – Sylvester facility was in compliance with PTI No. 6-11.

Future follow-up will involve making sure that Tuscola Energy Inc. checks the H2S concentration, and removes the identified waste barrels.

Image 1(Photo 1.) : Photo 1. Reference photo of storage tank and separator.

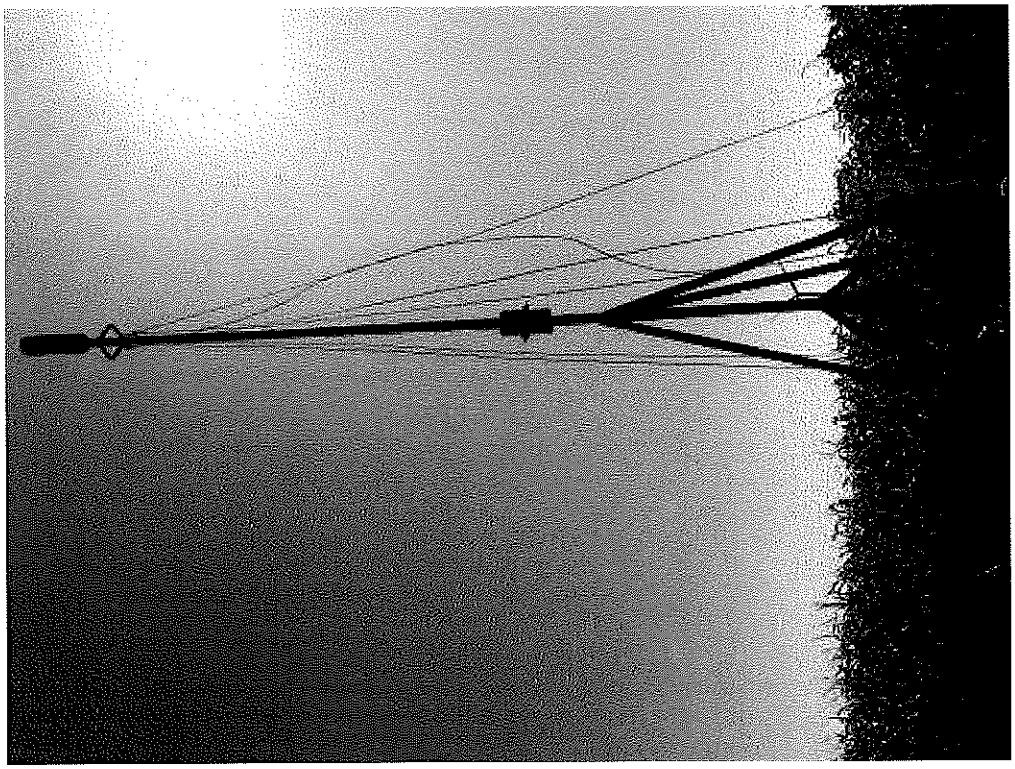

Image 2(Photo 2.) : Photo 2. Reference photo of flare control.

NAME Matthew R. Kuhl DATE 10/30/19 SUPERVISOR C. Hare