

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

N795551161

FACILITY: TUSCOLA ENERGY - NIXON - GARNER RD CPF		SRN / ID: N7955
LOCATION: GARNER RD BETWEEN CASS CITY RD AND M25, 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: MINOR
SUBJECT: Scheduled inspection to determine compliance with PTI No. 97-09A.		
RESOLVED COMPLAINTS:		

On Tuesday (10/8/19) Derek Timmermann (EGLE-OGMD) and I (Matt Karl) conducted a scheduled inspection at the Tuscola Energy Inc. – Nixon-Garner Road Crude Production Facility (CPF) located to the east of Garner Road between Bay City Forestville 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. 97-09A. 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
Nixon 7	Sour Well
Nixon 8	Sour Well
Nixon 9	Sour Well
Nixon 11	Sour Well
Nixon 12	Sour Well
Nixon 10	Sweet 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. 97-09A:

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUTANKNIXON07	Sour oil storage tank. Flare control.	FGOILPRODUCTION
EUTANKNIXON08	Sour oil storage tank. Flare control.	FGOILPRODUCTION
EUTANKNIXON09	Sour oil storage tank. Flare control.	FGOILPRODUCTION
EUTANKNIXON10	Sweet oil storage tank. Sweet gas is used for pilot in flare.	FGOILPRODUCTION
EUTANKNIXON11	Sour oil storage tank. Flare control.	FGOILPRODUCTION
EUTANKNIXON12	Sour oil storage tank. Flare control.	FGOILPRODUCTION
EUSEPNIXON07	Sour oil/gas separator. Flare control.	FGOILPRODUCTION
EUSEPNIXON08	Sour oil/gas separator. Flare control.	FGOILPRODUCTION
EUSEPNIXON09	Sour oil/gas separator. Flare control.	FGOILPRODUCTION
EUSEPNIXON11	Sour oil/gas separator. Flare control.	FGOILPRODUCTION
EUSEPNIXON12	Sour oil/gas separator. Flare control.	FGOILPRODUCTION

The flare control, SVFLARE, is required to be a minimum of 38 feet above the ground.

Site Inspection:

We arrived on site at approximately 1:10 pm. At the time of our inspection, the temperature was ~62°F, the wind was ~6 mph from the east, gusting to ~10 mph; it was sunny, and the skies were clear. The attached reference photo (Photo 1) shows the storage tanks as they appeared at the time of our inspection; the flare control is visible in the background and was operating. There are currently four (4) storage tanks present on site. The southwest storage tank (EUTANKNIXON10), the sweet oil storage tank, is currently not in use and does not have at hatch. Photo 2 shows the separators as they appeared at the time of our inspection. There are currently five (5) separators present on site. We did not note any H₂S gas odor on site, and our personal H₂S meters did not detect any readings. We noted one (1) waste barrel located to the east of the flare control. 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 the waste barrel.

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

Flow Rate	21.5 MSCF/D
Flow Monthly	142.3 MSCF
Flow Today	9.4 MSCF
Flow Yesterday	20.4 MSCF

We departed the facility at approximately 1:45 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 both 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 all operable sour wells pumping – quarterly (This does not include the Nixon 10, which is a sweet well)

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 Dist. Supervisor for approval. The requested monitoring frequency shall be no 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 28.750 MSCF, with an average flow rate of 2.639 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 8.0% H₂S. The requirement for determining the concentration of H₂S in the produced sour gas is either 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. The permittee shall perform the following calculations each calendar month:

- a) Calculate the mass flow rate of H₂S going to the flare for each day using the following:
 - I. The most recent concentration of hydrogen sulfide in the sour gas determined with all operable sour wells pumping (This does not include the Nixon 10, which is a sweet well)
 - II. The daily volume of sour gas going to the flare
 - III. The following equation:

$$(\text{ft}^3 \text{ sour gas/day})(\text{ft}^3 \text{ H}_2\text{S}/100\text{ft}^3 \text{ sour gas})(\#\text{mol H}_2\text{S}/385\text{ft}^3 \text{ H}_2\text{S})(34\# \text{ H}_2\text{S}/\#\text{mol H}_2\text{S}) = \#\text{day H}_2\text{S}$$

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 10/10/19 and was 8.0% 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. The mass flow rate of H₂S that went to the flare each day ranged from 0 to 202.860 lbs./day and averaged 18.550 lbs./day. The maximum mass flow rate of 202.860 lbs./day represents approximately 87% of the SC II.1 limit of 232 lbs./day H₂S.

Summary:

After the scheduled inspection on Tuesday (10/8/19) and subsequent records review it appeared that Tuscola Energy Inc -- Nixon-Garner Rd CPF was in compliance with PTI No. 97-09A.



Image 1(Photo 1.) : Photo 1. Reference photo of storage tanks. Perspective facing east.



Image 2(Photo 2.) ; Photo 2. Reference photo of separator tanks and storage tanks. Perspective facing west.

NAME Matthew R. Koval

DATE 10/30/19

SUPERVISOR C. Hall