

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

N092430849

FACILITY: MUSKEGON DEVELOPMENT--HEADQUARTERS--Sour Zone CPF		SRN / ID: N0924
LOCATION: SE SE Section 29, T21N, R3W, HOUGHTON LAKE		DISTRICT: Gaylord
CITY: HOUGHTON LAKE		COUNTY: ROSCOMMON
CONTACT: Mike Mesbergen ,		ACTIVITY DATE: 08/31/2015
STAFF: Gloria Torello	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: 2015 FCE		
RESOLVED COMPLAINTS:		

**SRN N0924 Name: Muskegon Development**

This is a sour gas facility. **REMINDER:** calibrate H2S monitor and wear monitor while onsite.

**Directions.** Take I-127 south to M-55 East. Turn south on Reserve Road to facility. There's an Arby's just north of M-55 at the Reserve Road intersection. Head south on Reserve Rd for about 8.5 miles. Muskegon's pipe yard (look for the old single wide trailer) will be on the east (left) side of Reserve Road near the 8.5 ish mile mark. Continue south on Reserve Road about 0.25-0.5 miles further. The main road will angle east (left) there, but stay straight on the smaller two track for another 0.25-0.5 miles. The facility will be visible on the east (left) side. Map:

<https://www.google.com/maps/dir/44.2985422,-84.7123132/44.1787257,-84.6965732/@44.2375303,-84.652068,19676m/data=!3m1!1e3!4m2!4m1!3e0>

**Facility.** The facility includes one flare for burning H2S in the sour gas and converting the H2S to SO2, one line heater, and three storage tanks. The facility collects a mixture of gas, crude oil, condensate, and brine, via flow lines, from oil wells in the area. An inline heater-treater is used to heat the mixture and allow the various parts of the mixture to separate. The crude oil, condensate, and brine are then stored in tanks on site. Crude oil and condensate are trucked away. The brine is reinjected into deep rock formations via a disposal well.

**Permit.** On June 25, 2014 the AQD issued MI-ROP-N0924. The ROP expires on June 25, 2019. An administratively complete ROP renewal application is due to AQD between December 26, 2017 and December 26, 2018.

**MAP.** On September 1, 2010 the AQD approved the malfunction abatement plan (MAP). The MAP includes the flare. The permittee provided records showing the daily observations of the flare.

**MAERS 2014** included 16.6 tons of SO2. The ROP limits SO2 in pounds per hour based on a 24-hour average. Monthly reporting to AQD demonstrates compliance with the limit in pounds per hour based on a 24-hour average.

**Records.**

The permittee consistently submits to AQD the monthly reporting demonstrating compliance with the limit in pounds per hour based on a 24-hour average.

The permittee submitted to AQD the daily/monthly record for May and June 2015, which includes a record of the monthly dragger tube reading.

**MACTS.** The facility is not subject to any MACT.

**MACES:** Facility Information and Regulatory Information were reviewed, no change was made.

**Brochure:** The inspection brochure will be forwarded to the permittee with the site inspection notes via email.

**Compliance.** A review of AQD files, and MACES report generator from January 2000 to present, show no outstanding violation. There are two active consent decrees (CD): 4-2009, and 10-2013.

CD 4-2009 alleged the permittee installed an unpermitted scrubber system for the heater treater fuel gas which allowed it to use unpermitted fuel at the facility in violation of R201; failed to fuel the flare pilots with sweet gas or propane, and failed to report deviations from the ROP.

CD 10-2013 alleged the permittee failed to timely submit an administratively complete ROP application. The existing ROP was issued June 25, 2014.

Per conversation with Mike Messbergan on 8/28/15, Mike intends to submit paperwork to terminate the CDs.

**Inspection.** During the site visit on August 31, 2015, it was mostly sunny with light cloud cover with temps in the 70s Fahrenheit. There was a light wind, 5-10 mph, that was predominantly from the west. The wind was just strong enough to lift the on-site wind sock. Torello/AQD staff observed the facility.

**Flare.** The flare was lit, the color of flame was orange. There were intermittent visible emissions in the 15-20 percent opacity range. Torello took a six minute VE reading and found an average VE reading of 10.6 percent. There is a chain-link fence around the flare. The gate on the flare fence is open. On the fence are danger/poison signs.

**Tanks.** There are three tanks in a lined retaining area. In the ROP staff report, EUTANKBATTERY consists of two 400-barrel stock tanks used for storage of oil and brine and are exempt under Rule 212(4). When the ROP is renewed, either in the staff report or in the technical review document, it is recommended to comment on size and exempt status of the third tank. There is no fence around the tanks. The tanks have a load out area. Torello did not observe truck loading, however there appears to be pipe hook-ups for vapor recovery. There are danger/poison signs on post around the tanks. There is an above ground pipe from the tanks to the flare.

**Heater Treater.** The heater treater is in an unlined berm area. There is a fence around the heater treater consisting of two strands of wire on posts. On the east side of the heater treater the top strand of wire is down. There is a gate on the heater treater fence

consisting of two fence doors, one door is lying on the ground. There are danger/poison signs around the heater treater.

LP Tank. There is an LP tank in near the heater treater. A review of AQD field notes from past years indicates gas in the LP tank is used to fuel the flare.

There are distinct and definite petroleum odors associated with the facility. There was a stain on the sand in an area measuring approximately 5 feet wide by 20 feet long of what visually appeared to be oil and rusty metal. There were deer and bird tracks in the sand around the facility. There is not a fence around the entire facility. The facility is showing signs of age including: rusting pipes, faded danger/poison signs, rusty chain link fence, miscellaneous wires that are cut off and sticking out of the ground, rusty steps leading to the top of the tanks.

Permit Conditions:

#### **EUFLARESYSTEM**

1.1 and VI.3 Sulfur Dioxide Limit of 28.78 pounds per hour, based on 24-hour average: Sulfur Dioxide is calculated and submitted on a monthly basis. Records are reviewed monthly by AQD Staff and indicate compliance with this limit.

III.1 There is a propane pig located onsite which fuels the flare.

III.3 & 4 Facility shall notify wells in use and OGS permit numbers: A review of the file shows no new wells added.

III.6 The tanks have a vapor recovery system for load out.

IV.1 AQD staff observed the tank piping leading to the flare.

IV.2 and VI.1 Volumetric flow rate of gas to the flare is metered and submitted to AQD on monthly basis.

V.2 and VI.2 The hydrogen sulfide concentration of gas burned in the flare is determined with a dragger tube and recorded on the Daily Checklist for Month of \_\_\_.

VII. 2 and VII.3 Semi and annual reports are submitted on time, any deviation would be addressed during AQD staff's review.

VII.4 Volumetric flow rate of sour gas, and daily mass flow rate of hydrogen sulfide and daily sulfuric dioxide emissions records are provided on monthly basis to AQD, and reviewed each month.

VIII.1 By visual assessment, the flare stack meets the minimum stack height of 50 feet and maximum diameter of 4 inches.

IX.1 The permittee has fencing/signs to prevent unauthorized entry to plant, both are showing signs of age and the fences need some maintenance.

**Conclusions.**

**AQD will communicate with the permittee on these follow-up items:**

- **The gate on the flare fence is open. To limit access, the fence needs to be kept closed.**
- **The gate on the heater treater fence consisting of two fence doors, one door is laying on the ground. The gate needs to be repaired and kept closed.**
- **On the east side of the heater treater the top strand of wire is down and needs maintenance.**

**When the ROP is renewed, either in the staff report or in the technical review document, it is recommended to comment on size and exempt status of the third tank.**

**Via onsite inspection, review of records, and in consideration of the follow-up items, the permittee demonstrates compliance with the conditions of the ROP.**

NAME Gloria Inello DATE 8-31-15 SUPERVISOR 