

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

B649729022

FACILITY: JAGUAR ENERGY - OTSEGO LAKE 27 GAS PLANT		SRN / ID: B6497
LOCATION: 27 E MARLETTE RD, WATERS		DISTRICT: Gaylord
CITY: WATERS		COUNTY: OTSEGO
CONTACT: John Ward		ACTIVITY DATE: 04/02/2015
STAFF: Gloria Torello	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: FCE 2015		
RESOLVED COMPLAINTS:		

**B6497 Jaguar Energy (formerly Sour Gas Ventures)**

**Directions.** The facility is located in Waters, Otsego County. From I-75, take exit 270, turn east on Marlette Road, travel about 5 minutes, the facility is on the left down a 2-track.

**Description.** The Otsego Lake 27 Gas Plant is a sour gas sweetening facility-there is H<sub>2</sub>S in the gas. There are two Antrim wells and one Niagaran well that feed into this facility. The facility consists of one inline heater, one amine reboiler, one glycol dehydrator, one natural gas fired compressor engine, one condensate storage tank, and one flare. The sweetened gas is compressed and sent to the sales line. The condensate is stored on site in the 18,000 gallon condensate storage tank (bullet tank) and later trucked off site for sale. The H<sub>2</sub>S from the gas is sent to the flare and burned and converted to SO<sub>2</sub>. At one time the facility fractionated natural gas liquids, but the facility no longer is operational to fractionate.

**Permit.** On March 6, 2013 the AQD issued permit MI-ROP-B6497-2013. ROP expires on March 6, 2018. An administratively complete ROP renewal application is due to AQD between September 6, 2016 and September 6, 2017.

**Malfunction Abatement Plan (MAP).** The ROP has a condition requiring a MAP. On August 23, 2012, the AQD approved the MAP. The MAP needs to be updated because the contact person referenced in the MAP no longer works for the permittee. Also, on 8/28/15 Torello/AQD spoke with John Ward, Jaguar, 231-342-8789, and requested records per the MAP. John said he does not specifically keep records per the MAP. John keeps records in a log. On 9/2/15 Torello is meeting John Ward on site to review the log. There needs to be resolution between record keeping as described in the MAP and how the permittee keeps the records.

**MAERS 2014.**

- **Source Totals**
  - CO 0.6 ton
  - NO<sub>x</sub> 1.3 ton
  - SO<sub>2</sub> 13.4 tons
  - VOC 0.6 ton
- **EUENGINE**
  - Natural gas throughput was 1 MMCF.
  - NO<sub>x</sub> and CO used "Emission Basis Other" but did not provide an attachment.
    - 0.5 ton NO<sub>x</sub>
    - 0.4 ton SO<sub>2</sub>
- **EUSWEETENING-Amine Sweetening Unit**
  - Hydrogen Sulfide throughput was 7.15 tons.
    - 13.4 tons SO<sub>2</sub>
- **EUSWEETENING-Reboilers, Heaters, Pilots**
  - Natural gas throughput was 11 MMCF

- 0.7 ton NOx
- 0.2 ton SO2

Records. In January 2015 Torello requested records from John Ward. Responses to the requests were made, no record of the daily visible emissions readings was provided.

The permittee is very consist is submitting the EUSWEETENING required monthly report to AQD showing the mass flow rate of H2S emissions going to the waste gas flare and SO2 emissions.

MACTS. This is an area source (minor for HAPs). The engines are subject to 40 CFR Part 63 Subpart ZZZZ. The glycol dehydrator is subject to 40 CFR Part 63 Subpart HH . The EPA has not delegated these Subparts to MI AQD and the Subparts were not reviewed.

MACES. Facility Information and Regulatory Information were reviewed, and no updated 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, show no outstanding violation.

Inspection. During the site visit on 4/2/15, AQD staff met Bryan VanBrocklin of Jaguar Energy. Bryan had a personal H2S monitor, and showed AQD staff around the facility. The facility was operating. Torello viewed the stacks on the flare, compressor engine, and glycol burner and no visible emissions were noted. Per Bryan, the chart with flow into the building needed calibration.

The compressor engine stack exits the building through the wall of the building and on the ground outside the building the soil had oil-like coating from the compressor stack *spitting*. Bryan said these soils were going to be cleaned up and disposed of properly. Bryan said spring cleaning was getting started.

There is an H2S alarm system in the building.

There was a fence in place.

Two iron sponges are being installed on cement pad. They will be started this year.

On 8/25/15 Torello spoke with John Ward, B6497. The iron sponges are not yet operating. The media will be in place in the near future. With the iron sponges operational, the plan is to run more product from the Niagaran/sour gas well through the process. This may increase emissions. The iron sponges will clean the gas after the gas leaves the plant and just before the gas is sent to the sales line.

Permit Conditions:

Source-Wide Conditions

There is an AQD approved MAP, but the permittee is not keep records using the MAP sheets.

EUSWEETENING

The SO2 is calculated and recorded in pph on a 24-hour average. Monthly records to the AQD demonstrate the actual emissions are below the permitted SO2 limit. The permittee is very consist in submitting the monthly report to AQD showing the mass flow rate of H2S emissions going to the waste gas flare and SO2 emissions. Volumetric flow rate of gas entering the plant are shown on the monthly SO2 emission reports. Using Dragger Tubes, once a month the permittee determines the hydrogen sulfide concentration of the gas and these values are shown on the monthly reports sent to AQD. The SO2 emissions calculation in pounds per hour based upon a 24-hour average are shown on the monthly SO2 emission reports.

EUDEHY

The EUDEHY operates with the dehydrator vented to the flare. Regarding 40 CFR 63.764(e)(1)(i), the volume data on the monthly SO2 emission reports shows the flow of natural gas to the dehy is less than

85000 cubic meters/day.

**EUENGINE**

This is an area source (minor for HAPs). The engines are subject to 40 CFR Part 63 Subpart ZZZZ. The EPA has not delegated the Subpart to MI AQD and the Subpart was not reviewed.

**EUTANK**

A vapor return system is in place for truck load out. The tank vents to the flare.

**Conclusions.**

The MAP needs to be updated, for example to reference the correct contact person. There needs to be resolution between record keeping as described in the MAP and how the permittee keeps the records.

With the MAP issue resolved, at this time it is determined the permittee is in compliance with the conditions of permit the permit.

NAME *Genia Janello*      DATE *8-28-15*      SUPERVISOR *[Signature]*

