

P0544
MAWILA

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

P054435646

FACILITY: WEST BAY EXPLORATION COMPANY-LIVONIA 6 CTB		SRN / ID: P0544
LOCATION: 39020 Seven Mile Road, LIVONIA		DISTRICT: Detroit
CITY: LIVONIA		COUNTY: WAYNE
CONTACT: Tim Baker, Vice President		ACTIVITY DATE: 07/20/2016
STAFF: Jill Zimmerman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Syn Minor Opt Out
SUBJECT: Target Inspection		
RESOLVED COMPLAINTS:		

DATE OF INSPECTION : July 20, 2016
 TIME OF INSPECTION : 9:30 am
 NAICS CODE : 213112
 EPA POLLUTANT CLASS : CO2, NOx
 INSPECTED BY : Jill Zimmerman
 PERSONNEL PRESENT : Tim Baker, VP of Operations / Engineering, Westbay Exploration
 Eric Johnson, Consultant
 Dave Greer, Westbay Exploration
 FACILITY PHONE NUMBER : 231-409-9149
 EMAIL ADDRESS : Tim@Westbayexploration.com
EJohnson@WestshoreConsulting.com

FACILITY BACKGROUND

Westbay Exploration is involved in the oil and gas industry. The facility operates three gas wells, which pulls crude oil from underground. A byproduct from the crude oil extraction is natural gas. The facility purifies the natural gas and sells it to Schoolcraft College, which is located nearby. The facility is unmanned most of the time, with a technician arriving onsite twice a day to inspect all equipment. All monitoring equipment is also able to be reviewed remotely online.

REQUIRED PPE

During the onsite inspection, steel toed shoes, hardhat, and a safety vest were worn.

COMPLAINT/COMPLIANCE HISTORY

No complaints have been received regarding this facility. No violations have been issued for this facility.

PROCESS EQUIPMENT AND CONTROLS

The facility operates three oil wells. These wells pull crude oil from underground. The crude oil is stored in one of four above ground storage tanks. Natural gas is also pulled up from underground. The natural gas is compressed by the reciprocating engine that Westbay rents. The owner of the engine is responsible for all repairs of the engine. The natural gas is either piped to Schoolcraft College to be used as a fuel in their boilers, or is stored in an aboveground storage tank.

INSPECTION NARRATIVE

I arrived at the site at 9:30 am and met with Mr. Eric Johnson. During our introductions, Mr. Tim Baker and Mr. Dave Greer arrived. Mr. Johnson explained that no changes have been made to the process since it was last inspected. Mr. Johnson explained that production in all of the wells is slowing down, and in one of the wells, the production volumes are so low that the facility is determining if it is still economical to operate the well or if the well should be

9/8/2016

capped. During the inspection, the flare was operating properly. There is one small building on site that contains the controls of the process. There is another larger building that houses the caterpillar engine. The raw gas is piped into the engine house where it is compressed before being stored or sent to a customer. There is a flow meter that has been installed on the engine so that the facility can monitor the amount of gas processed daily. There were equipment labels on all of the components in the engine room. Part of the byproducts of the gas processing includes a propane / butane mixture, which can be added to natural gas for a better burn. This mixture is stored onsite in a large white above ground storage tank. Mercaptan is also added to the natural gas, to give the gas the distinctive rotten egg odor associated with natural gas. This odor was present onsite during the inspection. The odor did not appear to travel off site. The Mercaptan added at this site is slightly different than the odorant used by the utilities company so that should there be a leak, it can be determined from where the natural gas is coming.

The facility had used a vapor recovery unit before the compression engine was installed. This equipment is no longer used; through it is still located onsite. The equipment is not connected to any components in the system. The equipment is located inside of the engine room.

Mr. Johnson and Mr. Baker stated that they had been working with USEPA regarding hatch losses in the aboveground storage tanks at a different Michigan facility, located in the Jackson district. They stated that the hatches used at both Michigan facilities are the same hatches used throughout the oil and gas industry throughout the country. I explained that I was unaware of the concerns from USEPA, and that I had not been contacted by USEPA.

APPLICABLE RULES/PERMIT CONDITIONS

Westbay Exploration is currently operating under Opt-Out permit 131-14. The conditions are as follows:

EUENGINE – A natural gas fired reciprocating engine. No pollution control equipment.

- I. Emission Limits:
 1. Compliance – Based on the amount of NO_x reportedly emitted in 2015 through MAERS, the facility emitted about 26.8 tons. This value is less than the permitted limit of 51 tons per year.
 2. Compliance – Based on the amount of CO reportedly emitted in 2015 through MAERS, the facility emitted about 1.97 tons. This value is less than the permitted limit of 4 tons per year.
- II. Material Limits – NA
- III. Process / Operational Restrictions
 1. Compliance – An acceptable PM/ MAP was received on February 4, 2015.
 2. NA – There is no add-on equipment on the engine.
- IV. Design / Equipment Parameters
 1. NA – There are no add-on devices on this equipment.
 2. Compliance – There was a device to monitor the natural gas usage installed on the equipment. During the inspection, there read out screen showed 582 units. The technician records the value as part of his daily checklist.
- V. Testing / Sampling
 1. NA – No stack testing is required at this time.
- VI. Monitoring / Recordkeeping
 1. Compliance – The monthly records are kept off site and available for review at any time. While reviewing MAERS, the facility sent me monthly records for

- January 2015 through February 2016. These records are attached to this report.
2. Compliance – The facility has installed a flowmeter to monitor the natural gas.
 3. Compliance – The facility's technician completes a daily checklist of all the equipment onsite. The facility has an app on employees' devices that can monitor or control the operating parameters at any time.
 4. NA – There are no add-on devices on the equipment.
 5. Compliance – The NOx emission calculations are maintained monthly and on a twelve month rolling average. The records are attached to this report.
 6. Compliance – The CO emission calculations are maintained monthly and on a twelve month rolling average. The records are attached to this report.
- VII. Reporting
1. NA – The engine has not been replaced since it was installed.
- VIII. Stack / Vent Restrictions: Compliance – The stack was installed to the required height and diameter and has not been modified since it was installed.
- IX. Other Requirements
1. Compliance – The natural gas monitoring device has been installed.
 2. Compliance – The stack was installed in 2014 to the required height and diameter. No changes have been made to the stack since it was installed.

There are four green storage tanks on site. These tanks have the capacity to store either crude product or a water brine solution. Typically, three tanks hold crude and the fourth tank holds the brine solution. All four tanks are the same size, 400 barrels which converts to 16,800 gallons. These tanks are exempt from permitting by Rule 284(e) because they are all smaller than 40,000 gallons. There is a fifth tank that is used to store the light gases such as butane. This tank is 10,000 gallons and is exempt from permitted by Rule 284(b). The emissions from the tanks were completed by calculating the potential to emit based on guidelines in subpart W.

The four storage tanks are piped together. There is a thief hatch on each of these tanks with a pressure relief of 8 ounces. When the pressure is high enough to open the hatch, the gas from these store tanks is piped to a flare onsite. This flare is exempt from permitting by Rule 288 (ii)(c). The facility only works with sweet gas.

MAERS REPORT REVIEW

The MAERS was received on February 2, 2016 on time. I asked the company for clarification on how the NOx and CO emissions were calculated. These pollutants were calculated using emission factors from the equipment specs sheet, and were detailed in an email. All emissions appear to have been reported accurately.

FINAL COMPLIANCE DETERMINATION

Westbay Exploration appears to be operating in compliance with all state and federal regulations.

NAME Jill Zimmerman DATE 9/8/16 SUPERVISOR JK