

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: On-site Inspection**

P056859655

<b>FACILITY:</b> COBRA Summerfield Booster		<b>SRN / ID:</b> P0568
<b>LOCATION:</b> T20N R6W, SE 1/4 of SE 1/4 of section 12, HARRISON		<b>DISTRICT:</b> Bay City
<b>CITY:</b> HARRISON		<b>COUNTY:</b> CLARE
<b>CONTACT:</b> Sam Matthews ,		<b>ACTIVITY DATE:</b> 08/24/2021
<b>STAFF:</b> Nathanael Gentle	<b>COMPLIANCE STATUS:</b> Non Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> Scheduled on-site inspection		
<b>RESOLVED COMPLAINTS:</b>		

On August 24, 2021, AQD staff conducted a scheduled onsite inspection at the Cobra Oil and Gas Summerfield Booster Facility, SRN P0568. AQD staff were accompanied by Mr. Coty Withorn with the Oil, Gas, and Minerals Division (OGMD). Staff arrived onsite at 10:23 AM and departed at 11:45 AM. The purpose of the 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 (AQD) Administrative Rules; and to and to determine if permitting is needed for any emission units at the facility. EGLE staff were assisted onsite by Cobra Oil and Gas personnel, Mr. Sam Matthews, and Mr. Jim Clark. At the time of inspection, the facility was found to be out of compliance.

### Facility Description and History

The Cobra Oil and Gas Summerfield Booster facility is located at T20N R6W, SE 1/4 of SE 1/4 of Section 12, Harrison, MI. Coordinates for the facility are 44.132469000, -84.973162000. The facility is located on state land. Natural gas is sent to the facility where liquids and other hydrocarbons are removed before the gas is sent to the sales line. The source is a minor source.

An application for a Permit to Install (PTI) for the facility was received by AQD on October 22, 2014. The application was for a TEG dehydration unit. At the time, the facility was owned by Whiting Oil and Gas. The application was voided in December 2014 because the facility would no longer be operating. The facility was purchased by Cobra Oil and Gas. Sometime in 2018 the facility began operating again, according to Cobra Oil and Gas personnel. AQD became aware in 2019 that the facility was operating. AQD staff inquired about the permitting status of equipment at the facility. On December 9, 2019, Cobra Oil and Gas personnel indicated the blow down tank and compressor onsite were exempt, but the onsite dehydrator had not been evaluated and may require a permit. As part of the onsite inspection conducted on August 24, 2021, equipment onsite was reviewed to determine if permitting is needed.

Two gas lines feed into the facility, the Summerfield South and the Winterfield North. Both lines transport sweet gas obtained from the Prairie du Chien (PDC) zone. Gas entering the facility is first passed through a separator in which liquids and hydrocarbons are removed. The gas then travels to a TEG dehydrator where water is removed from the gas. After the dehydrator, the gas is passed through a second separator before it goes to the sales line. Any liquids and hydrocarbons removed by the separators are sent to an onsite storage tank where the materials are stored until they are trucked out and disposed of. Previously a compressor engine was onsite.

The unit is no longer onsite. Personnel said there is enough pressure in the lines, that the compressor engine was no longer needed.

### **Evaluation of Emission Units**

Two separators onsite are used to separate natural gas from liquids and hydrocarbons. The natural gas is sweet gas from the PDC zone. Both separators appear to be exempt from permitting based on R.288(2)(d).

Liquids and hydrocarbons removed from the sweet gas are sent to an onsite storage tank. The tank volume is approximately 80-100 barrels. The tank is enclosed and equipped with a spring-loaded thief hatch and spring-loaded Enardo back pressure valve. The valve will open if vapor pressure in the tank gets too high and close once the pressure is released. Materials stored in the onsite tank battery are trucked out as needed. The storage tank appears to be exempt from permitting based on exemption R.284.

The site operates a TEG dehydration unit with a glycol reboiler. As previously mentioned, natural gas processed at the facility is from the PDC zone. The glycol dehydrator is equipped with a condenser coil on the stack. The coil is a homemade device intended to condense vapors before exiting the stack. Ambient air runs across the coil condensing vapors while steam exits the stack. Personnel said they did not have a means to demonstrate the control efficiency of the coil. The glycol dehydrator does not appear to be exempt from needing a Permit to Install. AQD communicated this while onsite with Cobra Oil and Gas personnel and informed them the facility would be receiving a Violation Notice (VN), for violation of R.201. Explanation of the required response and what needs to be included in the response was provided. Onsite personnel said they would begin looking at their options to correct the violation. A VN was sent to the facility on August 31, 2021.

Material storage tanks were observed at the facility. A storage tank with a volume of approximately 350 gallons is used to store glycol for the glycol dehydrator. A storage tank with a volume of approximately 300-400 gallons is used to store methanol. The methanol is injected into the gas stream prior to sending gas to the sales line. Methanol is used as an inhibitor to reduce the freezing point of water within the gas stream. Both the glycol and methanol storage tanks appear to be exempt from permitting by either R. 284(c) or R.284(i).

Additional equipment was located onsite that is no longer in use. This equipment included two vertical separators. The equipment was not plumbed into the process. Facility personnel reported the equipment was likely used in conjunction with the compressor that was previously located onsite.

Maintenance activities are conducted at the facility on an as needed basis. Examples of maintenance activities conducted include changing pumps and filters associated with the glycol dehydrator, as well as maintaining fluid levels in the process equipment.

Facility personnel reported the facility has not been assessed for potential subjectivity to federal regulations. Federal regulations that may be applicable include NSPS OOOO and NSPS OOOOa. The potential of subjectivity to federal regulations was brought to the attention of Cobra Oil and Gas personnel and it was recommended the site be evaluated for subjectivity.

## Summary

The Cobra Oil and Gas Summerfield Booster facility, SRN P0568, is a natural gas production facility located in Clare County, MI. The facility is a minor source. No active PTIs are associated with the facility, Gas processed onsite comes from two lines, the Summerfield South and the Winterfield North. Both lines transport sweet gas from the PDC zone. Onsite, liquids and hydrocarbons are removed from the gas stream by passing the gas through a separator, a glycol dehydrator, and another separator before the gas is sent to the sales line. Liquids and hydrocarbons removed by the separators are sent to an onsite storage tank for storage until they are later trucked out. A compressor engine was previously onsite. However, the compressor engine has been removed and is no longer an emission unit onsite. As part of the inspection, equipment was assessed to determine if a PTI is needed for any of the emission units. The glycol dehydrator operating onsite appears to require a PTI. A violation notice was sent on August 31, 2021, for violation of R.201. At the time of inspection, the facility was found to be operating out of compliance.

  
NATHANAEL DENTEL

DATE 9/7/2021

SUPERVISOR   
CHRIS HARE