

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

B739442531

FACILITY: BreitBurn Operating LP Rich Field Tank Battery		SRN / ID: B7394
LOCATION: 7259 MOWATT RD, NORTH BRANCH		DISTRICT: Lansing
CITY: NORTH BRANCH		COUNTY: LAPEER
CONTACT: Ken Bodmer , Foreman - Rich Field		ACTIVITY DATE: 11/15/2017
STAFF: Michelle Luplow	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Announced, scheduled inspection to determine compliance with PTI 205-76E.		
RESOLVED COMPLAINTS:		

Inspected by: Michelle Luplow and Shaun Lehman (OGMD)
 Personnel Present: Ken Bodmer, Foreman (kenneth.bodmer@breitburn.com)
 Dwayne Donnelly, Plant Operator

Other personnel: Carolann Knapp, EHS Representative (carolann.knapp@breitburn.com)
 Michael Fairbanks, Regional VP (Michael.fairbanks@breitburn.com)

Purpose

Conduct an announced, scheduled compliance inspection by determining compliance with Breitburn's Permit to Install (PTI) No. 205-76E for a tank battery and associated emergency flare. This facility was inspected in conjunction with Breitburn's sweetening facility on McTaggart Road (B5462). Shaun Lehman from LDO's Oil, Gas and Minerals Division (OGMD) was also present for both inspections.

Facility Background/Regulatory Overview

Breitburn's (formally Quantum Resources') Rich Field Tank Battery is an oil handling facility: pumping oil, water/brine and gas out of the ground and separating these components from each other. The gas is separated from the oil/water mixture and is sent to the B5462 site to be burned off as sour gas in the flare. The oil and water are separated in "heat treaters" located onsite (run at 125°F). Oil is then stored onsite in 2 crude oil tanks. Ken Bodmer explained that the oil gets sold (distributed via the loading racks) and the water and brine from the heat treaters is contained within 2 storage tanks prior to being pumped back into injection wells.

The H2S Emergency Contingency Plan drafted and updated on a yearly basis for the B5462 sweetening plant also applies to this location.

All storage containers (heat treaters, crude oil tanks, and brine tanks) have ventilation piping that are connected to the emergency flare located onsite (via a vapor recovery system), but are also connected to piping that directs the waste gas to the flare located at the McTaggart Road facility (B5462).

Although the permit requires Breitburn to maintain all records required by 40 CFR 60 Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after June 11, 1973, and prior to May 19, 1978, this regulation does not apply to Breitburn. The oil storage tanks were installed in 1979, and store petroleum prior to custody transfer, but per Section 60.110a(b), with each liquid petroleum storage vessel at 126,000 gallons capacity, they are less than the 420,000-gallon regulatory thresholds; therefore, these storage vessels are not affected facilities. Per record review, a modification under permit application number 137-09 to remove NSPS Subpart Ka applicability from PTI 205-76E was submitted, but was then voided per the company's request. There are no records in the district or permit section files that discuss why the company chose not to proceed with having this condition removed. I will contact Breitburn staff with respect to this, and proceed with a discussion of why or why not this condition should be removed from the permit and actions to take to resolve the matter (including again initiating actions to have the condition removed).

There are 2 Ajax 165 hp engines located onsite that were once used for water injection back into the wells. While these are still present onsite and operational, they have not been used since the installation of the electric plunger pump prior to the 2011 inspection. I will work with Breitburn to determine if these engines are subject to any NSPS or NESHAP regulations.

K. Bodmer briefly mentioned that Breitburn was looking into stimulation of the wells to increase gas production. He said this would include replacing the current amine treatment process at the gas sweetening facility.

Currently they have 14 active wells, which includes both shut in wells (those wells that haven't produced in 1 year as they are temporarily abandoned per OGMD definition) and producing wells.

Table 1. Emission Units

Equipment	Description	Permit/Exemption
2 20x6 horizontal heat treaters	1 operating at all times for production; other on standby as a back-up (in instances of malfunction)	Rule 282(2)(b)
3 4x20 vertical heat treaters	2 are in operation, 1 is used for backup (in instances of malfunction). These are "test treaters" to check the oil, water and gas content.	Rule 282(2)(b)
2 Ajax 165 hp engines	Fully operational, but no longer in use. Once used for water injection, but an electric pump	Exempt under Rule 285 (2)(g), but may be subject to federal regulations
1 crude oil load rack		PTI 205-76E
2 crude oil storage tanks	2 3,000-barrel oil tanks	PTI 205-76E
2 brine tanks (100-barrel and 210-barrel capacity)	Used to hold water that was removed from their onsite sweet gas well. This brine solution is used to "kill the well" or stop production from a well by holding in the H2S gas.	PTI 205-76E
1 vapor recovery system	Includes ventilation piping and an emergency flare	PTI 205-76E
1 500-gallon methanol tank	Injected into the gas stream during the winter months to prevent ice from forming in the gas/oil lines	Rule 284(2)(n)

Inspection

At approximately 9:00 a.m. on November 15, 2017, I met with Shaun Lehman of OGMD at one of Breitburn's well operations prior to meeting Ken Bodmer, the facility's foreman, at the tank battery. I provided K. Bodmer with a January 2017 Permit to Install Exemptions Handbook. I had called K. Bodmer the day prior to ensure that he would be onsite for both the tank battery and sweetening plant inspections.

While onsite at the tank battery, there were odors present, but only near the flare and the heat treaters, and at one of the pump jacks we viewed on the oil field. S. Lehman was wearing an H₂S monitor the entire time, which did not indicate any detectable levels of H₂S in the area. The sour gas odors onsite could be considered a level 4 (distinct, definite and objectionable). I did not smell any odors offsite. K. Bodmer said that odors are likely the result of fugitive emissions from work on the wells (regulated under OGMD) or from the loading of crude oil into tanker trucks. There was no loading of tanker trucks during the inspection. K. Bodmer said tanker trucks are typically loaded twice per week, and generally occurs on Tuesday and Thursdays.

K. Bodmer and D. Donnelly record all instances where they receive a complaint. The last complaint was received on 8/8/17. K. Bodmer documented that 2 tankers had been loaded during the time that the complainant had detected odors. Per the Memorandum of Understanding between AQD and OGMD, OGMD has primary responsibility for investigation of odor complaints from well fields, and from oil and gas production facilities such as the tank battery.

H₂S monitors are located throughout the site: in the pump building (for the salt water) and in the header building where the injection lines go underground. K. Bodmer said during the 2014 inspection that the monitors are in these locations rather than around the exterior of the plant because they are considered confined spaces. I did not enter these locations.

PTI No. 205-76E: tank battery and emergency flare

Special condition 10 requires that opacity not exceed a 6-minute average of 20% opacity. There were no signs of opacity during the inspection. The pilot flame on the emergency flare was operating during the inspection.

Special condition 11 requires that all storage tanks be vented to a vapor recovery unit (VRU). As stated earlier in this report, all storage containers (heat treaters, crude oil tanks, and brine tanks) have ventilation piping that are connected to the emergency flare located onsite, but are also connected to piping that directs the waste gas to the flare located at the McTaggart Road facility (B5462). K. Bodmer said that all vapors collected from these tanks are pushed to the sweetening plant during normal operations. He explained that when the pressure from crude oil tanks is detected at 3.2 ounces, the VRU automatically kicks on, sending gas to the sweetening plant until the pressure is back down to 2 ounces, before shutting off. In the event that power is lost (i.e. that Breitburn does not have power to operate the VRU) K. Bodmer said the fields are shut in: the valve for the battery is shut and each well is manually shut in). In the event that the VRU fails to kick on at a maximum pressure of 4 ounces, the system notifies the operators to ensure that VRU operation is returned to normal operating conditions.

Special condition 12 requires that Breitburn maintain records required by the NSPS Subpart K (specifically, Ka); however, as discussed previously in this report, Breitburn does not have any facilities subject to Subpart Ka.

Special condition 13 requires that all source operating data and records of the number of times the emergency flare is used be kept on file and made available upon request. K. Bodmer allowed me to leaf through his maintenance and flare records logbook. He said that they haven't sent gas to the flare in quite a while and I verified, via the logbook, that gas was not sent to the flare since 2006, where they only flared once the entire year.

Special condition 14 requires that the pilot flame on the emergency flare be continuously burning. While onsite, I verified that the pilot flame was burning. Sweet natural gas that is either purchased for use, or from Breitburn's Berea formation active gas well is used to fuel this flare.

Special condition 15 requires that the flare not be operating more than 6.5 hours per day nor 323 hours per year for emergency conditions. Because the emergency flare has not been used since 2006, Breitburn is in compliance with this condition

Breitburn Tank Battery is currently in compliance with PTI 205-76E at this time.

NAME Michael Lopez DATE 12/1/17 SUPERVISOR B. M.

