

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

B709329953

FACILITY: Aztec Producing Company, Inc.		SRN / ID: B7093
LOCATION: 335 Washington St., MANISTEE		DISTRICT: Cadillac
CITY: MANISTEE		COUNTY: MANISTEE
CONTACT: John Ward, Plant Superintendent		ACTIVITY DATE: 06/17/2015
STAFF: Caryn Owens	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection & Records Review		
RESOLVED COMPLAINTS:		

On Wednesday, June 17, 2015, Caryn Owens, Michelle Rogers, Mark Mitchell, and Mary Ann Dolehanty of the DEQ-AQD conducted a scheduled onsite inspection of the Aztec Producing Company (Aztec) located at 335 North Washington Street in Manistee, Michigan (SRN No. B7093). DEQ met with Mr. John Ward, the Plant Superintendent, to tour the site. DEQ forgot to hand Mr. Ward an inspection brochure, but an Inspection Brochure will be emailed with this inspection report. The inspection and records review were to determine compliance with permit MI-ROP-B7093-2014. The facility is an area source in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (40 CFR, Part 63, Subpart ZZZZ (RICE MACT)) and NESHAP from Oil and Natural Gas Production facilities (40 CFR Part 63, Subpart HH), which the DEQ does not have delegated authority. Therefore, the RICE MACT and NESHAP from Oil and Natural Gas Production Facilities were not addressed in this report. Additionally, the facility would be subject to 40 CFR, Part 60, Subpart KKK, Subpart Kb, and Subpart LLL, but the facility commenced construction prior to the effective dates of the regulations and has not been modified. The above ground storage tanks at the facility are not subject to 40 CFR Part 60 Subpart Kb because they were used prior to ownership of the Property.

The site consists of two main buildings and some additional out buildings for storage and a vapor recovery unit. The main building in the central portion of the site consists of separation equipment, a couple heater treaters, and amine process equipment. The other main building on the southwest portion of the site consists of a 3-stage compressor engine, a compressor used for the refrigeration process, and a glycol dehydrator. The compressor engine used for the refrigeration process was not in use at the time of the inspection. Three flares were onsite as back-up emergency flares, and six above ground storage tanks (approximately 400 barrel). Only three of the above ground storage tanks were in operation. The process equipment and above ground storage tanks are connected to a vapor recovery unit and, if needed, a back-up emergency flare. Natural gas, brine, condensate and oil flow to the central processing facility (CPF) either by onsite wells or off site wells that enter the site via pipeline for processing and sales. The processes at the site consist of the gas wells coming into the site and flowing through separators where the gas, brine water, and crude oil are separated from the gas stream. The water and crude oil are separated and sent to the above ground storage tanks in the tank battery area, and the natural gas is sent to the compressor for the first stage of compression. The natural gas then goes through the amine process to sweeten the gas, and is sent back to the compressor, where it would typically go through thru the refrigeration process where the natural gas liquids (NGLs) are separated out (but this process was not occurring at the time of the inspection due to economic purposes), then the gas is compressed again and sent to the sales line. A glycol dehydrator is used to remove the water from the natural gas stream prior to refrigeration process.

During the field inspection the weather conditions were mostly sunny, approximately 75 degrees Fahrenheit and calm winds out of the north-northwest at approximately 10 miles per hour (mph). The orange flag at the top of one of the above ground storage tanks in the tank

battery area was blowing in the south direction. At the time of the inspection the 3-stage compressor, a 215 horsepower (hp) rich burn CAT 3406 NA engine, engine block labeled NGCS8, was operating at approximately at 1,061 revolutions per minute (RPM), 60 pounds per square inch (psi), and approximately 220 degrees Fahrenheit. During the field inspection, the power went out at the facility, and the production processes were routed to the emergency flare. Visible emissions of slight grayish smoke were observed during the inspection on the SVFLARESTACK ranging approximately 10 to 15 percent opacity. A greyish smoke ranging between 10 to 15 percent was observed from the SVSO2STACK. The visible emissions from SVFLARESTACK lasted approximately 10 to 15 minutes, and the visible emissions from SVSO2STACK lasted less than 5 minutes. By the end of the inspection, the visible emissions were no longer present on the SVFLARESTACK and SVSO2STACK. No emissions or flames were observed from the emergency flare connected to the glycol dehydrator. Mr. Ward stated that all three of the emergency flares at the site contain continuously burning pilots lit by sweet natural gas. Slight petroleum odors were present throughout the inspection, but not considered a nuisance.

Compliance Evaluation

EUDEHY: EUDEHY underlying applicable requirements are based off 40 CFR, Part 63, Subpart HH requirements. The site is an area source and the State of Michigan has not been given delegated authority of 40 CFR, Part 63, Subpart HH for area sources. Therefore, a compliance analysis of EUDEHY was not conducted at this time.

FGSOURGASPLANT: FGSOURGASPLANT includes the natural gas sweetening process (amine process), refrigeration process of the NGLs, glycol dehydrator, and above ground storage tanks. The emission units include EUSWEETENING, EUTANK01, EUTANK02, EUTANK03, EUBULLET01, EUBULLET02, EUDEHY, and EUNGLPLANT, and uses a vapor recovery unit, reboiler fire tube (SVSO2STACK), emergency bypass flare (SVFLARESTACK), and glycol dehydrator flare for pollution control measures.

Emission Limits:

I.1: Sulfur dioxide (SO₂) is permitted to 1,350 pounds (lbs) per day based on a 24-hour average. According to the records reviewed, SO₂ was reported between 0 to 226 lbs per day based on a 24-hr average. The SO₂ emissions were within the permitted limits.

Material Limits:

II Not applicable for FGSOURGASPLANT.

Process/Operational Restrictions:

III.1: The acid gas stream is sent to the amine reboiler to be combusted, and in case of an emergency, the acid gas is sent to the emergency bypass flare.

III.2: Alarms are located at each flare in case the pilot light is extinguished. The plant would be shut down if the bypass flare could not be restarted within one hour of operation.

III.3: As stated above, FGSOURGASPLANT is connected to a vapor recovery unit, a reboiler fire tube (SVSO2STACK), and/or the emergency bypass flare (SVFLARESTACK).

III.4: As stated previously, a vapor recovery unit is connected to the above ground storage tanks containing brine water and sour crude oil. If the vapor recovery unit is down, the recovery unit vents to the emergency bypass flare.

III.5 & 6: All inflowing streams to FGSOURGASPLANT shall be shut off if the concentration of hydrogen sulfide (H₂S) in the building is greater than 20 parts per million (ppm). A warning goes off if the concentration is at 10 ppm of H₂S, and then if the concentration of H₂S goes above 20 ppm, the facility will shut-in. Operation of FGSOURGASPLANT may be resumed only after successful corrective measures have been applied. This is more stringent than the ROP limits that state that all the inflowing streams to FGSOURGASPLANT shall be shut off if the concentration of H₂S in the building is greater than 100ppm, and a visual alarm to indicate when the H₂S concentration is greater than 50 ppm.

Design/Equipment Parameters:

IV.1: A device is located inside the main processing building, located in the central portion of the site, which monitors the amount of gas produced on a daily basis.

IV.2: An H₂S system is installed inside the buildings to monitor the concentration of H₂S inside the buildings. As mentioned above, a visual alarm will go off if the concentration inside the building is greater than 10ppm of H₂S.

Testing Sampling:

V.1: The facility has a log book that records abnormal conditions. DEQ reviewed the log books during the field inspection, and it appears that any abnormal conditions and/or malfunctions are taken care of in a timely manner.

Monitoring/ Recordkeeping:

VI.1: Based on the records reviewed, the mass flow rate of H₂S going into the sweetening process was between 0 and 120 lbs per day. The H₂S concentration was between 1,000 and 2,000 parts per million.

VI.2: Aztec calculates and records SO₂ emissions on a pound per day, based on a 24-hour average, in an acceptable manner. The emissions are reported above.

VI.3: The Company monitors and records the amount of gas produced on a daily basis. The amount of gas processed on a daily basis ranged between 0 and 777 thousand cubic feet per day (mcf/d).

VI.4: The facility continuously monitors the concentration of H₂S in the amine process building and compressor engines building.

VI.5: No deviations were reported to the DEQ from May 2014 through May 2015. As previously stated, the facility has a log book that records onsite conditions. DEQ reviewed the log books during the field inspection, and it appears that any abnormal conditions are taken care of in a timely manner. DEQ received no complaints about the facility within this past year.

Reporting:

VII.1-4: Monthly, Semi-annual, and annual reporting for ROP certification were submitted to the DEQ in a timely manner. No deviations were reported from May 2014 through May 2015.

STACK/VENT RESTRICTIONS

VIII.1 & 2: The emergency bypass flare (SVFLARESTACK) is required to be 75 feet tall and the SO₂ reboiler fire tube stack (SVSO2STACK) is supposed to be 150 feet tall and no more than 12 inches in diameter. SVFLARESTACK and SVSO2STACK appear to be of the appropriate dimensions.

OTHER REQUIREMENTS

IX.1: The facility has fencing and signage to keep unauthorized people out of the plant.

FGRICEMACTZZZZ: FGRICEMACTZZZZ underlying applicable requirements are based off 40 CFR, Part 63, Subpart ZZZZ requirements. The site is an area source and the State of Michigan has not been given delegated authority of 40 CFR, Part 63, Subpart ZZZZ for area sources. Therefore, a compliance analysis of FGRICEMACTZZZZ was not conducted at this time.

Evaluation Summary

The activities covered during this full compliance evaluation (FCE) appear to be in compliance with the MI-ROP-B7093-2014. Review of the records for the facility indicates the facility was in compliance with emission limits in accordance to the current ROP. No further actions are necessary at this time.

NAME

Camp Owens

DATE

6/17/15

SUPERVISOR

[Signature]