

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

P001641019

FACILITY: RIVERSIDE - FLINT NAPPERS CPF		SRN / ID: P0016
LOCATION: Flint Nappers CPF, ALPENA		DISTRICT: Gaylord
CITY: ALPENA		COUNTY: ALPENA
CONTACT:		ACTIVITY DATE: 08/04/2017
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled site inspection for synthetic minor targeted for the 2017 fiscal year inspections.		
RESOLVED COMPLAINTS:		

On August 4, 2017, AQD District Staff performed a scheduled site inspection at the Riverside Energy Partners LLC (Riverside), Flint Nappers CPF, located at 5464 Prevo Road, Wilson Township, Alpena County, Michigan. SRN No. P0016. The facility is permitted under Permit to Install No. 285-09 issued on January 4, 2010. The purpose of the site inspection was to confirm operation of the facility in compliance with the referenced permit. No previous compliance inspection is of record for the facility.

Mr. Rich Ostrander of Riverside met Staff onsite and answered questions with respect to equipment and facility operations. Ms. Natalie Schrader of Riverside provided records for review upon request and in a timely manner.

FACILITY

The referenced facility is located in the NE ¼ of the SW ¼ of Section 14, T30N, R6E, Wilson Township, Michigan. Access to the facility is located approximately south of the intersection of Prevo Rd and Nappers Rd. The access road is the first on the west side of the road and is gated and locked before you get to the station. Adjacent properties consist of predominantly agricultural property, though there are some smaller parcels of wooded property. The referenced facility was permitted by Atlas Gas and Oil Company LLC, who effective April 19, 2011 became Chevron Michigan, LLC. On April 29, 2016, the company became Riverside.

Activities at the facility include separation of H₂O from the stream using a dehydrator prior to compressing the gas for the pipeline. No crude or condensate is generated onsite. Water separated from the gas stream is containerized in brine tanks onsite before being pumped for disposal. The gas stream associated with the facility is reported to be from Antrim Formation wells.

REGULATORY APPLICABILITY

Though not identified in the permit for the facility, the facility as an area source may be subject to federal Regulation. Subparts frequently associated with oil and gas facilities are identified below. Note however, that compliance with these subparts has not been determined as part of this inspection.

The referenced facility does not process or store petroleum liquids, nor store them onsite and is therefore appears to not be subject to 40 CFR Part 60 (New Source Performance Standards AKA NSPS) Subparts;

- K, Ka or Kb (Storage vessels for Petroleum Liquids);
- KKK (Equipment Leaks of VOC from onshore NG Processing Plants);
- VV (Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry);

In addition, the existing engine(s) has an installation date of 2004, which would make them not subject to NSPS Subparts IIII and JJJJ for Compression Ignition (CI) RICE and Spark Ignition (SI) RICE, respectively.

Subpart OOOO would apply to onshore affected facilities that are constructed, modified or reconstructed after August 23, 2011. Based on available information it appears that the referenced subpart is not applicable at this time but that future changes may be subject to the referenced subpart.

With respect to 40 CFR Part 63 (Maximum Achievable Control Technology Standards) the following Subparts may apply:

- Subpart HH (HAPS from Oil and NG Production Facilities)
- Subpart ZZZZ (RICE)

With respect to Subpart HH, the facility's TEG dehydrator is reported to not be subject to the subpart due to the Antrim source (no benzene). The facility also reports maintaining adequate records to demonstrate they are under applicable thresholds. A compliance determination has not been made with respect to this subpart, and at the time of report preparation AQD does not have authority to enforce the subpart.

With respect to Subpart ZZZZ, Initial Notification for Subpart ZZZZ by O.I.L. Energy Corp was received by the District Office on February 16, 2011. The referenced document identified the facility as an area source of HAPS, and a compliance date of October 19, 2013. A determination of compliance under the referenced subpart has not been made as part of this compliance determination.

EQUIPMENT

One building and two brine tanks are present onsite. Equipment onsite includes:

- One Tri-ethylene Glycol (TEG) dehydrator (EUDHY)
- One R-Framed Aeril Corporation, NG compressor with a SI, 1200 rpm, rich burn, caterpillar G399 TA RICE (EUENGINE1)

A review of District files did not contain records of engine change outs; however, it did clarify that the existing Caterpillar engine is an 830 Hp, rich-burn, engine with a 3-way catalyst control with Air Fuel Ratio Control (AFRC). The referenced engine is presently only being operated at 265 Hp, and that is reflected in reporting for the Archrock test report. The compressor/engine is equipped with an auto shut down and alarm for critical malfunctions. The engine is equipped with a muffler and an unobstructed stack that appeared to meet the maximum exhaust diameter of 12-inches and minimum height of 36 feet above ground level (Special Condition (SC) VIII.1).

COMPLIANCE

History –

No complaints are of record for the facility. Annual reporting with respect to emissions were submitted by Riverside for 2016.

Evaluation –

Compliance is being determined with respect to conditions associated with Permit No. 285-09. Permitted emission units are limited to EUDHY and EUENGINE1. No compliance determination has been made with respect to 40 CFR Parts 60 and 63 subparts applicable to the facility.

Process and operations –

At the time of the site inspection, District Staff noted that the site was well maintained; no staining or visible emissions were noted. The compressor was in operation at the time of the inspection. A steam plume was noted from the dehy stacks.

Permit 285-09 requires that no later than 60 days after the issuance of the permit, that a Preventative Maintenance/Malfunction Abatement Plan (PMAP) be submitted to the AQD District Supervisor for review and approval (SC III.1). A review of District Files identified a PMAP submitted by Atlas Energy Resources, LLC dated February 18, 2010 (received March 1, 2010) for the referenced facility. The referenced document was one of 23 approved in AQD correspondence dated July 15, 2010. Based on a January 4, 2010 issuance date, the referenced PMAP was determined to be in compliance with the referenced condition. No previous document existed in the files.

SC III.2 limits operation of EUENGINE1 to no more than 200 hours per engine per year without the add-on control device. Facility staff reported that the engine is not ran without the catalyst. A review of records provided by the facility identified a correlation between compressor downtime and catalytic converter maintenance or emissions testing activities confirming that the compressor is not ran without

the control device in operation. Total downtime for EUENGINE1 for June 2016 through July 2017 was less than 55 hours.

SC IV.1 requires any engine with a control device will only be operated with the control device installed, maintained and operated in a satisfactory manner. The PMAP for the facility identifies various activities to be conducted every 12-18 months and additional maintenance activities to be conducted every 18-24 months, with portable emission analyzer testing to be conducted every 5 years. A review of preventative maintenance schedule in the approved PMAP and maintenance records maintained by Riverside since taking over operations of the facility. Records indicate that the annual maintenance activities were conducted on March 1, 2017, and that catalytic converters operational records are collected once per month since June 20, 2016, and that the operational parameters of temperature and differential pressures were within the parameters of the PMAP. Other activities of record would confirm that the control device is maintained, monitored and operated in compliance with the permit condition.

SC IV.2 requires the permittee to install calibrate, maintain and operate satisfactorily a device to monitor the natural gas usage for EUENGINE1. SC IX.1 requires that the meter be installed within 120-days of issuance of the permit. A fuel gas meter has been installed and the readings recorded daily onsite. However, there is no way to verify the installation date which should have been on or before May 4, 2010.

Emissions –

SC I.1 & 2 limit NOx and CO emissions for EUENGINE1 to 15 and 20 tons/year based on a 12-month rolling average (respectively). Upon request, the permittee provided emissions records for the period of July 2016 through June 2017. Appendix A of 285-09 specifies that to determine NOX or CO emissions For EUENGINE1, the permittee shall use the emission factors from vendor data or from source specific testing. The facility reports using and reporting annually MAERS EF which are higher than vendor data to calculate emission totals. Upon request, the facility calculated total emissions using vendor data to determine NOx and CO emissions. A review of the data indicated that the highest 12-month rolling total for the referenced pollutants were 2.09 tons and 7.63 tons, respectively and well below permit limits.

Engine (EUENGINE1) Emission testing conducted by Archrock on March 15, 2017, reported post control annual emissions of 0.99 ton NOx/yr and 7.30 ton CO/yr and conversions of pollutants by the catalytic converter of 82.4 % or more.

Material Limits –

Under the referenced permit, the facility is restricted from burning sour NG in EUENGINE1 (SC II.1). The permittee reports that periodic testing is conducted to confirm H2S content. Records provided indicate content below detection levels from each of the various wells coming to the facility.

Monitoring & Record Keeping –

SC VI.1 requires the permittee to complete all required calculations in a format acceptable to the AQD District Supervisor and make them available the last day of the calendar month, for the previous month, unless specified otherwise in another permit condition. Records provided by the permittee appear to be in compliance with the referenced permit condition.

Under permit 285-09, the permittee is required to keep monthly fuel use records (SC VI.5) for EUENGINE1. Fuel usage for EUENGINE1 is monitored using a continuous fuel gas meter, recorded daily and the total compiled monthly for use in determining monthly emissions of NOx and CO per Appendix A (SC VI.6 &7), in compliance with permit conditions..

Other recordkeeping under permit No. 285-09 includes the following requirements:

- A log of all maintenance activities conducted according to the PMAP (SC VI.3)
- Monthly and 12-month rolling time periods records of the hours that the engine is operated without control (SC VI.4)

Logs and spreadsheets for maintenance activity, engine down times, catalytic converter maintenance and other activities were provided upon request and appear to be in general compliance with the permit.

MACES- Activity Report

Manual documentation of various readouts at the facility is conducted daily, and is submitted to the corporate office at regular intervals. The above referenced information was provided in a timely manner in compliance with permit conditions. Copies may be found in district files.

With respect to EUDHY, the facility reports no benzene emissions (Antrim formation source) and annual average daily gas flow rates of below 85,000 cm/day in compliance with SC VI.1 and VI.2. the highest annual daily average reported was approximately 7,300 cm/day reported during the month of September 2016.

Testing-

By request of the AQD District Supervisor, stack testing for NOX and CO (SC V.1) and H2S or total sulfur content of the NG stream (SCV.2) may be required. At the time of the inspection, engine testing has not been requested by the AQD District Supervisor, and SC V.1 is not applicable. However, engine testing for NOx and CO are conducted by the facility to meet requirements under the RICE MACT (subpart ZZZZ).

Reporting –

Under Permit 285-09, the permittee is required to notify AQD within 30-days should the engine be replaced and show that the alternate engine is equivalent or lower- emitting than the previous engine (SC VIII.1). No records of an engine change out for the site could be found in district files, there for the condition is not applicable at this time.

Other-

Other requirements of Permit 285-09 not already identified include correction of stack height to a minimum of 36 feet above ground within 120 days of the permit issuance (SC IX.2). A review of the file does not indicate when the corrections of stack heights was completed onsite, but stack heights did appear to be in compliance with the permit condition.

Summary-

On August 4, 2017, AQD District Staff performed a scheduled site inspection at the Riverside Energy Partners LLC (Riverside), Flint Nappers CPF, located at 5464 Prevo Road, Wilson Township, Alpena County, Michigan. SRN No. P0016. The facility is permitted under Permit to Install No. 285-09 issued on January 4, 2010. The purpose of the site inspection was to confirm operation of the facility in compliance with the referenced permit. No previous compliance inspection is of record for the facility.

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Based on the information obtained onsite and via the corporate office the facility appears to be in general compliance with permit conditions.

NAME Sharon Coburn

DATE 8/30/17

SUPERVISOR SN