

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

N615660599

FACILITY: RIVERSIDE - S. CHESTER 1 CPF		SRN / ID: N6156
LOCATION: NE4 NE4 NE4 SEC 1, T29N-R2W, CHESTER TWP		DISTRICT: Gaylord
CITY: CHESTER TWP		COUNTY: OTSEGO
CONTACT: Natalie Schrader , Compliance Coordinator		ACTIVITY DATE: 10/12/2021
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: 2022 FCE compliance evaluation included on-site inspection and data evaluation. sgl		
RESOLVED COMPLAINTS:		

On October 12, 2021, AQD District Staff mobilized to Riverside Energy of Michigan LLC (aka Riverside)– South Chester CPF (N6156), located in NE ¼, NE ¼, NE ¼, Section 1, T29N – R 2W, Chester Township, Otsego County, Michigan to conduct a scheduled compliance inspection of the facility. The referenced facility presently operates under Permit to Install No. 715-96. The most recent site inspection activities were conducted on June 19, 2013. A records request was made electronically on October 8, 2021. Records were provided by Riverside electronically on October 13, 2021.

The most recent site inspection was conducted on October 31, 2017. No compliance issues were reported.

FACILITY

The referenced facility is a gated, un-fenced and unmanned CPF station operated by the Linn Operating LLC (AKA Linn). The referenced facility as historically been operated by Dominion Midwest Energy (effective 1997), High Mount Midwest Energy LLC. The station is reported to service Antrim Formation wells in the area. Activities onsite include separation of gas and brine from the incoming gas stream and compression of the gas in the lines.

The Facility is located just west of the intersection of Gingell road and Bass Lake trail. To reach the facility, District Staff traveled south of the intersection of Gingell Road and M-32 on Gingell road. At the intersection of Gingell Road and Bass Lake trail, make a right onto Bass Lake Trail. Shortly after making the turn watch on the left (south) side of the road, within ¼ mile there is a gate and a sign at the entrance of the drive. Note that the gate is kept locked as the property owner is reported to be very privacy oriented.

Formerly the entrance to the Facility was shared with a former Breitburn facility known as Charlton West located immediately south of the intersection of Gingell Road and Bass Lake Trail.

REGULATORY

Permitting -The referenced facility operates under Permit to Install (PTI) No. 715-96, which was issued in 1996 to the Facility which was operated by Wolverine Environmental Production, Inc. The PTI was issued as an opt-out permit, but not a Rule 201 permit and was issued around the same time as other Michigan Oil and Gas Association (MOGA) permits that did not undergo 201 reviews. The PTI conditions were generic and refer to the stationary source as a whole rather than conditions that address individual pieces of equipment.

At the time of permitting the facility consisted of one Ajax Natural Gas (NG) fired compressor and one glycol dehydration unit with reboiler and was reported to have the potential to emit over 100 tons of NOx. The referenced permit limits the emissions to 89 tons per year for NOx, CO and VOCs.

Though not identified in the permit, the facility 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.

Federal Regulations - 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) have install dates which may make them subject to NSPS Subparts JJJJ for Spark Ignition (SI) RICE, respectively. However, Riverside had indicated that based on the serial numbers, the units are pre- 2006.

Subpart OOOO and OOOOa would apply to onshore affected facilities that are constructed, modified or reconstructed after August 23, 2011 and September 18, 2015, respectively. Riverside has indicated that they have not increased capacity at the Facility and are not subject to OOOOa. 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 affected unit is believed to be the dehy unit. The files contain a January 18, 2016 evaluation of Linn facilities with respect to Antrim gas dehydrators. The document reported that the South Chester Facility have natural gas flows of less than 3 MMcf/day and are exempt from emission control requirements under the subpart. Data provided by Riverside indicated daily average flow rates of for 2020 and 2021 (to date) of 752.04 Mcf/day and 892.04 Mcf/day.

With respect to Subpart ZZZZ, District files contain a copy of an October 18, 2013, renofication submitted by Linn to EPA Region V. The referenced document identifies the facility as an area source of Hazardous Air Pollutants (HAPs), and the existing engine is reported to be remote. This was confirmed by Riverside. At the time of report preparation, AQD has been delegated authority to implement and enforce the subpart. However, at this time compliance determinations for Federal requirements under Subpart ZZZZ for Area Sources have not been made. Riverside has indicated that requirements under the subpart have been incorporated into the MAP for the Facility. Riverside submitted a Malfunction Abatement Plan (MAP) dated August 12, 2020 (received December 1, 2020) and approved the week of November 30, 2020. Compliance with the MAP may indicate compliance with the referenced subpart.

EQUIPMENT

At the time of the October 12, 2021, site visit AQD Staff identified one compressor (no catalytic converter), one glycol dehydrator with reboiler, and one slop tank with lined-secondary containment were present onsite. Each of the referenced pieces of equipment are housed separately. No visible emissions were noted onsite.

A review of District Files and MAERs records indicates the following equipment having been associated with the facility.

EQUIPMENT	DESCRIPTION	INSTALL DATE	DISMANTLE DATE	OTHER
Engine	Ajax	UNK	Post 12/2003	“6/3/89” on permit application
Engine2	Cat 3306 TA	11/20/2004 per MAERs	10/2017	

Inactive as of June 2016, relocated to Linn clear lake facility.

Engine1 Cat 3512 LE 1/13/2006
Unit 4031

Maers had install date of 2006, Company indicated of 4/2000.

Dehydrator DEHYStill -Antrim 6/3/1989 NA
(AKA dehy) 40/15 pump

Compressor Engine, Cat 3512, installed January 13, 2006

Operational parameters documented at the time of the October 12, 2021, site visit included:

- 979 RPMs
- Engine Oil Pressure– 61
- Engine Oil temp - 195 degrees F
- Hours - 114692

The brine generated appears to be disposed of in one disposal well located to the west of the tanks. Chemical storage tanks were noted at several locations, but all appeared to be tidy, labeled and properly maintained.

COMPLIANCE

At the time of the October 12, 2021, site visit, no visible emissions were noted to be coming from onsite stacks, nor were any odors noted. Liquids had collected in the secondary containment of the slop tank, some of which would have been the result of recent rains.

MAERS- Reporting of actual emissions for CO, NOx, VOCs and HAPs is required under special condition 18 of the permit. A review of the most recent MAERS submittal for the facility (received on February 1, 2017 for emissions associated with the calendar year 2016) included emissions for two engines and one glycol dehydrator onsite.

Permit Conditions -Special conditions associated with Permit No. 715-96 are limited to record keeping, reporting and emission limits. Emission limits for the facility are defined in special conditions 13 and 14. These two conditions limit CO, VOC and NOx emissions to 89 tons/year for each referenced parameter as well as individual HAPs to below 9 tons/year and total HAPs to below 22.5 tons/year.

Calculation of actual emissions on a monthly and 12-month rolling total for CO, NOx, VOC and HAPS are required under special condition 15. The PTI specifies that emissions will be determined using emission factors from Appendix A. It should be noted that with the exception of HAPs, which Appendix A does not list for Antrim units.

NOx and CO annual emissions are determined using manufacturer data. Except for NOx, CO and VOC engine emissions were calculated using EPA emission factors. Emission Limits for NOx, CO and VOC are 89 tpy each. Total emissions in tons per year (tpy) reported for the calendar years since the last site inspection were:

CALENDAR YEAR	NOX (tpy)	CO (tpy)	VOC (tpy)	HAPs *(tpy)
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2019	9.04	7.23	2.13	0.01
2020	8.45	6.76	1.70	0.01
October 2021	9.5	7.6	2.2	NR
Limits	89	89	89	9

***Reflects AQD calculated formaldehyde emissions**

Special condition No. 16 and/or 17 require monthly records of:

- Fuel consumption, in million cubic feet (MMcf)
- Crude/condensate throughput to the tank in barrels (bbls)
- Hydrocarbon liquid trucked offsite (bbls), and
- Oil and gas processed onsite

Upon district request and in compliance with permit requirements Riverside provided the applicable requested records. As previously noted the facility does not produce or process liquid hydrocarbons onsite. Fuel consumption and other equipment operational data provided in response to the request indicated consistent operation of the equipment overtime, and with operational data recorded during the October 12, 2021, site visit.

Special condition 19 requires the owner or operator of the source to conduct all necessary maintenance and make all necessary attempt to keep all components of the process equipment in proper working order and maintain a log of significant maintenance activities and all repairs made to the equipment. Per request, the Riverside provided copies of maintenance spreadsheets for the 2020 and 2021 to date. A review of the maintenance scope and dates of activities it appears that general maintenance service requirements are well documented to occur approximately every 90 days, in general compliance with Riverside O&M practices reported to have implemented by the Facility to meet Subpart ZZZZ requirements.

Special condition 20 applies to crude oil or condensate storage tanks greater than or equal to 952 barrels, and the liquid having a true vapor pressure of greater than 1.5 psia. This condition is not applicable as the facility does not store crude or condensate onsite.

Special condition 21 applies to malfunction of a pollution control device and limits bypass of the control device for a period not to exceed 48 hours per event nor a total of 144 hours per calendar year. The facility does not have pollution control devices associated with onsite equipment.

Special condition 22 requires the owner or operator of an oil-gas facility constructed on or after January 20, 1984 to determine if they are subject to Federal standards in 40 CFR, Part 60, Subpart KKK. No hydrocarbon liquids are reported to be produced at the facility, so the facility is reported not to be subject to the referenced Subpart.

Special condition 23 refers to requirements associated with verification stack testing for CO, VOC, NOx or HAP. No request for verification testing was found in District Files, so the condition in not applicable at the time of the report preparation.

Special condition 24 requires the facility to only process sweet gas as defined in Rule 119. Riverside provided copies of hydrogen sulfide dated June 5, 2021. The data reported that the hydrogen sulfide contents of the sample from was below the 1 ppm detection limit. Data provided indicated consistent concentrations of 1ppm, well below permit limits of 1 grain of hydrogen sulfide per 100scf (16.5 ppm).

SUMMARY

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Based on the information reviewed, and observations made the facility appears to be in general compliance with their permit.

NAME _____

DATE _____

SUPERVISOR _____