

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

N615560676

<b>FACILITY:</b> RIVERSIDE - W. ALBERT 11 CPF		<b>SRN / ID:</b> N6155
<b>LOCATION:</b> 5021 County Road 491, ALBERT TWP		<b>DISTRICT:</b> Gaylord
<b>CITY:</b> ALBERT TWP		<b>COUNTY:</b> MONTMORENCY
<b>CONTACT:</b> Natalie Schrader , Compliance Coordinator		<b>ACTIVITY DATE:</b> 10/11/2021
<b>STAFF:</b> Sharon LeBlanc	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> SM OPT OUT
<b>SUBJECT:</b> Onsite inspection and records review as part of FY 2022 FCE for facility. sgl		
<b>RESOLVED COMPLAINTS:</b>		

On October 11, 2021, AQD District Staff mobilized to the Riverside Energy of Michigan LLC (aka Riverside) – West Albert 11 CPF (N6155), located in SW ¼, SW ¼, NE ¼, Section 11, T29N – R 1E, West Albert Township, Lewiston, Montmorency County, Michigan to conduct a scheduled compliance inspection of the facility. The referenced facility presently operates under Permit to Install No. 714-96. A records request was made electronically on October 8, 2021, and the response received on October 20, 2021.

The most recent site inspection activities were conducted on June 6, 2014, and October 24, 2017. No compliance issues were noted in association with the compliance evaluations.

#### FACILITY

The referenced facility is a gated, unmanned CPF station operated by Riverside. The referenced facility as historically been operated by Wolverine Environmental Production Inc. Dominion Midwest Energy (effective 1997), High Mount Midwest Energy LLC and Linn Operating 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 north of the intersection of County Road 491 (CR491) and CR 612, Lewiston, Michigan. To reach the facility, District Staff traveled north on CR 491 for two-miles. Immediately on the east/right hand side of the road there is a gate and a sign at the entrance of the unpaved drive. Take the drive back approximately 1/16<sup>th</sup> of a mile to the site. A vacant house on the right hand (south) side of the drive part way to the site.

At the time of the site inspection, weather conditions were partly cloudy, with temps in the mid-70's.

#### REGULATORY

Permitting -The referenced facility operates under Permit to Install (PTI) No. 714-96, which was issued in 1996 to the Facility which was operated at the time 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 two Ajax Natural Gas (NG) fired, 360 HP compressors and one glycol dehydration unit with reboiler and was reported to have the

potential to emit over 100 tons of NO<sub>x</sub>. The referenced permit limits the emissions to 89 tons per year for NO<sub>x</sub>, 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 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 affected unit is believed to be the dehy unit. Documentation provided by Riverside indicated that for the period of January 2020 thru October 2021, that West Albert 11 Facility has natural gas flows of less than 3 MMcf/day (1.433 MMcf/day) and are exempt from emission control requirements under the subpart

With respect to Subpart ZZZZ, the facility reports that the engines on site are remote and are subject to the referenced subpart. 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. Compliance with the MAP may indicate compliance with the referenced subpart.

## **EQUIPMENT**

At the time of the October 11, 2021, site visit AQD Staff identified one compressor (no catalytic converter), one glycol dehydrator with reboiler, one slop tank and one brine 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 EU-COMP#2	Ajax 360 HP, Low Emission	11/01/1993	12/30/2010	
Engine	Ajax 360 Nat. Asp.	UNK	UNK	“11/92” indicated on application
Engine EUENGINE1 EU-COMP#3 Unit 3797	Cat 3516 TALE SN 4EK00830 1080 Hp No Catalyst	02/15/2002	NA	
Dehydrator (AKA dehy)	DEHYStill -Antrim 40/15 pump	11/21/1992	NA	

October 11, 2021, operating parameters for the EU-COMP#3, Cat 3516 LE, installed February 15, 2002 are summarized below:

- RPM – 1183
- Engine Oil Pressure – 57
- Compressor Oil Temp – 165
- JW Temp Out – 192
- Hours - 64067

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 11, 2021, site visit, with the exception of intermittent steam plumes coming from the dehy, no visible emissions were noted to be coming from onsite stacks. The smell of burning oil, and light smoke coming from engine rebreathers were noted, and the Facility notified. Minor quantities of liquids had collected in the secondary containment of the brine and slop tanks, some of which would have been the result of recent light 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 January 22, 202, for emissions associated with the calendar year 2020) included emissions for one engine (aka EUENGINE1 or EU-COMP#3) and one glycol dehydrator onsite.

Permit Conditions -Special conditions associated with Permit No. 714-96 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 HAPs 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. Total emissions for the Facility in tons per year (tpy) reported for the last two years included:

CALENDAR YEAR	NOX (tpy)	CO (tpy)	VOC (tpy)	HAPs* (tpy)
September 2021**	15.61	13.55	3.50	0.67
2020	14.9	13.41	3.00	0.02
2019	13.28	12.43	2.82	0.02
LIMITS	89	89	89	9

\*Reflects AQD calculated formaldehyde emissions

\*\* Data reflects 12-month rolling total

Data from "Engine Specification Calculation spreadsheets" provided by Riverside reported the following emissions for EU-COMP#3, the principal emission source:

12-month Rolling Time Period Ending	NOX (tpy)	CO (tpy)	VOC (tpy)
September 2021	14.84	13.36	3.56
2020	14.9	13.41	3.01
2019	13.8	12.43	2.78

**Source Wide Limit****89****89****89**

Emissions reported for the glycol dehydrator onsite for the 2020 and 2019 calendar years was reported to be 61.64 lbs per year. Emissions were determined using the MAERS emission factors.

**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 Linn provided the applicable requested records. These records included not only monthly fuel thruput (MMcf/month), but 12-month rolling for each fuel burning EU associated with the site. Compressor fuel for the period of January 2020 to September 2021 ranged from 3786 -4401 Mcf/month. The data is used to determine emissions for the respective EUs.

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 11, 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. On December 1, 2020, Riverside submitted a revised Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) dated August 12, 2020. The revised document was approved in District correspondence issued the week of November 30, 2020. Per request, Riverside provided copies of maintenance reports for the NG compressors and associated engines. A review of maintenance records provided appeared to indicate compliance with the approved PM/MAP. No engine swings were of record.

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. Documentation provided by Riverside indicated that hydrogen sulfide concentrations reported for the Facility are below detection levels at this time (October 19, 2021). Which is consistent with previous concentrations reported for the Facility.

#### SUMMARY

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The most recent site inspection activities were conducted on June 6, 2014, and October 24, 2017. No compliance issues were noted in association with the compliance evaluations.

At the time of the site inspection, weather conditions were partly cloudy, with temps in the mid-70's. Intermittent emissions were noted from the Facilities dehy.

Based on observations at the time of the inspections and records provided, it appears that the Facility is operating in general compliance.

NAME \_\_\_\_\_

DATE \_\_\_\_\_

SUPERVISOR \_\_\_\_\_