

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

N615465403

FACILITY: RIVERSIDE - S. BRILEY 34 CPF		SRN / ID: N6154
LOCATION: NW4 NW4 NW4 T30N R2E SEC 34, BRILEY TWP		DISTRICT: Gaylord
CITY: BRILEY TWP		COUNTY: MONTMORENCY
CONTACT: Natalie Schrader , Compliance Coordinator		ACTIVITY DATE: 10/06/2022
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2023 Onsite inspection and records review for FCE. sgl		
RESOLVED COMPLAINTS:		

On October 6, 2022, AQD District Staff mobilized to the Riverside Energy of Michigan, LLC (AKA Riverside) Briley 34 CPF (N6154), located in the NW 1/4, of NW ¼, of NW ¼ of Section 34, T30 N, R2E, Briley Township, Montmorency County, Michigan to conduct a scheduled compliance inspection of the facility. The referenced facility presently operates under Permit to Install No. 713-96. A records request was made electronically on September 8, 2022. Data requested was received on November 8, 2022.

Previous site inspection activities were conducted on October 29, 2018, June 9, 2017, and June 19, 2013. No compliance issues were identified with respect to the facility for those visits.

FACILITY

The referenced facility is a fenced and unmanned CPF station operated by Riverside and is located in the NW 1/4, of NW ¼, of NW ¼ of Section 34, T30 N, R2E, Briley Township, Montmorency County. At the time of the site inspection the facility gate was open. Activities onsite include separation of gas and brine from the incoming Natural Gas (NG) stream and compression of the gas in the lines to aid in transport. Documentation in the Files from the initial permittee Wolverine Environmental Production Inc. memo dated August 16, 2004, expressed that the facility did not produce any oil.

The company had a name change in January 1997 to Dominion Midwest Energy, Inc. In a 2007 merger, the company became Highmount Midwest Energy LLC. On May 25, 2010, the Company became Linn Energy LLC changing its name later to Riviera Recourses LLC before Riverside took over operations in 2019.

To reach the facility from the intersection of M-32 and M-33 (the light) in Atlanta, Michigan, Staff traveled south on CR 487 just under ¾-mile to the intersection with CR 489. At the intersection of CR 489 and 487 make a right and travel east from the intersection approximately ¼-mile then turn left as CR 489 turns south and travel for approximately 1-mile. Continue to travel along CR 489 as it curves around Crooked Lake. From Crooked Lake, CR 489 (paved) will turn to the right (west) and go approximately 1.5-miles, then turns to the left (south). Travel south on the paved road for one-mile, the pavement ends, and the facility is located on the left-hand side of the road, just after it becomes unpaved.

A review of aerial photos readily available on the internet indicate that the location was an active oil and gas facility as early as 1994. 1992 aerials showed the property as undeveloped. Further development of the site occurred between 1994 and 1998, during which the Facility added three larger buildings to house equipment. Two structures (southern-most and western most building)

were removed leaving only footings and pad prior to 2009. No significant changes were noted in aerials after 2009.

Adjacent properties were identified as being property of State of Michigan and appears to be undeveloped, forested lands. It should be noted that property to the immediate west as well as northwest of the Facility contain a number of private residences and developed parcels.

Weather conditions at the time of the site inspection included overcast skies, and temperatures in the low-60's. No emissions were noted from the compressor stack at the time of the inspection.

REGULATORY

Permitting -The referenced facility operates under Permit to Install (PTI) No. 713-96, which was issued to the Facility on November 14, 1996. 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.

District files indicate that at the time of permitting one CAT 3512 RICE, Two CAT 3515 RICE and one glycol dehydration unit were reported to be onsite and had 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.

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);

With respect to NSPS (40 CFR Part 60) Subpart JJJJ, as applicable Reciprocating Internal Combustion Engines (RICE) were reported to commence construction after June 12, 2006. Recent communications with Riverside staff indicated that both engines have DOB dates of 1996, or that same period and would not be subject to the NSPS Requirements. With regards to the two existing engine(s) it appears that based on install dates of 1993 and 1995 that the existing RICE onsite would not be subject to NSPS Subparts IIII for Compression Ignition (CI) RICE and RICE.

40 CFR Part 60 Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Facilities for which construction, modification, or reconstruction commenced after August 23, 2011, and on or before September 18, 2015. Subpart OOOO as indicated 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 A.K.A. MACT) the following Subparts may apply:

- Subpart HH (HAPS from Oil and NG Production Facilities)
- Subpart JJJJJ (Boiler MACT)
- Subpart ZZZZ (Reciprocating Internal Combustion Engine aka RICE)

With respect to Subpart HH, the affected unit is believed to be the dehy unit. The EU may be exempt from Subpart HH based on either:

- actual annual average NG flow rates of less than 3 million standard cubic feet per day (MMcf/d) or 85,000 cubic meters/day, or
- average benzene emissions of less than 0.9 Mg/yr.

The Facility reports actual annual average NG flow rates of 2605 Mcf/d, well below the threshold. 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.

NESHAP subparts JJJJJ pertain to Industrial, Commercial and Institutional Boilers and Process Heaters for Area source of HAPS, respectively. At the time of the site inspection, it appears that the reboiler of the glycol dehydration process would not be subject to the subpart, as a process heater is not subject for area sources. No compliance determination has been made with reference to the subpart.

With respect to Subpart ZZZZ, District Files contain copies of the October 18, 2013, re-notification for the subpart. The document indicates that engine associated with the Facility are existing (before June 12, 2006) area source of HAPs and subject to the subpart. They also indicated that the >500 HP are not subject to initial subpart testing. AQD has been delegated authority with respect to the subpart, but no compliance determination with reference to the subpart requirements has been made at this time.

A Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) November 30, 2020 (approved on December 3, 2020) was submitted for the Facility, and per discussions with Riverside Staff indicated that the requirements under Subpart ZZZZ were incorporated into the document. Two CAT 3516s were identified in the referenced document.

EQUIPMENT

At the time of the October 6, 2022, site visit AQD Staff identified two compressors with RICE, one glycol dehydrator, one each of slop oil and produced brine tanks within lined-secondary containment.

A review of District Files indicates the following engines associated with the site:

INSTALL DATE	MAERs ENGINE ID	Other ID	TYPE	Dismantle Date	SOURCE
3/3/1995*	NA	Briley #3*	CAT 3512		

		LE-1	s/n 7nj00059	Sept. 2009 moved to Big Bass Lake	Facility Emission Reports
10/14/1993	EU- CAT3516LE#1	EUENGINE1Briley #1*	CAT 3516 LE 1085 Hp	NA	MAERS
	F8826	LE-2	s/n 3rc000703		
	Unit 3959	CM3000	No Catalyst		
	South Briley #1	Unit 3959			
3/03/1995 (4/18/95)	EU- CAT3516LE#2	ENGINE2 Briley #2*	CAT 3516 LE 1085 Hp	NA	MAERS
	F10112 Unit 4042	LE-3	s/n 4ek00275		
	South Briley #2	CM3001 Unit 4042	No Catalyst		

*Note – file records show discrepancy in installation dates with respect to month and day.

No Malfunction Abatement Plan (MAP) is required under the existing permit. However, Riverside submitted a MAP dated November 30, 2020 (received December 1, 2020) which was approved in correspondence dated December 3, 2020. Unlike 2017 and 2018, in which the more significant maintenance activities included a head change for Briley #2 (May 25, 2017) and a frame overhaul for the same unit on August 24, 2017, no significant activities were noted for 2022.

Engine operational data observed as part of the October 6, 2022, site visit appears to be consistent with operational data documented on daily operational logs and spreadsheets. Operational data was also noted to be consistent between those reported in maintenance records and the company’s operational spreadsheets.

Engine	EUENGINE1	EENGINE2
RPMs	1165	1172
Engine Oil Pressure	57	62
Engine Oil Temperature	195	184

Engine Hours	149292	127257
--------------	--------	--------

The glycol dehydrator associated with the site was reported to be installed on October 14, 1993. As previously indicated that facility is reported to process only Antrim gas. The referenced equipment is reported to be a KimRay 90/15 pump. The glycol recirculation rate for the last two years was reported to range from 0.23 – 0.26 gallon/minute.

COMPLIANCE

At the time of the October 29, 2018, site visit, no visible emissions were noted to be coming from onsite stacks, nor were there any significant liquids collected in the secondary containment of the brine tank.

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 26, 2022 for emissions associated with the calendar year 2021) included emissions for two RICE and one glycol dehydrator onsite.

Permit Conditions -Special conditions associated with Permit No. 713-96 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.

The following table summarizes both the MAERS for the calendar years of 2020, 2021 as well as the 12-month rolling total as of September 2022. All reported emissions were below permit limits.

Reporting Period	NOX (12-Month Rolling)	CO (12-Month Rolling)	VOC (12-Month Rolling)
2020	37.63	33.86	7.62
2021	37.21	33.49	7.54
2022 (to date)	36.41	32.77	0.73
Limit	89 tpy	89 tpy	89 tpy

*Note that Appendix A HAP emission factors indicate “nil” for Antrim wells.

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, however, CO and NOx are determined based on Manufacturer emissions data. AP-42 EFs are used for other applicable contaminants.

Special condition No. 16, 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

Records provided indicated that the Facility monitors both fuel consumption by its equipment and volumes of gas processed on a monthly basis. It should be noted as no oil is processed onsite, neither monthly oil processing or hydrocarbon liquid totals are associated with the facility. The other requested monthly records were submitted as requested.

Period	EU	Fuel Usage (MMcf)
CY 2020	EUENGINE1	62.996
CY 2020	EUENGINE2	63.142
CY 2021	EUENGINE1	63.11
CY2021	EUENGINE2	61.64
2022 to date*	EUENGINE1	61.78
2022 to date*	EUENGINE2	60.28
LIMIT	NA	NA

*To date is the 12-month rolling through September 2022.

Special condition 19 requires the owner or operator of the source to conduct all necessary maintenance and make all necessary attempts 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. As previously noted, the Facility has an approved MAP to outline the appropriate activities to meet maintenance activities required under the Subpart ZZZZ regulations. Records provided as part of the records request indicated that each of the two engines are subject to approximately quarterly scheduled service activities to maintain the engines. Supplemental activities are conducted on an as needed basis. Records provided are consistent with those outlined in the approved MAP. High O2 and the "DCP Plant" being down seem to have been reoccurring issues for 2022 for both engines.

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. No control device is associated with the engines of the Facility.

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 is 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. The Facility provided data for five dates in 2021, that reported a H₂S concentration in the wet gas contained 0.5 ppm. This would confirm that the gas stream is in compliance with the referenced special condition.

Stacks associated with the permitted engines have no construction requirements. The stacks are directed to the SE corner of the buildings. From there the muffler/silencer comes to or into the ground before being redirected upwards to the atmosphere.

As part of the October 6, 2022, site visit, AQD District Staff conducted stack height measurements using a Nikon Range Finder. Dimensions were reported to be 12-16 in diameter with heights of 16-20 ft above land surface.

SUMMARY

On October 6, 2022, AQD District Staff mobilized to the Riverside Energy of Michigan, LLC (AKA Riverside) Briley 34 CPF (N6154), located in the NW 1/4, of NW ¼, of NW ¼ of Section 34, T30 N, R2E, Briley Township, Montmorency County, Michigan to conduct a scheduled compliance inspection of the facility. The referenced facility presently operates under Permit to Install No. 713-96. A records request was made electronically on September 8, 2022. Data requested was received on November 8, 2022.

Previous site inspection activities were conducted on October 29, 2018, June 9, 2017, and June 19, 2013. No compliance issues were identified with respect to the facility for those visits.

Weather conditions at the time of the site inspection included overcast skies, and temperatures in the low-60's. No emissions were noted from the compressor stack at the time of the inspection.

The referenced facility operates under Permit to Install (PTI) No. 713-96, which was issued to the Facility on November 14, 1996. Based on observations made, and information provided and reviewed, it appears the facility is operating in general compliance with their permit.

NAME Sharon L LeBlanc

DATE 2-8-23

SUPERVISOR Shane Nixon