

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

P048055762

FACILITY: NUENERGY OPERATING INC.		SRN / ID: P0480
LOCATION: SECTION 23, AVERY TWP		DISTRICT: Gaylord
CITY: AVERY TWP		COUNTY: MONTMORENCY
CONTACT: Darcie Fuzi-Duble , Production Administrator		ACTIVITY DATE: 10/09/2020
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY2021 scheduled site inspection for opt-out Facility. sgl		
RESOLVED COMPLAINTS:		

On October 9, 2020, AQD District Staff conducted a scheduled site inspection for the NuEnergy Operations Avery 23 Central Processing Facility (CPF)(P0480). The referenced Facility is located at 9814 M-33, in the SW ¼ of the NE ¼ of the NE ¼ of Section 23, Avery Township, Montmorency County, Hillman, Michigan. The purpose of the site visit was to determine compliance with respect to their Permit to Install (PTI) No. 175-03

Records were previously requested September 14, 2020, received on October 1, 2020 and have been reviewed as part of this site investigation.

The referenced site was previously inspected on May 19, 2017. No compliance issues were identified as part of the 2017 compliance evaluation.

FACILITY

The referenced facility is an unmanned CPF operated by NuEnergy Operations. The station is reported to service Antrim Formation wells in the area. Activities onsite are limited to removal of water via the triethylene glycol (TEG) dehydrator from the incoming wet NG stream and compression of NG, which pushes it through the pipeline.

The Facility is located west of M-33, just south of Jewell Road, Hillman, Michigan. From the Gaylord District Office, Staff will travel east on M-32 past Atlanta, Michigan until they reach the intersection with M-33, at which point they will turn south onto M-33, and travel approximately one-mile. The entrance drive will be located on the west (right hand) side of the road. Surrounding properties appear to consist of predominantly undeveloped acreage.

A review of readily available aerials appears to indicate that the compressor building was present onsite in aerials as early as April 1998.

At the time of the site inspection, the skies were partly cloudy, temps in the mid-50's with little to no wind. No visible emissions were noted.

REGULATORY

Permitting -The referenced facility operates under PTI No. 175-13, which was issued to NuEnergy Operations on January 10, 2014. The PTI was issued as an opt-out permit, and allows for replacement of the permitted engine with an equivalent or lower emitting engine with notification to the District Supervisor, and submittal of appropriate documentation of emissions (SC VII.1).

Information provided by the Facility indicated that a like for like engine swing occurred on August 21, 2018.

EQUIPMENT

Review of District Files indicates that the following emission units are of record for the site.

ID	DESCRIPTION	INSTALLATION DATE	REMOVAL DATE	COMMENT
EUDEHY	TEG dehydrator	unk	NA	Not identified in MAERS Exempt under Rule 288
DEHY Burner	125K BTU/Hr	unk	NA	Not identified in MAERS Exempt under 282(b)(1)
EUENGINE GCS 424	Cat 398 TA LCR 625 Hp 4SRB No Catalyst	2/19/2014	8/22/2018	Engine Swing*
EUENGINE SN 73801919 GSC 424	Cat 398 TA LCR 625 Hp 4SRB No Catalyst	8/22/2018	NA	Engine Swing*

*At the time of the engine swing the operator reported that they had been instructed that a "like - for - like" exchange did not require notification at the District Office. This misconception has been corrected.

At the time of the October 9, 2020, site visit a single engine was identified onsite. An operator's log was present, verifying monitoring of the unit. Plates were found on the engine and confirmed the engine model and Serial No. The markings on the operators logs as well as on the compressor skid identified the unit as "CM 424". A catalyst shell/exterior exists onsite, but the Facility has reported no catalyst was present. Operational parameters noted at the time of the visit included:

- RPMs – 1042
- Engine Oil pressure - 75
- Engine Oil temp – 186 degrees

Multiple chart recorders were present onsite, one specifically was labeled as fuel gas, and another was labeled as "sales".

Federal Regulations - The referenced facility does not process or store petroleum liquids and is therefore 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, based on information provided in the engineers eval form PTI 175-13, the engine is reported to have a manufacture date that would exempt (pre July 1, 2007) the existing RICE from NSPS Subparts JJJJ for Spark Ignition (SI) RICE.

The permit engineer eval form indicated that the Facility would not be subject to NSPS Subpart OOOO, as there is no affected Facility that commenced construction, modification or reconstruction after 8/23/2011. They go on to indicate that the EPA clarified in their public comment response document that an affected source would be the compressor, not the compressor engine.

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 dehy units. The permit eval form indicates that the Facility at the time of permitting requested that the dehy be included in the permit, though it could have been exempt from permitting, and that the requirements under Subpart HH be included in the permit. No NSR review was completed for the dehy. PTI 175-13 EUDEHY contains a high-level citation for Subpart HH.

With respect to Subpart ZZZZ, the permit application reports that the Facility RICE are subject to 40 CFR Part 63, Subpart ZZZZ. EUENGINE contains a high-level citation for Subpart ZZZZ (the RICE MACT). These requirements appear to have been incorporated into the Site Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) submitted on March 25, 2014, and include the following activities every 1440 - 2160 hours of operation as mandated under Federal Regs:

- Oil and oil filter changes
- Inspection and replacement of air cleaner and pre-cleaner
- Inspection of spark plugs, and replacement if necessary
- Inspection of hoses and belts and replace as necessary.

Maintenance activities for EUENGINE are presently contracted through Natural Gas Compression Systems and based on the limited data provided (2020) indicated that maintenance activities are conducted in general compliance with the Facility MAP.

COMPLIANCE

MAERS- Annual reporting of actual emissions for the facility under the MAERS reporting system, has been completed in an appropriate and timely manner. The most recent submittal was dated January 27, 2020. As previously indicated a review of the most recent submittal indicated that only the emissions for EUENGINE are reported annually.

EUDEHY – The referenced EU consists of one Tri-ethylene Glycol (TEG) dehydrator with a 125K MBTU/Hr reboiler. The referenced unit is restricted from using stripping gas (SC II.1). Other permit conditions associated with the unit includes demonstrating compliance with Subpart HH (SC III.1) by either:

- An average daily throughput of less than 85,000 standard cubic meters per day (about 3 million standard cubic feet per day, (SC VI.1 (a)) or
- Actual average benzene emissions less than 0.90 megagram per year. (SC VI.1 (c))

Records provided are summarized below, and indicate average daily well below thresholds and demonstrating compliance with the referenced Subpart HH.

CALENDAR YEAR	AVERAGE DAILY THROUGHPUT (Standard Cubic Feet/ Day)
2014	29,128.59
2015	19,216.60

2016	18,546.15
2017	17,060.74
2018	16,732.42
2019	18,276.26
2020	18,119.84
LIMIT	3,000,000.00

EUENGINE- The referenced EU consists of one NG-fired, CAT 398 TALCR, 625 Hp, RICE (EUENGINE). No material limits are associated with EUENGINE, however SC IV.2, VI.2 and VI.5 requires that the permittee installs, calibrates, maintains and operates in a satisfactory manner a device to continuously record the NG usage for each engine. Records provided were sufficient to confirm compliance with permit conditions.

As EUENGINE is not equipped with an add-on control device the following special conditions are not applicable to EUENGINE at this time:

- Operational limit of 200 hours per year for engine without it's control device. (SC III.2)
- Proper installation, operation and maintenance of the add-on control device (SC IV.1 and VI.3)
- Documentation of the hours of engine operation without it's control device (SC VI.4)

OPERATION LIMITS – No later than 60 days after the issuance of Permit 175-13 the permittee is required to submit for review and approval a Preventative Maintenance/Malfunction Abatement Plan (PM/MAP). Records indicate that the required document was submitted in a timely manner (March 28, 2014) in compliance with the permit condition. (SC III.1) As previously indicated the required document has been submitted and is considered to have met the permit condition.

EMISSION LIMITS

Emissions for RICE associated with the Facility are calculated using emission factors from Manufacturer Spec sheets (SC VI.6, VI.7 and Appendix A) when available and are based on NG usage documented (SC IV.2 and SC VI.5). Emissions reported for EUENGINE are summarized below:

Emission Unit	NOx Emissions (TPY)	CO Emissions (TPY)	Reporting Period
EUENGINE	29.87	32.6	12 month rolling total ending August 2020
EUENGINE	30.362	33.15	2019
EUENGINE	28.984	32.646	2018
EUENGINE	28.973	31.63	2017
LIMIT	60* (SC I.1)	65* (SC I.2)	12-month rolling*

TESTING ACTIVITIES – Under the present permit verification of NOx and CO emissions are required upon request of the AQD District Supervisor. (SC V.1) District files contain no copies of written requests for verification testing, and the permit condition not applicable at the time of report preparation.

MONITORING/RECORDKEEPING –Permit requirements for monitoring and recordkeeping include the following:

- Completion of all required calculations by the last day of the calendar month for the month prior and made available to AQD staff upon request, (SC VI.1)
- Monitor and record NG usage for EUENGINE1 on a continuous basis (SC IV.2, VI.2 and VI.5)
- Maintain a log of all maintenance activities conducted according to the PM/MAP (SC VI.3) and
- Monthly and 12-month rolling time period NOx and CO emission calculation records for EUENGINE1 as required by SC I.1 and SCI.2 and Appendix A. (SC VI.6 and SC VI.7)

Records provided by the Facility were sufficient to indicate compliance with the above referenced permit conditions. These records with respect to emission calculations and NG usage are summarized on spreadsheets generated monthly, which summarizes all the required information, as well as equipment descriptions and emission factor sources.

NG usage records for EUENGINE1 are summarized below:

Reporting Period	NG usage (MMCF)
12-month rolling time period ending August 2020*	28.6
2019	29.07
2018	27.75
2017	27.74

*Note that fuel usage for the 12-month rolling time period ending in August 2020 ranged from 2.0 – 2.6 scf/month.

STACK/VENT - Permit 175-13 (SC VIII.1) limits the exhaust dimensions for the stack associated with EUENGINE to:

Emission Unit	Exhaust Diameter (inches)	Minimum Height Above Land Surface (feet)	Source
EUENGINE1	10-inch	34.5 feet	Facility Operator
LIMIT	10-inch Maximum	34.5-feet Minimum	

Note at the time report preparation, MAERS does not include any stack information.

SUMMARY

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The referenced site was previously inspected on May 19, 2017. No compliance issues were identified as part of the 2017 compliance evaluation.

Information obtained as part of this scheduled site inspection appears to indicate general compliance with permit conditions. It should be noted that a 2018 engine swing was conducted onsite with failure to notify AQD District office. As previously noted, the Facility understood that "like - for - like" swaps/swings did not require notification. This misconception has been corrected with the Facility.

NAME _____

DATE _____

SUPERVISOR _____

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LeBlanc

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