

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

N643170200

FACILITY: VCP Michigan - ASE 6		SRN / ID: N6431
LOCATION: T30N-R2W, Section 32, CHESTER TWP		DISTRICT: Cadillac
CITY: CHESTER TWP		COUNTY: OTSEGO
CONTACT:		ACTIVITY DATE: 10/12/2023
STAFF: Sharon LeBlanc	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Site Inspection and records review for FY2024 FCE. sgl		
RESOLVED COMPLAINTS:		

On October 12, 2023, AQD District Staff mobilized to the VCP Michigan LLC (AKA VCP) ASE 6 Central Processing Facility (CPF) (N6432), located in the NW/4, SE/4, SW/4, Section 32, T30N, R2W, North Chester Township, Otsego County, Michigan to conduct an unannounced, scheduled compliance inspection of the facility. The referenced facility presently operates under Permit to Install (PTI) No. 320-05A. A records request was made electronically on October 6, 2023. Records were received electronically on December 8, 2023.

The previous site inspections for the Facility was conducted on February 15, 2017, April 20, 2017 and October 21, 2020. No compliance issues were documented with respect to the October 21, 2020, site inspection. Insufficient stack height was documented to for the February 15, 2017, site visit, and the stack correction to the proper height verified during the April 20, 2017 site inspection.

FACILITY

The referenced facility is a gated, unmanned CPF operated by VCP, located on State lands off Ranger Lake Road, Gaylord, Michigan. The station is reported to service Antrim Formation wells in the area. Activities onsite consist of dehydration and compression of gas prior to pipeline transport. The Facility does not extract Natural Gas (NG) liquids (NGLs) from field gas and/or fractionate mixed NGLs to NG products.

To reach the site AQD District Staff traveled west approximately two-miles from the intersection of McCoy Road and M-32, at that point McCoy Road curves to the north and intersects with Ranger Lake Road. Turn left (east) on Ranger lake Road, then south on Ranger Lake Road for approximately 2.2 miles. Aerials show the road forking, but stay to the right on the well-used road and go another approximately $\frac{3}{4}$ -mile. There will be a trail to the left with a well-marked sign for the site. Note that the trail itself goes approximately $\frac{2}{10}$ -mile to the east, then turns to the south, and then again to the east. After this second turn in the road watch for the entrance to the Facility on the left approximately $\frac{2}{10}$ -mile from the second turn.

A review of readily accessible aerials indicates that the Facility has been in operation since before May 1993. 1993 aerials indicate the presence of three buildings until December 2005, at which time the southeastern most building disappears from the aerial. The southern most of the remaining buildings increases in size in September 2013, and in aerials dated June 2021 the roof is off the compressor building, and activities are ongoing, as there is a crane onsite. Note that PTI 320-05A was issued February 4, 2021.

Tanks onsite included a single mung oil tank in a secondary containment. A second, empty tank is located laying outside the containment in what appears to be onsite storage.

REGULATORY

Permitting -The referenced facility operates under PTI No. 320-05A, which was issued to VCP Michigan, LLC on February 4, 2021. Permits of record for the subject site include:

PTI No.	issued	voided	Comment
532-97	4/2/1998	5/10/05	HRF Exploration & Production – Opt out permit
320-05	1/4/2006	NA*	EnerVest Operating, LLC
320-05A	2/4/2021	NA	VCP Michigan, LLC, replacement engine

*Note that at the time of report preparation, that permit cards database does not show a voidance data for 320-05. A voidance letter is also not found in district files. Permits Lansing staff have been notified of the oversight.

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 for PTI 11-18, the existing 255 Hp CAT 3408 NA engine is reported to have a manufacture date of October 22, 1996, that would exempt the existing RICE from NSPS Subparts JJJJ for Spark Ignition (SI) RICE.

Per the permit application, the Facility based on a construction date before applicability dates is reported to not be subject to NSPS Subpart OOOO (applicability date of August 23, 2011) or OOOOa (September 18, 2015).

- 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)

- Subpart JJJJJ (Industrial, Commercial and Institutional Boilers and Process Heaters) (AKA Boiler MACT for Area Sources)

With respect to Subpart HH, the applicable emission unit is the dehydration system. Exempt dehydration systems must meet one or both of the following conditions; actual annual NG flow rate of less than 3 million standard cubic feet per day (MMcf/d) or 85,000 cubic meters/day) or an uncontrolled benzene emission rate of less than 0.9 megagrams per year (or approximately 1 TPY) threshold. Based on Antrim formation gases being processed at the site, benzene concentrations are reported to be 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.

With respect to Subpart ZZZZ (RICE MACT), the facility engine was reported by the facility to be subject to the referenced subpart. District files contain copies of the initial notification for the referenced subpart submitted for the site on February 17, 2011. The referenced document identified an AJAX 800 LE, 800 Hp as subject to the referenced MACT. 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.

NESHAP subparts JJJJJJ 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.

EQUIPMENT

The October 12, 2023, site visit identified one compressor engine, with no catalysts as well as one slop tank and one dehy. Also located onsite is a large AST on it’s side outside of the secondary containment near the fence line. Previous reports indicate that the tank was there in 2012 as well.

Review of District Files and MAERs submittals (2002 through 2022) indicates that the following compressor engines are of record for the site. Note that MAERS data is *Italicized* :

ENGINE ID	ENGINE TYPE	INSTALLATION DATE*	REMOVAL DATE	COMMENT
<i>EUENGINE EUCOMP1</i>	AJAX 800 NA	UNK	UNK	
<i>EU-ASE-6- ENGINE</i>	AJAX 800 NA	UNK	2021	PTI 320-05

<i>EUCOMP3</i>	<i>AJAX 800 LE</i>	<i>UNK</i>	<i>2005</i>	
<i>EUCOMP1</i> Skid NGCS 065 SN 6NB01498 SN 7NJ00055	<i>CAT 3512</i> 810 Hp	<i>2014</i>	<i>UNK</i>	2012 site inspection report indicates CAT 3512 present onsite.
<i>EUENGINE</i>	<i>CAT 3408</i> NA 255 Hp	<i>2021</i>	<i>NA</i>	PTI 320-05A indicated an engine manufacture date of 10/22/1996

*MAERS installation date for the compressor onsite reported installation on January 1 1988. The submittal for the 2017 calendar year indicated that the engine was a CAT 3512 810 Hp.

Operational parameters documented at the time of the October 12, 2023, site inspection included:

ENGINE	RPMS	OIL PRESSURE	Oil Temp
EUENGINE	1500	58	not recorded

COMPLIANCE

At the time of the October 12, 2023, site visit, no visible emissions were noted to be coming from onsite stacks. Only heat shimmers were noted from exhaust stack onsite. Only one EU (EUENGINE) is identified in PTI 320-05A. FGFACILITY which was identified in permit 320-05, was not incorporated into the modified permit.

MAERS- Annual reporting of emissions is conducted by the Facility, the most recent report for the calendar year 2022, was submitted on February 1, 2023. The submittal was found to be complete and timely.

EUENGINE-

The referenced EU is identified in permit 320-05A as a NG-fired CAT 3408 NA 255 Hp, 4SRB RICE without pollution control device (EUENGINE). No reported engine swings or replacements are of record since the 2021 installation.

MATERIAL LIMITS – EUENGINE is limited to only burning NG in EUENGINE (SC II.1). NG consumption/usage by the referenced EU for 2022 and 2023 to date is summarized below:

12-month rolling time period ending	Reported Fuel Usage (Mscf/Month)	Reported Material Usage (Mscf/Year)
December 2022	1279 - 1432	16,546
September 2023	1309 - 1850	17,454
LIMIT	NA	NA

SC. IV.2 and VI.2 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.

OPERATION LIMITS – No later than 60 days after the issuance of Permit 320-05A the permittee is required to submit for review and approval a Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) (SC III.1). Documents contained in District files are summarized below:

PM/MAP Submittal Date	Approval Date
March 24, 2006	April 3, 2006
March 14, 2008	UNK

As EUENGINE is not equipped with an add-on control device the following special conditions are not applicable 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)
- Documentation of the hours of engine operation without it’s control device (SC VI.4)

EMISSION LIMITS - Emissions for RICE associated with the Facility (SC 1.1) are calculated using emission factors from Manufacturer Spec sheets (SC VI.5 and Appendix A) when available and are based on NG usage documented (SC VI.2). Emissions reported for EUENGINE are summarized below:

12-Month Rolling time period ending	NOx Emissions (tons/month)	NOx Emissions (TPY)
December 2022	3.878 – 4.332	50.173
September 2023	3.969 - .5610	52.926
LIMIT	NA	63.2 (SC 1.1)

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 320-05A requirements for EUENGINE 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 EUENGINE on a continuous basis (SC VI.2)
- 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 emission calculation records for EUENGINE as required by SC I.1 and Appendix A. (SC VI.5)

Records provided by the Facility were sufficient to indicate compliance with the above referenced permit conditions.

STACK/VENT - Permit 320-05A (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)
EUENGINE	10-inch	36 feet
LIMIT	10-inch Maximum	36-feet Minimum

Visual estimates at the time of the October 12, 2023, site inspection indicated that the stack appeared to meet the construction requirements presented above.

REPORTING - Reporting requirements for EUENGINE consists of notification within 30-days of change out of EUENGINE with an equivalent-emitting or lower-emitting engine. (SC VII.1).As previously indicated, no records of engine change-outs or swings since the 2021 installation are of record.

SUMMARY

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Based on observations made at the time of the site inspection, as well as supplemental data received from the company it appears that the facility is operating in general compliance with it's permit conditions.

NAME *Marcus J. LeBlanc*

DATE 1-29-24

SUPERVISOR *Shane Nixon*