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

N593470249

FACILITY: VCP Michigan - Mayer		**SRN / ID:** N5934
LOCATION: T29N-R4W, Section 24, HAYES TWP		**DISTRICT:** Cadillac
CITY: HAYES TWP		**COUNTY:** OTSEGO
CONTACT:		**ACTIVITY DATE:** 10/11/2023
STAFF: Sharon LeBlanc	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Site Inspection and records review for FY 2024. sgl		
RESOLVED COMPLAINTS:		

On October 11, 2023, AQD District Staff mobilized to the VCP Michigan LLC (AKA VCP) Mayer Central Processing Facility (CPF) (N5934), located in the NW/4, NW/4, SW/4, Section 24, T29N, R4W, Hayes 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. 106-96C. A records request was made electronically on October 6, 2023. Records were received electronically on December 7, 2023.

The previous site inspection for the Facility was conducted on October 10, 2019. No compliance issues were documented.

FACILITY

The referenced facility is a gated, unmanned CPF operated by VCP, located on approximately 630 acres of undeveloped property of record as being owned by the Mayer Family Trust. 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.

Wells located onsite included:

- Permit No. 40630 Mayer 5-24

To reach the site AQD District Staff traveled from the Office west approximately 2.4-miles to Hayes Tower Road. At the intersection with Hayes Tower Road make a left turn and travel south approximately 9-plus miles to Mancelona Road. Make a left on Mancelona Road and travel approximately 1-mile to Lynn Lake Road. Make a right and travel south on Lynn Lake Road approximately 0.5-miles, the entrance to the Facility is on the left.

A review of readily accessible aerials indicates that the Facility has been in operation since before May 1994.

VCP Operating LLC purchased Enervest Operating LLC and Ward Lake Energy on August 1, 2020.

Weather conditions at the time of the site visit included overcast skies, light showers, and temperature of approximately 47 degrees Fahrenheit. Stack emissions were limited to heat waves off the compressor stack.

REGULATORY

Permitting -The referenced facility operates under PTI No. 106-96C, which was issued to Enervest Operating on December 14, 2011. Permits of record for the subject site include:

PTI No.	issued	voided	Comment
106-96C	12/14/2011	NA	Enervest Operating LLC Added 2cnd Compressor
106-96B	Withdrawn	NA	NA
106-96A	1/4/2006	NA*	Enervest Operating, LLC
106-96	9/10/1996	1/4/2006	Mack Oil Corporation MOGA Permit

***District Staff noted that the PTI 106-96A had not been voided at the time of report prep.**

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);

The existing CAT 3304 engine is reported to have a manufacture date prior to June 12, 2006, that would exempt the existing RICE from NSPS Subparts JJJJ for Spark Ignition (SI) RICE.

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 JJJJJJ (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 a CAT 399 700 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. A high-level citation for the subpart may be found in SC IX.1 for FGENGINES.

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 11, 2023, site visit identified one compressor engine, with catalyst as well as one slop tank (400 BBL), one brine tank (400 BBL) (tanks exempt under Rule 284(2)e)) and one dehy (exempt under Rule 288(b)(ii)).

Review of District Files and MAERs submittals indicated that the following compressor engines are of record for the site:

ENGINE ID	ENGINE TYPE	INSTALLATION DATE*	REMOVAL DATE
EUENGINE1 *EUCOMP1CAT398*	CAT G398 TACLR 700HP 4SRB No Control	*1/1/1998*	5/24/2022
EUENGINE1 SN 73B01884 Unit 105529	CAT G398 HCR 715 HP* 4SRB with Catalytic Converter	5/24/2022	NA
	CAT G3304 NA 95 HP	*1/1/2012*	5/24/2022

EUENGINE2	**4SRB**	
EUCAT3304	**No Control**	

***Note that communications indicate that this engine was rebuilt in 2013 as a 700 HP but was tested as a 715HP.**

Operational parameters documented at the time of the October 11, 2023, site inspection included:

ENGINE1	**CAT 398 105529**	**Unit**
RPMs	**1000**	
Catalyst Temp - Pre	**935 degree F**	
Catalyst Temp - Post	**920 degree F**	
Engine Oil Pressure	**74 psi**	

COMPLIANCE

At the time of the October 11, 2023, site visit, no visible emissions were noted to be coming from onsite stacks. Only heat shimmers were noted from exhaust stack onsite. Permit 106-96C identifies two NG-fired reciprocating engines for the site. The two engines, EUENGINE1 and EUENGINE2 (FGENGINES) and FGFACILITY. As previously indicated one of the two engines was removed in 2022, and only EUENGINE1 remains onsite.

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.

EUENGINE1-

The referenced EU is a NG-fired CAT 398 715 Hp, 4SRB RICE with pollution control device (EUENGINE1). Conditions for the two engines were summarized under FGENGINES.

EMISSION LIMITS – Emission limits associated with EUENGINE1 are limited to the following:

12-month rolling time period ending-	NOx emissions (TPY)	CO emissions (TPY)
December 2022	12.362	2.025
September 2023	0.539	2.471
Limit	80 TPY (SC I.1)	4 TPY (I.2)

MATERIAL LIMITS – The engines FGENGINES are limited a not to exceed 44, 072,339 cubic feet/12-month rolling time period as determined at the end of each calendar month. (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	1024 - 1757	16,014
September 2023	1445 - 1699	16,858
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 106-96C the permittee is required to submit for review and approval a Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) (SC III.1). Electronic communications received during the preparation of this report indicated that an updated PM/MAP is required as a result of the May 2022, engine swap onsite. District Staff anticipate receiving the document within 30 days of completion of this report.

Documents contained in District files are summarized below:

PM/MAP Submittal Date	Approval Date	Comment

March 24, 2006	**April 3, 2006**	**CAT 398 700 Hp**
March 30, 2012 (Rcvd 4/3/2012)	**NR**	**CAT 3304 NA 95 Hp**

As EUENGINE1 is 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 any engine in FGENGINES equipped with a control device 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)

Maintenance records indicate that the control device is inspected and tested annually the most recent event being May 5th, 2023. Destruction efficiencies reported for the referenced test date confirmed reduction in NOx and CO of greater than 90% and 80%, respectively.

Maintenance logs indicate that approximately every two months, preventative maintenance activities are conducted onsite. No major repairs were documented as having been conducted in general compliance with the PM/MAP.

EUENGINE1 per the operator did not operate without it's control device for during the period of 2022 and 2023 to date.In compliance with SC III.2.

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 106-96C requirements for FGENGINES 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 each engine in FGENGINES 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 VI.2 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 106-96C (SC VIII.1) limits the exhaust dimensions for the stack associated with EUENGINE1 to:

Emission Unit

	Exhaust Diameter (inches)	Minimum Height Above Land Surface (feet)
EUENGINE	12-inch	30 feet
LIMIT	12-inch Maximum	30-feet Minimum

Visual estimates at the time of the October 11, 2023, site inspection indicated that the stack appeared to meet the construction requirements presented above.

REPORTING - Reporting requirements for FGENGINES consists of notification within 30-days of change out of any engine with an equivalent-emitting or lower-emitting engine. (SC VII.1). The most recent being the swap of EUENGINE1 in May 2022 and summarized above.

FGFACILITY-

The referenced Flexible Group (FG) consists of all process equipment source-wide, including equipment covered by other permits, grand-fathered equipment and exempt equipment. Permit conditions are limited to emission limits, operational limits, testing and monitoring/record keeping limits and are discussed below.

EMISSION LIMITS - Emissions reported for the source are summarized below:

12-Month rolling period ending	NOx Emissions (TPY)	CO Emissions (TPY)	Aggregate HAP Emissions (TPY)
December 2022	14.024	2.230	0.124
September 2023	0.589	2.513	0.039
LIMIT	89.9 (SC I.1)	5 (SC I.2)	NA

MATERIAL LIMITS – The permittee shall not burn any sour NG in FGFACILITY. Sour gas being defines as any gas containing more than 1 grain of hydrogen sulfide (16.5 ppm) or more than 10 grains of total sulfur per 100 standard cubic feet. (SC II.1) The

Facility reports that by contract NG produced by the Facility is not to exceed 4 ppm H2S when it goes to its customer. They also report that the site does not require an iron sponge to treat the incoming gas.

TESTING ACTIVITIES – Under the present permit the Facility is required to verify (upon request) H2S and/or sulfur content of the NG burned in FGFACILITY is in compliance with SC II.1, which restricts the Facility from burning sour gas. (SC V.1) The file does not contain copies of any written request for analysis. The Facility reports that they wear H2S monitors and use olfactory senses to verify the presence of H2S. Verification testing of incoming gas stream is reported by the Facility to only occur should unusual situation occur.

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)
- Monthly and 12-month rolling time period NOx and CO emission calculation records for FGFACILITY as required by SC 1.1 and SC 1.2 (SC VI.2), and
- Determine the annual emission rate of individual and aggregate HAP emission rates for each 12-month rolling time period. (SC VI.3)

Records provided by the Facility were sufficient to indicate compliance with the above referenced permit conditions. Emission totals are summarized earlier in this report.

SUMMARY

On October 11, 2023, AQD District Staff mobilized to the VCP Michigan LLC (AKA VCP) Mayer Central Processing Facility (CPF) (N5934), located in the NW/4, NW/4, SW/4, Section 24, T29N, R4W, Hayes 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. 106-96C. A records request was made electronically on October 6, 2023. Records were received electronically on December 7, 2023.

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A review of readily accessible aerials indicates that the Facility has been in operation since before May 1994.

VCP Operating LLC purchased Enervest Operating LLC and Ward Lake Energy on August 1, 2020.

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 Shawn D LeBlanc DATE 1-29-24 SUPERVISOR Shane Nixon