

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

N644670278

FACILITY: VCP Michigan - SCV		SRN / ID: N6446
LOCATION: T29N-R2W, Section 15, 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: Onsite 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) State Chester Venture (SCV) Processing Facility (CPF) (N6446), located in the NE/4, NW/4, Section 15, T29N, R2W, 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. 48-05A. 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 31, 2019. No compliance issues were documented.

FACILITY

The referenced facility is a gated, unmanned CPF operated by VCP, 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. The present operator purchased properties associated with Enervest Operating, LLC and Ward Lake Energy in the area effective August 1, 2020.

The site is located east of the intersection of Old State Road (County Road F-38) and Turtle Lake Road. The site is easily visible on the south side of the road and is immediately north of the TransCanada/ANR South Chester Storage Facility (B7219). Other O&G Facilities in the immediate vicinity of the site include:

- Phillips (formerly DCP Midstream Antrim) (N2940)
- Chester 10 CO2 Recovery Facility (N5798)
- Future Riverside Carbon Solutions CO2 Facility (N6576) (permitted December 2023)

A review of readily accessible aerials indicates that the Facility has been in operation prior to December 1985.

Tanks onsite include one each of 400 bbl (not in use), 200 bbl (not in use) and 100 bbl (slop) ASTs in secondary containment. The referenced ASTs are exempt under Rule 284 (2)(e). In addition, the following well was noted onsite:

- Permit # 34369, VCP Michigan LLC, State Chester #3 SWD

Weather conditions at the time of the site visit included mostly clear blue skies and temperature of approximately 35 degrees Fahrenheit. Stack emissions were limited to heat waves off the compressor stack.

REGULATORY

Permitting -The referenced facility operates under PTI No. 48-05A, which was issued to VCP Michigan, LLC on January 9, 2006. Permits of record for the subject site include:

PTI No.	issued	voided	Comment
48-05	4/22/2005	1/9/2006	HRF Production & Exploration
48-05A	1/9/2006	NA	Enervest Operating, LLC

The initial permit was issued for two compressor engines. The permit modification reflects only one engine.

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 compressor engine (EU-SCV-ENGINE) is of an unknown manufacture date, but it believed to be before 2006 and that it 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 3516, 1340 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 the following equipment onsite:

- one compressor engine,(EU-SCV-ENGINE) with no catalysts
- one each of 400 bbls, 200 bbl and 100 bbl ASTs (Exempt under Rule 284(2)(e)), and
- one dehy.(EUDEHY installed January 1, 1998) (Exempt under Rule 288(2)(b)(ii))

Review of District Files indicates that the following compressor engines are of record for the site.

ENGINE ID	ENGINE TYPE	INSTALLATION DATE	REMOVAL DATE	COMMENT
NGCS 800 SN 4FD02367	CAT 3406 NA	UNK	UNK	District Files identified onsite is 3/31/2012
EU-SCV-ENGINE EUCOMP4* Unit NGCS20	CAT 3516 LE 1340 HP No Control	11/8/2000*	UNK	SN 4EK03743 identified onsite 11/8/2006 - 3/10/2012
EU-SCV-ENGINE SN 4EK01025 Unit NGCS20	CAT 3516 LE 1340 HP 4SLB No Control	UNK	UNK	identified in 10/21/2014 – 4/11/2019
EU-SCV-ENGINE SN 4EK01106_ Unit NGCS20	CAT 3516 LE 1340 HP 4SLB No Control	UNK	10/26/2020	Rental Unit

EU-SCV- ENGINE SN 4EK01106_Unit NGCS20 **CAT 3516 LE 1340 HP 4SLB No Control** **10/26/2020** **NA** **Owned Unit**

***MAERS information**

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

ENGINE	RPMS	OIL PRESSURE	Oil Temp	O2 Reading
EU-SCV-ENGINE	1028	53	160	0.11

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 (EU-SCV-ENGINE) and FGFACILITY are identified in PTI 48-05A.

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.

EU-SCV-ENGINE-

The referenced EU is identified in permit 48-05A as a NG-fired CAT 3516 NA, 1340 Hp, RICE without pollution control device (EUENGINE). VCP reports that the most recent engine swings occurred in October 2020, at which time a like for like change was made to replace a rented engine with one owned by the Facility Operators. EU-SCV-ENGINE has not EU specific emission or material limits. NOx emissions reported for the EU are summarized below:

12-month rolling time period ending	NOx Emissions (tons/month)	NOx 12-month rolling emissions (TPY)
December 2022	0.582 - 0.671	7.438
September 2023	0.569 – 0.646	7.345
LIMIT	NA	NA

PROCESS/OPERATIONAL LIMITS -- No later than 60 days after the issuance of Permit 48-05A the permittee is required to submit for review and approval a Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) (SC 1.1). Documents contained in District files are summarized below:

PM/MAP Submittal Date	Approval Date
March 6, 2008	June 5, 2008
September 6, 2005	Unk

As EU-SCV-ENGINE 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, the hours per year limit is based on a 12-month rolling time period the rolling total to be determined monthly. (SC 1.2)
- Proper installation, operation and maintenance of the add-on control device consistent with the PM/MAP. (SC 1.2 and 1.3)
- Documentation of the hours of engine operation without it’s control device (SC 1.7)

TESTING ACTIVITIES – Under the present permit verification of NOx and CO emissions are required upon request of the AQD District Supervisor. (SC 1.4) 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 48-05A requirements for EU-SCV-ENGINE monitoring and recordkeeping include the following:

- Monitor and record NG usage for EUENGINE on a continuous basis (SC 1.5 and 1.8) and
- Maintain a log of all maintenance activities conducted according to the PM/MAP (SC 1.6) .

Records provided by the Facility were sufficient to indicate compliance with the above referenced permit conditions. The required monthly NG usage for EU-SCV-EUENGINE is summarized below:

12-month rolling time period ending	NG usage (Mscf/Month)
December 2022	3221 - 3717
September 2023	3151 – 3579

LIMIT	NA
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STACK/VENT - Permit 48-05A (SC 1.9) limits the exhaust dimensions for the stack associated with EU-SCV-ENGINE to:

Emission Unit	Exhaust Diameter (inches)	Minimum Height Above Land Surface (feet)
LIMIT	10-inch Maximum	34-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.

FGFACILITY-

This FG includes all process equipment at the facility including equipment covered by other permits, grand-fathered equipment and exempt equipment. Permit conditions associated with the Flexible group are limited to Emission and material limits, verification testing and recordkeeping/reporting conditions.

EMISSION LIMITS- Emission limits associated with FGFACILITY are limited to NOx limits of 89 tons per 12-month rolling time period (SC 2.1). Reported emissions are summarized below:

12-Month rolling period ending	NOx monthly Emissions (tons)	NOx Emissions (TPY)
December 2022	0.586 – 0.668	7.487
September 2023	0.573 – 0.650	7.394
LIMIT	NA	89 (SC 2.1)

MATERIAL LIMITS – SC 2.2 restricts the permittee to burning only sweet natural gas 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. 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.

RECORDKEEPING/REPORTING- Under PTI 48-05A all required calculations are required to be completed and made available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified (SC 2.4). Though some delays were experienced in obtaining the data requested, they were due to vacations be key contacts.

The permittee shall keep monthly and 12-month rolling time period NO_x emission calculations records for FGFACILITY. (SC 2.5) NO_x emission calculations were presented above and are complete and in compliance with permit conditions.

SUMMARY

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A review of readily accessible aerials indicates that the Facility has been in operation prior to December 1985.

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 Sharon J. DeBlase

DATE 1-29-24

SUPERVISOR Sharon Nixon