

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

N608669885

|   |                                      |                                  |
|---|--------------------------------------|----------------------------------|
| <b>FACILITY:</b> Core Energy LLC - Charlton 28  |                                      | <b>SRN / ID:</b> N6086           |
| <b>LOCATION:</b> 11859 Sparr Rd, JOHANNESBURG   |                                      | <b>DISTRICT:</b> Cadillac        |
| <b>CITY:</b> JOHANNESBURG   |                                      | <b>COUNTY:</b> OTSEGO            |
| <b>CONTACT:</b>   |                                      | <b>ACTIVITY DATE:</b> 10/17/2023 |
| <b>STAFF:</b> Sharon LeBlanc  | <b>COMPLIANCE STATUS:</b> Compliance | <b>SOURCE CLASS:</b> SM OPT OUT  |
| <b>SUBJECT:</b> 2024 FCE site inspection and records review completed for Facility. sgl |                                      |                                  |
| <b>RESOLVED COMPLAINTS:</b>   |                                      |                                  |

On October 17, 2023, AQD District Staff mobilized to the Core Energy LLC (AKA Core) Charlton 28 Central Processing Facility (CPF) (N6086), located at 11859 Sparr Road, Johannesburg, Michigan. The Facility is located in the NE/4, SE/4, SE/4, Section 28, T31N, R1W, Charlton 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. 644-96A.

A records request was made electronically on September 8, 2023. Records were received electronically on October 4, 2023 and have been incorporated into this document.

The previous site inspections for the Facility were conducted on May 24, 2022 and June 9, 2020. No compliance issues were documented.

## **FACILITY**

Visible from the road, the referenced facility is a gated, unmanned CPF operated by Core, at 11859 Sparr Road, Johannesburg, Michigan. MAERS identifies the Facility as a crude petroleum extraction Facility. When fully operating it appears that activities onsite consist of collection of crude oil, 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. However, as noted during the October 17, 2023, site visit, the dehydration and compressor are not in operation, limiting activities to the heater treaters and separation/collection of crude oil.

To reach the Facility District Staff traveled east on Sparr Road (F-44) from the intersection of Sparr and Gingell Roads until Sparr Road turns to the North. The Facility is on the south side of the road, and is clearly marked. The May 24, 2022, site inspection report indicates that lines coming to the ASTs are owned by Lambda

A review of readily accessible aerials indicates that the Facility has been in operation since before December 1985. Information provided in MAERS indicated that all EUs were installed in June 1974 and consist of EUDEHY, EUHEATERS, EUNATLG and EUTANKS. EUDEHY is reported to process Niagaran formation gases.

ASTs onsite include both crude oil and produced H2O tanks and are reported to be both fixed roof with vapor recovery. No Natural Gas Liquids (NGLs) tanks exist onsite.

Weather conditions at the time of the October 17, 2023, site visit included partly cloudy skies, and temperature of approximately 48 degrees Fahrenheit. Intermittent NG odors were noted.

## **REGULATORY**

**Permitting** -The referenced facility operates under PTI No. 644-96A, which was issued to Merit Energy Company on July 27, 2007. The PTI was issued as an opt-out permit allowing for replacement of the compressor engine with an equivalent or lower-emitting engine with notification to the AQD District Supervisor (SC 2.8).

At the time of permitting, the Facility consisted of on glycol dehydrator (EUDEHY), one compressor engines (EUCH28CMPENG1). Flexible Groups (FG) associated with the site include FGTANKS and FGFACILITY. FGTANKS consists of three 16,800 gallon storage tank, and one 25,200 gallon storage tank located at the SE corner of the site.

NG-fired heater treaters/process heaters were identified on the western side of the Facility, and are believed to be exempt from Rule 201 permitting under exemption Rule 282 (2)(b)(1). It should be noted that due to the shut-in status of EUDEHY and EUCH28CMPENG, that the NG-fired heater treaters are the only fuel burning equipment operating at this time.

Permits associated with the Facility include:

| <b>PTI No.</b> | <b>Issued</b> | <b>Voided</b> |                        |
|----------------|---------------|---------------|------------------------|
| 644-96         | Nov. 13, 1996 | July 27, 2007 | Shell Western E&P Inc. |
| 644-96A        | July 27, 2007 | NA            | Merit Energy Company   |

Property ownership/operation has changed hands since issuance of PTI 644-96. Operators of record for the Facility include:

- Shell Western E&P Inc.
- Merit Energy Company
- Lambda Energy Resources
- Core Energy LLC (present operator)

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. Note however, that compliance with and applicability of these subparts has not been determined as part of this inspection.

**Federal Regulations** - The referenced facility that process or store petroleum liquids may be subject to one or more of the following 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);

**NSPS Subpart OOOO and OOOOa through OOOOc performance standards for Crude Oil and Natural Gas Facilities affect both new and existing Facilities. Applicability of these regulations may result in Leak Detection and Repair (LDAR) activities being required onsite.**

**In addition NSPS Subparts IIII or JJJJ may apply to Facilities with new compression ignition or spark ignition internal combustion engines onsite.**

**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 DDDDD (Industrial, Commercial and Institutional Boilers and Process Heaters) (AKA Boiler MACT).

**District Files contain a copy of the January 31, 2011, Initial notice of applicability for 40 CFR Subpart ZZZZ (AKA the RICE MACT). The referenced document identified one existing 4 Stroke Rich Burn, 500 Hp engine onsite.**

**With respect to Subpart HH, the affected unit (glycol dehydration unit) is an area source. When brought back online, the unit/Facility may not be subject to Subpart HH if they were below throughput or benzene emission thresholds.**

**Subpart DDDDD has been determined by EPA to be applicable to dehy reboilers.**

**EQUIPMENT**

**The October 17, 2023, site visit identified one Waukesha compressor engine, with no catalyst. The engine was not operating at the time of the site inspection.**

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

| <b>ENGINE ID</b>     | <b>ENGINE TYPE</b>   | <b>INSTALLATION DATE</b> | <b>REMOVAL DATE</b> | <b>COMMENT</b>         |
|----------------------|----------------------|--------------------------|---------------------|------------------------|
| <b>EUCH28CMPENG1</b> | <b>Waukesha</b>      | <b>1974</b>              | <b>per</b>          | <b>NA</b>              |
| <b>No Catalyst</b>   | <b>F3521GSI/WB14</b> | <b>MAERS</b>             |                     | <b>Company reports</b> |
| <b>Unit 182</b>      | <b>4SRB</b>          |                          |                     | <b>Installation</b>    |
| <b>SN 361204</b>     | <b>500 HP</b>        |                          |                     | <b>date of</b>         |
|                      |                      |                          |                     | <b>September</b>       |
|                      |                      |                          |                     | <b>1995</b>            |

## **COMPLIANCE**

At the time of the October 17, 2023, site visit, no visible emissions were noted to be coming from onsite stacks. Only heat shimmers were noted from exhaust stacks onsite.

**MAERS-** Annual reporting of emissions is conducted by the Facility, the most recent report for the calendar year 2022, was submitted on February 27, 2023. The submittal was found to be complete and timely.

### **EUDEHY-**

In addition to the following permit conditions associated with EUDEHY, FGFACILITY includes a high level citation (SC 3.4) for compliance with all provisions of 40 CFR Part 63, Subpart HH, as they apply to FGFACILITY. As previously noted, the referenced subpart applies to dehydration systems for area source of HAPs. The EU was reported by Core Staff to have been shut in on June 16, 2021.

Requirements for EUDEHY under PTI 644-96A include installation, maintenance, and operation of a flash tank in association with EUDEHY (SC 1.1). Satisfactory operation includes routing the flash tank exhaust to the compressor for destruction. At the time of the October 17, 2023, site inspection the dehy building was locked, and verification of the flash tank routing could not be made. Proper routing of the flash tank was documented in the November 10, 2015, site inspection report.

SC 1.2 requires the permittee at least once per calendar year to obtain, by sampling an analysis of the wet gas stream. Records of the wet gas compositions determined through the wet gas sample analysis are to be kept for a period of 5 years (SC 1.3). A wet gas analysis dated October 26, 2022, indicated that no H<sub>2</sub>S or total sulfur was present in the gas stream. EUDEHY was reported not to be operated for the calendar years 2021 or 2022.

Stack/vent restrictions for EUDEHY include a maximum stack diameter of 4-inches, and a minimum height of 15 ft above ground level (SC 1.4a). The stack onsite appears to be in compliance with the permit conditions. The EU was reported by Core Staff to have been shut in on June 16, 2021. The Facility reports a height of 20 feet above ground level.

**EUCH28CMPENG1-** One existing engine is associated with the Charlton 28 CPF. This EU is reported to have not operated since June 26, 2021. The Facility was questioned regarding the reported status, as MAERS emission reports for the 2022 calendar year indicate that it was in operation. The Facility response indicated that the consultant who had been contracted to submit on their behalf had submitted incorrect data, and that they would look into correcting the error.

As the EU has not been in operation, no maintenance activities have been conducted, therefore no evaluation of compliance with respect to the PM/MAP has been made.

Requirements under PTI 644-96A. No material limits exist for EUCH28CMPENG1.

**Process/Operational Limits** – SC 2.2 requires the preparation and submittal of a Malfunction Abatement Plan (MAP)/Preventative Maintenance Plan (PMP) to the AQD District Supervisor for review and approval. District records indicate that the referenced document was received on September 24, 2007, and was approved on October 4, 2007.

Though no material limits are associated with EUCH28CMPENG1, the following NG usage was reported for the reported 12-month rolling periods:

| <b>12-month reporting period ending</b> | <b>NG Use (MMCF)</b> |
|---|----------------------|
| December 31, 2022                       | 6.80**               |
| 2023 to date*                           | 0.00                 |

\*8/31/2022

\*\* data from 2022 MAERS submittal. Facility reports data is incorrect.

As EUCH28CMPENG1 is not equipped with an add-on control device none of the following special conditions are applicable at this time:

- Operational limit of 200 hours per year for engine without it's control device. (SC 2.3)
- Proper installation, operation and maintenance of the add-on control device (SC 2.4), and
- Documentation of the hours of engine operation without it's control device (SC 2.9)

**Emission Limits-** Emission limits associated with EUCH28CMPENG1 are limited to 87 TPY NOx (SC 2.1(a)). Emissions for RICE associated with the Facility are calculated using emission factors from Manufacturer Spec sheets (SC 2.11 and Appendix A) when available and are based on NG usage documented (SC 2.10). Emissions reported for EUCH28CMPENG1 are summarized below:

| <b>12-Month reporting period ending</b> | <b>NOx Emissions (TPY)</b> |
|---|----------------------------|
| December 31, 2022                       | 17.1*                      |
| 2023 to date                            | 0                          |

**LIMIT****87****(SC 2.1(a))**

\* Data was reported in the 2022 MAERS submittal. Core Staff report that consultant incorrectly reported emissions and fuel use, when in fact the EU was inoperable for the calendar year.

**TESTING ACTIVITIES** – Under the present permit verification of NOx emissions are required upon request of the AQD District Supervisor. (SC 2.5) 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 2.7)
- Monitor and record NG usage for EUCH28CMPENG1 on a continuous basis (SC 2.6 and SC 2.10)
  - Maintain a log of all maintenance activities conducted according to the PM/MAP (SC 2.8) and
  - Complete monthly and 12-month rolling time period NOx emission calculation records for EUCH28CMPENG1 required by SC I.1(a) and Appendix A. (SC I.11)

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 a spreadsheet generated monthly, which summarizes all the required information, as well as equipment descriptions and emission factor sources. As previously noted both EUDEHY and EUCH28CMPENG1 did not operate for the 2022 calendar year or 2023 to date, therefore those values were zero.

**STACK/VENT** - Permit 644-96A (SC I.12 (a)) limits the exhaust dimensions for the stack associated with EUCH28CMPENG1 to a maximum 8-inch diameter and minimum height of 20 feet above ground level. Exhaust gases to be discharged unobstructed vertically to the ambient air. Observations made at the time of the October 17, 2023, site inspection indicated that the existing stack is in compliance with permit conditions. The Facility reported that the existing stack meets the permit conditions.

**FGFACILITY**- This FG consists of all equipment including grandfathered, permitted and exempt equipment onsite.

**Emission Limits** -

Emission limits for FGFACILITY, are limited to NOx and VOC (SC 3.1a and 3.1b). The emission limits are for 12-month rolling time periods (SC 2.5), and are summarized below:

| <b>12-month rolling time period ending</b> | <b>NOX (TPY)</b>                    | <b>VOC (TPY)</b>                    |
|--|-------------------------------------|-------------------------------------|
| December 31, 2022*                         | 17.20                               | 0.12                                |
| 2023 to date**                             | 0.1                                 | 0                                   |
| <b>LIMIT</b>                               | <b>89 (TPY)</b><br><b>(SC 3.1a)</b> | <b>40 (TPY)</b><br><b>(SC 3.1b)</b> |

\* Data was reported in the 2022 MAERS submittal. Core Staff report that consultant incorrectly reported emissions and fuel use, when in fact the EU was inoperable for the calendar year.

\*\* August 31, 2023

#### Material Limits-

SC 3.2 limits FGFACILITY to only burning of sweet natural gas (less than or equal to 1 grain of H<sub>2</sub>S or less than 10 grains of total sulfur per 100 scf). As verification of compliance with the referenced condition, the Facility provided a wet gas stream analytical report dated October 26 202, indicating that no H<sub>2</sub>S or total sulfur compounds were present.

SC 3.3 limits the permittee to burning no more than 21,500 scf of NG in EUCH28CMPENG1, and no more than 59,800,000 scf of NG in FGFACILITY. NG usage for 2022 and 2023 to date are summarized below:

| <b>12 month rolling time period ending</b> | <b>NG burned by EUCH28CMPENG1 (SCF)</b> | <b>NG burned by FGFACILITY (SCF)</b> |
|--|---|--------------------------------------|
| December 31, 2022                          | 6,800,000*                              | 8,160,000*                           |
| 2023 to date **                            | 0                                       | 134,000                              |
| <b>Limit</b>                               | <b>21,500,000 (SC 3.3)</b>              | <b>59,800,000 (SC 3.3)</b>           |

\* Data was reported in the 2022 MAERS submittal. Core Staff report that consultant incorrectly reported emissions and fuel use, when in fact the EU was inoperable for the calendar year. NG burned for FGFACILITY is limited to the heater treaters and was 140,000 SCF

\*\* August 31, 2023

### Testing-

No annual verification test requirements for H<sub>2</sub>S or total sulfur are contained in PTTI 644-96A. Verification of sweet gas fuels required in SC 3.2 was provided in a wet gas stream analytical report dated October 26 202, indicating that no H<sub>2</sub>S or total sulfur compounds were present.

### Recordkeeping/Reporting/Notification

The permittee is required to complete all required calculations in a format acceptable to the AQD District Supervisor and made available by the 15th day of the calendar month for the previous month, unless otherwise specified in a condition (SC 3.5). These record include:

- NO<sub>x</sub> and VOC emission calculations for FGFACILITY as required by SC 3.1a, 3.1b and Appendix A (SC 3.6)
- Monthly and 12-month rolling fuel use records for FGFACILITY. (SC 3.7)

Core Staff provided requested calculations in a timely manner, in compliance with the permit condition.

### SUMMARY

On October 17, 2023, AQD District Staff mobilized to the Core Energy LLC (AKA Core) Charlton 28 Central Processing Facility (CPF) (N6086), located at 11859 Sparr Road, Johannesburg, Michigan. The Facility is located in the NE/4, SE/4, SE/4, Section 28, T31N, R1W, Charlton 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. 644-96A.

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Visible from the road, the referenced facility is a gated, unmanned CPF operated by Core, at 11859 Sparr Road, Johannesburg, Michigan. MAERS identifies the Facility as a crude petroleum extraction Facility. When fully operating it appears that activities onsite consist of collection of crude oil, 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. However, as noted during the October 17, 2023, site visit, the dehydration and compressor are not in operation, limiting activities to the heater treaters and separation/collection of



crude oil. This was confirmed by the Facility during records review. It should be noted that the consultant hired by Core to complete annual emissions reporting incorrectly reported NG usage and emissions for EUCH28CMPENG1 for the 2022 calendar year.

A review of readily accessible aerials indicates that the Facility has been in operation since before December 1985. Information provided in MAERS indicated that all EUs were installed in June 1974 and consist of EUDEHY, EUHEATERS, EUNATLG and EUTANKS. EUDEHY is reported to process Niagaran formation gases.

Based on records provided and observations onsite, it appears that the Facility is in general compliance with conditions identified in PTI 644-96A. 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. Note however, that compliance with and applicability of these subparts has not been determined as part of this inspection.

NAME Sharon J LeBlanc

DATE 1-29-24

SUPERVISOR Shane Nixon