

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

N804472559

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| FACILITY: Bluewater Gas Storage - Booster Compressor Station | | SRN / ID: N8044 |
| LOCATION: 24551 29 MILE RD, RAY TWP | | DISTRICT: Warren |
| CITY: RAY TWP | | COUNTY: MACOMB |
| CONTACT: James B. Jensen , Senior Engineer - Environmental | | ACTIVITY DATE: 07/10/2024 |
| STAFF: Noshin Khan | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MINOR |
| SUBJECT: scheduled on-site inspection | | |
| RESOLVED COMPLAINTS: | | |

On Wednesday, July 10, 2024 I, Noshin Khan, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, performed a scheduled, on-site inspection of Bluewater Gas Storage, LLC - Booster Compressor Station, located at 24551 29 Mile Road, Ray Township, Michigan 48096. (SRN: N8044). The purpose of the inspection was to determine the facility's compliance status with the requirements of the federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended (Act 451); the AQD administrative rules, and the conditions of Permit to Install (PTI) 139-08A.

I met Bluewater staff at 9AM at Bluewater Gas Storage, LLC - Columbus Storage. Bluewater staff informed me it would be easier to review records at this site since it has a conference room and the Booster and Kimball stations do not. I met with Ron Churchill, Supervisor - Gas Control; Frank Rasmussen, Engineer; Jeffrey Westrick, Asset Manager - Gas Storage Power Generation; and Suzanne Coats, Administrative Assistant. James Jensen, Senior Engineer - Environmental (WEC Energy Group) is based out of Milwaukee, Wisconsin and joined the meeting over the phone.

Jeff explained the facility's processes. The Booster Compression Station connects to the Vector Pipeline and Michcon Pipeline. The site was constructed to adjust line pressure after a turbine was constructed at Vector's Washington 28 site. In 2021 a turbine added at another Bluewater site resulted in decreased use of the Booster compressor. Jeff said that he is proposing to management that the compressor be taken out of commission.

During the pre-inspection meeting Ron showed me maintenance records and work logs for the engine in accordance with the facility's preventative maintenance plan/malfunction abatement plan (PM/MAP). I discuss these records below under the *Permit Compliance Evaluation* section.

After this meeting, Ron and Frank accompanied me on walkthroughs of the Booster and Kimball stations. At the Booster site, Ron pointed out the Vector, Michcon, and Bluewater lines which each have a different color (silver for Bluewater, red for Vector, and tan for Michcon). I observed the blowdown stack at the corner of the site. I observed the suction and discharge inlet and outlet to and from the compressor building. While I was on site, gas was not being processed. A gas flow meter inside the compressor building read 0 SCF. Ron also showed me the control panel for the compressor, and I observed LEL monitors. The room adjacent to the compressor has a fan and waste oil and lube oil in enclosed tanks, which are exempt from permit requirements per Michigan Air Pollution Control Rule 284(2)(c). Frank, Ron, and I were not able to locate the name plate on the engine to be able to compare the rating to what is written in the permit.

Permit Compliance Evaluation - PTI 139-08A EUCOMP

According to the permit description, the unit is a 10.1 MMBtu/hr Caterpillar G3516 natural gas-fired 4-stroke, lean burn (4SLB) reciprocating internal compressor engine.

The records I received are available on the AQD shared drive at the following address: S:\Air Quality Division\STAFF\Noshin Khan\FY24\N8044 Bluewater Booster.

Special Condition (S.C.) I.1, V.1: The unit has a formaldehyde emission limit of 0.22 lb/hr. According to AQD records, the last test was performed on September 14, 2023 and showed a result of 0.005 lb/hr. This testing was performed as a verification of the formaldehyde emission rate required by S.C. V.1.

S.C. III.1, IV.1, VI.2, VI.5: Condition III.1 requires that the permittee operate in accordance with a preventative maintenance/malfunction abatement plan (PM/MAP) approved by the AQD. The most recent revision of this plan was received on September 11, 2023. Bluewater staff showed me inspection and maintenance records required by S.C. VI.2 and VI.5 during the pre-inspection meeting.

The facility's MAP lists operating parameters monitored to detect malfunctions. These include catalyst inlet temperature, engine load, compressor oil pressure, engine oil pressure, CO emissions, and air to fuel ratio. Alarms and automatic shutdowns are in place for catalyst inlet temperature, compressor oil pressure, and engine oil pressure in the event of set point readings out of range. According to James, EUCOMP has not experienced any malfunctions since January 2022. The unit has only operated to complete testing required by 40 CFR 63 Subpart ZZZZ.

Condition IV.1 requires that EUCOMP not operate unless the catalytic oxidation system is installed, operated, and maintained in a satisfactory manner. During the pre-inspection meeting, I reviewed annual catalyst maintenance work orders for September 2022 and September 2023 indicating compliance with this condition. The inspection records indicate that no adjustments were needed to be made to the system and the system was operating properly. Catalyst inlet temperature records for the periods of operation (during Subpart ZZZZ testing in 2022 and 2023) indicate operation of the catalyst within the normal range of less than 1350F. During 2022 testing, the catalyst inlet temperature measured between 854.8F and 857.2F; during 2023 testing, it measured between 870.2F and 871.3F. As mentioned above, EUCOMP has not experienced any malfunctions including catalyst inlet temperature exceedances.

Ron also showed me calibration records for the monitors for differential pressure, pre-catalyst temperature, and fuel gas flow. These were also performed in September 2022 and September 2023.

The last time EUCOMP operated was in September 2023 for the emissions test, and before the emissions test to verify proper operation. According to staff, maintenance on the engine is scheduled based on engine operating hours, so the most recent records which I reviewed on-site are from 2021, 2020, and 2019. Based on the records reviewed, the facility is operating in accordance with its PM/MAP.

S.C. VI.1, VI.3, VI.4: Condition VI.1 requires that the natural gas usage for EUCOMP be monitored continuously. Bluewater staff verified that this is done and I observed meters while on-site. The facility keeps monthly fuel use records required by S.C. VI.4 and provided values for January 2022 through May 2024. The provided record shows that 0.14 MMSCF of fuel was used in the unit in 2022; 0.4 MMSCF was used in 2023; no fuel has been used in 2024. This log also includes monthly and 12-month rolling hours that EUCOMP has operated without the catalytic oxidation system, as required by S.C. VI.3. Since January 2022, the unit has not operated without the catalytic oxidation system.

S.C. VIII.1: EUCOMP has a stack height limit of 28 feet. I did not verify compliance with this condition.

40 CFR Part 63 (MACT), Subpart ZZZZ: AQD records indicate that the facility has been submitting semi-annual reporting as required by this regulation and performing annual compliance demonstrations to verify compliance with the Subpart ZZZZ emission limits. The most recent test was on September 14, 2023 and the results showed a CO emission rate of 0.72 ppmvd @ 15% O₂. The limit is 47 ppmvd.

The facility provided a notification of change of operational status for EUCOMP on August 1, 2024; the letter said that as of August 15, 2024, the unit will become a long term non-operational stationary RICE. The annual compliance demonstration previously scheduled for September 11, 2024 will no longer be performed.

Overall, the facility is in compliance with the above rules and regulations.

NAME Nashin Khan

DATE 09/20/2024

SUPERVISOR K. Kelly