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

N579264522

FACILITY: Consumers Energy - Overisel Compressor Station		**SRN / ID:** N5792
LOCATION: 4131 138th Ave., HAMILTON		**DISTRICT:** Kalamazoo
CITY: HAMILTON		**COUNTY:** ALLEGAN
CONTACT: Amy Kapuga , Environmental Engineer		**ACTIVITY DATE:** 07/07/2022
STAFF: Cody Yazzie	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On July 7, 2022 Air Quality Division (AQD) staff (Cody Yazzie) arrived at 4131 138th Avenue, Hamilton Michigan at 1:20 PM to conduct an unannounced air quality inspection of Consumer Overisle Compression Station (hereafter Consumers) SRN (N5792). Staff made initial contact with the office receptionist and stated the purpose of the visit. Amy Kapuga, Consumers, Sr. Environmental Engineer, is the environmental contact was not present for the onsite inspection, but did assist staff in providing the necessary records to complete the inspection. Staff was escorted around the facility by Dean Lampen, Consumers, Plant Manager.

Consumers Energy – Overisel Compressor Station (hereafter Consumers). The stationary source has a glycol dehydration unit with a condenser, auxiliary equipment, and organic liquid storage vessels. Pipeline natural gas is compressed and injected from roughly April to November into rock formations below the earth's surface. Overisel and Salem are the two fields that this facility injects and draws from. During the December to March months the facility draws the natural gas out of the fields, filters particles, dehydrates it of water, and puts it back into a distribution pipe. The facility has roughly 10 employees and operates on one shift. Consumers Overisel was last inspected by the AQD on June 19, 2018.

Consumers was last inspected by the AQD on August 1, 2018 and appeared to be in Compliance at that time with MI-ROP-N5792-2018. Staff asked, and Mr. Lampen stated that the facility does not have any newly installed emergency generators or boilers not included in the ROP or PTI No. 202-19.

Mr. Lampen gave staff a tour of the facility. Required personal protective equipment are a high visibility vest, safety glasses, hearing protection, hard hat, and steel toe boots. Staff observations and review of records provided during and following the inspection are summarized below:

EUGLYCDEHY:

EUGLYCDEHY is the emission unit that is listed in MI-ROP-N5792-2018. This unit is listed in the ROP as a small natural gas glycol dehydrating system using triethylene glycol that includes a reboiler, flash tank, glycol surge tank, a new and used glycol tanks. This unit was decommissioned and removed from the facility. Due to the unit being fully removed there were no records requested as a part of the inspection. The facility does have a glycol dehydration system that was installed to replace EUGLYCDEHY that was installed on November 9, 2022. This new unit operates under PTI No. 202-19 which will be incorporated into the ROP renewal in the next renewal cycle.

EUDEHY:

This emission unit is a small glycol dehydration system processing natural gas using triethylene glycol (TEG). Systems consists of two identical halves. Each half has two contact towers, a flash tank, a surge tank, a reboiler, and a thermal oxidizer. This unit is subject to 40 CFR Part 63 Subpart HHH and operates under PTI No. 202-19. This unit was just recently installed and only operates in the winter/spring months when the facility is taking gas out of the storage fields and into the pipeline.

This emission unit has a 12-month rolling VOC emission limit. The facility provided records from December 2021 through June 2022. The VOC emissions are calculated using an emission factor from GRI-GLYCalc software and hours of operation. The facility calculates the emissions for each side of EUDEHY. The largest 12-month Rolling VOC emissions for the unit was recorded as 0.2712 TPY in March 2022 which is well below the permitted limit of 3.37 TPY. In addition to the 12-month Rolling VOC emission records the facility maintains records of the monthly and 12 month rolling operating hours. The largest 12-month rolling operating hours were 2,564 hours which were recorded in March 2022. There is no limit associated with the operating hours the facility is just required to calculate and record it.

The facility is required to submit a Malfunction Abatement Plan (MAP) that is implemented and maintained to operate EUDEHY. This MAP was submitted on August 16, 2021. The MAP included an identification of the equipment and the supervisory personnel responsible for overseeing the inspections, maintenance, and repair. There was also a description of the corrective procedures that should be followed in the event of a malfunction. The MAP included a list of replacement parts that should be maintained in inventory for a quick replacement. Operating parameters were also included in which it established typical operating parameters that the equipment should be operated at. The information included appeared to be sufficient for Special Condition III.3 and Rule 910. If the MAP becomes insufficient in the future modifications may be required to address those deficiencies.

Each portion of the system are equipped with glycol recirculation rate flowmeters and thermocouples to monitor the combustion temperature in the thermal oxidizers. For each parameter the facility is required to monitor continuously and maintain hourly records. Staff requested that records for the following dates: 1/27/22, 2/14/22, 2/22/22, 3/3/22, and 3/15/22 for both operating parameters. Records showed that the facility typically operates the units at around 10 GPM of glycol recirculation which is well below the 24 GPM maximum limit. The records for the temperature of the combustion chamber showed that the thermal oxidizers were being typically operated at 1500°F during the days reviewed. This is above the 1400°F minimum limit specified in Special Condition III.2. From these records the facility appears to be in compliance with these process/operational restrictions in PTI No. 202-19.

The facility also provided documentation of the calibrations for both Thermal Oxidizer thermocouples and the glycol recirculation rate flowmeters. These calibrations are initial calibrations for the system. Consumers is also required to once a calendar year to obtain an analysis of the wet gas stream. The facility sent in a wet gas sample to be analyzed on February 8, 2022. The analysis determines the make up of the wet gas stream. These results are then used in the GRI-GLYCalc to calculate BTEX and VOC emissions.

The unit is subject to NESHAP HHH which required that an initial performance test be conducted within 180 days after the initial startup. Consumers notified the District Office that the initial

startup date was on November 9, 2021. The initial performance test was conducted on February 15th, 17th, and March 1st, 2022. The test was used to evaluate compliance of the EUDEHY system by comparing the emissions from each control device with the unit specific BTEX emission limit calculated using Equation 2 of 40 CFR Part 63, Subpart HHH and establish the minimum combustion chamber temperature at which each thermal oxidizer must be operated on a daily average to achieve continuous compliance with the BTEX emission limit. The results of the test showed that the daily average temperature for SVTHERMOX_A and SVTHERMOX_B are 1,460°F and 1,510°F respectively. The showed that the Total EUDEHY BTEX Emission limit Rate was calculated to be 0.07 Mg/Year which is well below the limit of 0.7 Mg/Year.

Consumers is maintaining records on the natural gas throughput that is being run through the system. Records show when EUCLYCDEHY operated previously in 2021 and when EUDEHY started operation in December 2021. The facility appears to be complying with the NESHAP HHH regulations. All the initial testing appears to be conducted before they stopped using the system in the spring.

FGENGINES:

These are four natural gas fired reciprocating engines used for gas compression. These engines are considered grandfathered equipment being installed before August 1, 1967. Since these units are grandfathered pieces of equipment the recordkeeping required by the permit is limited to recording the monthly fuel usage by each engine. The facility is recording the gas consumption rate for each engine for each calendar month. The highest natural gas consumption over the past 12 months for Engine1, Engine2, Enginer3, and Engine4 were 13,030.38 MCF, 10,128.67 MCF, 13,451.09 MCF, and 12,866.09 MCF respectively from January 2021 through June 2022.

The ROP indicates that this emission unit is subject to federal regulations 40 CFR Part 63, Subpart A and JJJJ. This regulation is for National Emission Standards for Hazardous Air Pollutants in Paper and other Web Coatings. This should be corrected in the next ROP renewal.

EUENGINE1	EUENGINE2	EUENGINE3	EUENGINE4
Engine No: 78506	Engine No: 78507	Engine No: 78525	Engine No: 78542
Brand: Clark	Brand: Clark	Brand: Clark	Brand: Clark
Model: TLA-8	Model: TLA-8	Model: TLA-8	Model: TLA-8

During the inspection the facility was operating EUENGINE2, EUENGINE3, and EUENGINE4. The facility was operating HP of 2220, 2408, and 2404 respectively. The noted RPM of the engines during operations were noted as around 300 RPM for all the engines.

Staff did ask during the inspection if the facility has had any major engine maintenance/overhauls in the past two years. Mr. Lampen indicated that there have not been any major engine maintenance/overhauls in the past two years. Staff further explained that if an engine overhaul or requires maintenance that was over 50% of the cost of new unit that the unit would need to go through the permitting process.

EUEMERGGEN:

This 1,462 hp (1.3 MW) emergency generator is fueled by natural gas. This emergency generator is subject to the federal requirements of 40 CFR 60 Subpart JJJJ and 40 CFR 63 Subpart ZZZZ. The facility must show compliance to with Subpart JJJJ to show compliance with subpart ZZZZ.

The engine must pass performance testing every 3 years because it is not a certified by the manufacturer. The last performance test was conducted on February 20, 2020. The test results showed that the engine was under the emission limits for NOx, CO, and VOC. The measured emissions were 1.0 g/hp-hr, 0.8 g/hp-hr, 0.1 g/hp-hr for NOx, CO, and VOC respectively.

The facility is required to maintain records of maintenance and the operation hours of the engine. The facility is keeping records on the maintenance preformed on the engine. They also either change or send the oil for analysis. According to the most recent inspection report the oil was last replaced on January 7, 2020. Since the facility has had collected a sample of the oil to have analyzed. The most recent oil sample was taken on December 3, 2021. The facility also inspected all hoses and belts on December 13, 2021 as well. It is documented that the facility inspected the air cleaner and spark plugs of the engine on December 14, 2021.

During inspection Staff did check the non-resettable hour meter for an hour reading. Staff noted the that the engine had 231 hours during the inspection. The facility stated that it typically operates the engine once a week for 10-15 minutes for maintenance and engine readiness testing. The total hours for 2021 were recorded as 39 hours. This is well below the 100 hours permitted by NESHAP ZZZZ.

FGCOLDCLEANERS:

Mr. Lampen indicated to staff that the facility received a new "cold cleaning unit", but was unsure what was going to be used as the solvent in the unit. Ms. Kapuga provided the SDS of a Green Unikleen product that will be used in the unit. Similar to the previous Green Unikleen product the facility used the SDS indicates that there are no volatiles in the solvent. As previously stated in the prior inspection report due to the fact that the solvent in this unit contain less than 5% VOC's the unit does not meet the definition a cold cleaner in Rule 103(aa) which defines a cold cleaner as a tank containing organic solvent with a VOC content of 5% or more by weight that is used to spray, brush, flush, or immerse metallic and or plastic objects for the purpose of degreasing or cleaning. Because the VOC content is less than 5% by weight this tank is not subject to the part 7 Rules. It does appear that this unit could possibly be exempt under Rule 285(2)(r)(i) for metal cleaning.

FGBLRMACT:

These are a collection of eight process heaters and an industrial boiler fired by natural gas. These process heater and boiler are subject to the federal requirements of 40 CFR 63 Subpart DDDDD. This equipment has fuel capacity ratings between 0.15 MMBTU/hour and 9.2 MMBTU/hour.

As a part of the federal Regulations the facility is required to have tune-ups done on the boilers and process heaters based on the fuel capacity ratings of each individual boiler. The facility is required to get tune-ups every 2 years for the following units: EULINEHEATER4A, EULINEHEATER5A, and EULINEHEATER6A. Staff was provided with documentation that showed

the most recent tune-ups were conducted on February 17, 2022 for all three units. The facility is required to get the tune-ups every 5 years for the following units: EUFUELHEATER1A, EUFUELHEATER1B, EULINEHEATER1, EULINEHEATER2, and EULINEHEATER3. The facility did provide documentation that showed the most recent tune-ups were conducted on January 6, 2021 for EUBOILER1. Documentation was provided that showed the most recent tune-ups were conducted on February 12, 2021 for EUFUELHEATER1A, EUFUELHEATER1B, EUFUELHEATER1, EUFUELHEATER2, and EUFUELHEATER3. Other Documentation showed that EUBOLER was last tuned up on February 17, 2022. EUREBOILER was installed in 2018 and also had documentation of the tune up. The most recent tune up for this reboiler was done on February 12, 2021.

Based on these records the facility appears to be conducting the required tune ups as required by NESHAP DDDDD. The facility also provided documentation of the energy assessment for the boilers that was conducted in January 2016.

At the time of the inspection and based on a review of records obtained during or following the inspection, the facility appears to be in compliance with MI-ROP-N5792-2018 and PTI No. 202-19. Staff stated to Mr. Lampen that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 3:00 PM.-CJY

NAME Cody Yaggie DATE 9/13/22 SUPERVISOR RIL 9/15/22