DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N579254840

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:** 06/12/2020
STAFF: Cody Yazzie	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

This inspection was conducted in two separate portions to best accommodate for social distancing guidelines that are set by the operating facility and the State of Michigan in response to the COVID-19 virus pandemic. The first portion consist of the records review that are associated with any Permit to Install that may have active currently along with any permit exempt equipment that may require recordkeeping. The second part of the inspection would include the on-site visit in which staff could observe the emission units on a typical operation day.

This 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.

Records Review Conducted (June 26, 2020):

On June 26, 2020 Air Quality Division (AQD) staff (Cody Yazzie) sent an email to Amy Kapuga, Consumers Overisel, Environmental Engineer, requesting recordkeeping associated with MI-ROP-N5792-2018. Mrs. Kapuga promptly sent over the requested records for staff's review. Staff's summary of the review is included below.

EUGLYCDEHY:
This is a small natural gas glycol dehydrating system using triethylene glycol (TEG) that includes a reboiler, flash tank, glycol surge tank and a used glycol tank. The system is the final step in removing the moisture from the natural gas before being put into a distribution pipeline. Prior to the dehydration system the gas is moved through a network "slug" catchers and scrubbers that are used to remove the larger concentrations of water and particles in the gas. The dehydration system is subject to the federal requirements of 40 CFR 63 Subpart HHH. This system was not in operation during the inspection, but staff did observe the unit. It typically operates December through March.

The facility has a site-specific monitoring plan prepared for the Continuous Parameter Monitoring System (CPMS), which was last revised on May 6, 2019. This CPMS outlines what is included in the CPMS, Performance and Equipment Specifications, Performance Evaluations Procedures, Operation and Maintenance, Recordkeeping and Reporting, and Corrective Action Procedures. The CPMS identifies the Condenser as the control equipment and a thermocouple that monitors the condenser exhaust gas as the means of monitoring that control equipment. The thermocouple is monitored using a circle chart and electronic data capture. The CPMS identifies that the thermocouple must be calibrated yearly and be calibrated to within plus or minus 2.5 degrees Celsius. The CPMS also indicates that the condenser exhaust temperature must be maintained below 133.3 degrees Fahrenheit. Staff asked for several random dates in which the facility should report the condenser exhaust temperature. During the records review the condenser exhaust temperature was maintained below the required 133.3 degrees Fahrenheit.

The facility also monitors various other parameters of the natural gas glycol dehydration system. These parameters include the flash tank outlet pressure and the flash tank level. Staff requested these records as a

part of the records review. The records showed that the parameters were operated between normal operating ranges. The normal operating ranges for the flash tank level are between 20-80% and flash tank outlet pressure are between 20-40 psi.

Since the exhaust from the BTEX is routed to the fuel gas system for the reboiler, the conveyance system is not considered a closed vent system and is not subject to the inspection requirements. If the design is changed the applicability will need to be reevaluated.

Calculations of HC, VOC, HAP, and BTEX (Benzene, Toluene, Ethylbenzene, and Xylenes) emissions are sent annually as an attachment to the MAERS report. The 2019 calculated BTEX emission limit was 4.2 Mg/year. This is calculated using the equation from Appendix 7 in the facility's ROP. GRI-GLYCalc Version 4.0 is then used to calculate the BTEX emissions. The BTEX emissions reported for 2019 were calculated to be 0.0135 tons/year. This converts to 0.0122 Mg/year, showing that they are well below their BTEX emission limit.

Recently the facility was issued PTI No. 202-19 for a new Glycol Dehydration Unit that was approved on June 11, 2020. The facility plans to start construction on the new unit starting sometime Fall 2020. The new unit would likely not be completely installed by the end of Withdrawal season in Early 2021. This would likely mean the new unit would not be able to be in operation until end of 2021 or beginning 2022. The facility plans to decommission the existing Glycol Dehydration Unit once the new unit permitted under PTI No. 202-19 is installed.

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. The oil was last replaced on January 7, 2020. The facility also inspected all hoses and air cleaner/spark plugs on January 7, 2020 as well. It is documented that, and inspection of all belts was done on January 8, 2020.

The facility is keeping monthly records for the engine operating hours. The facility operates the engine every Monday for 20 minutes. The facility also differentiates emergency use hours from maintenance and readiness testing hours. If the facility does use emergency hours documentation is made of the reason why the engine was operated. In all of 2019 the facility recorded a total of 19 hours of operation.

FGCOLDCLEANERS:
The facility reported having only one cold cleaner at the facility. Staff required documentation of the cold cleaner that identified the following details: Parts cleaner Identification, Serial/Model Number, Date of installation, Air/Vapor Interface Area, Solvent Used, Reid Vapor Pressure, VOC content, and Applicable Rule 201 Exemption. The unit was installed on November 13, 2019. The facility started using a new solvent compared to the previous unit. The solvent is Green Unikleen 200. From section 9 of the SDS it is documented that there is no data available on the VOC content or Vapor pressure of the solvent. After the onsite inspection Staff asked Ms. Kapuga to reconfirm the VOC content and the Reid Vapor Pressure of the solvent. Ms. Kapuga confirmed in an email that after contacting Ipax Atlantic, LLC the supplier of Green Unikleen 200 that the total VOC content of the product is 2.4% VOC and the Reid Vapor pressure is less than 0.000058 psia. Staff discussed with Ms. Kapuga that the facility should update the documentation to reflect the information provided by supplier.

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.

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 12,691.77 MCF, 12,842.77 MCF, 12,402.09 MCF, and 12,889.19 MCF respectively between June 2019 and June 2020.

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.

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 apart 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 January 28, 2020 for all three units. The facility is required to get the tune-ups every 5 years for the following units: EUFUELHEATER1A, EUFUELHEATER1B, EUBOILER1, EULINEHEATER1, EULINEHEATER2, EULINEHEATER3, and EUREBOILER. The facility did provide documentation that showed the most recent tune-ups were conducted on January 13, 2016 for EUFUELHEATER1A, EUFUELHEATER1B, EUFUELHEATER1, EUFUELHEATER2, and EUFUELHEATER3. Other Documentation showed that EUBOLER was last tuned up on January 12, 2018. EUREBOILER was installed in 2018 and documentation of the boiler inspection certification was provided that shows the boiler is certified starting August 6, 2018 through August 6, 2020. Based on these records it appears that the facility is complying with the tune-ups required by the regulation.

Onsite Inspection Summary Conducted (July 17, 2020):

On July 17, 2020 AQD staff arrived at 4131 138th Avenue Hamilton, Michigan at 10:00 AM to conduct an announced air quality inspection of Consumer Overisel. Staff made initial contact with the office receptionist and signed in at the facility and stated the purpose of the visit. Les Bradshaw, Consumers Overisel was the Consumers facility contact that escorted Staff around the site during the onsite inspection.

EUGLYCDEHY:
This is a small natural gas glycol dehydrating system using triethylene glycol (TEG) that includes a reboiler, flash tank, glycol surge tank and a used glycol tank. The system is the final step in removing the moisture from the natural gas before being put into a distribution pipeline. This unit was not in operation, but staff did observe the glycol dehydration room that the condenser temperature, flash tank level, and flash tank pressure are measured. Since the unit was not in operation staff did not collect any operational data of the condenser temperature or the flash tank pressure/level.

EUEMERGGEN:
This 1,462 hp (1.3 MW) emergency generator is fueled by natural gas. The engine is required to be equipped with a non-resettable hour meter. Staff did observe the hour meter and took a reading during the inspection. The hour meter read 166 hours at the time of the inspection. The unit was not in operation.

FGCOLDCLEANERS:
Staff did observe the parts washer that the facility has. The top was covered during the inspection.
Staff did notice during the inspection that there was no sticker on the lid of the parts washer that had language instructing the user to leave the unit closed when not in operation. Staff asked Mr. Bradshaw if the facility could post instructions to leave the lid closed when the unit is not in operation. Mr. Bradshaw did post instructions and took a picture and emailed it to Staff once the inspection concluded.

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. Three of the four engines were operating during the inspection.

The engines that were in operation during the inspection were engines 2, 3, and 4. Staff did note the Engine Numbers, Brand, and Model Number for each of the engines as marked on the nameplate.

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

Staff did ask during the inspection if the facility has had any major engine maintenance/overhauls in the past two years. Mr. Bradshaw 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.

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. Staff stated to Ms. Kapuga that a report of the inspection would be sent to the facility for their records. Staff concluded the onsite inspection at 11:00 AM.-CJY

NAME Cody Yaggi DATE 9/23/20 SUPERVISOR RIL 9/23/20