

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

B648061942

FACILITY: DTE Gas Company - Columbus Compressor Station		SRN / ID: B6480
LOCATION: 1647 CAUGHILL Road, COLUMBUS		DISTRICT: Warren
CITY: COLUMBUS		COUNTY: SAINT CLAIR
CONTACT: Joe Neruda , Environmental Specialist		ACTIVITY DATE: 01/05/2022
STAFF: Shamim Ahammod	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Conducted a scheduled on-site inspection of DTE Gas Company-Columbus Compressor Station to determine the company's compliance with the requirements of Renewable Operating Permit (ROP) No. MI-ROP-B6480-2018.		
RESOLVED COMPLAINTS:		

On January 5, 2022, the Michigan Department of Environment, Great Lakes and Energy-Air Quality Division (EGLE-AQD) staff, I (Shamim Ahammod) conducted a scheduled on-site inspection of DTE Gas Company-Columbus Compressor Station (SRN: B6480) located at 1647 Caughill Rd, Richmond, Michigan. The purpose of the inspection was to determine the company's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; and the conditions of Renewable Operating Permit (ROP) No. MI-ROP-B6480-2018.

Source Description

DTE Gas Company operates a natural gas compressor station in southwestern St. Clair County approximately one mile north of Gratiot Avenue on Caugill Road. The area surrounding Columbus Compressor Station is rural, sparsely populated with residential properties. The nearest residence is approximately one-quarter of a mile south of Columbus Compressor Station. The function of Columbus Compressor Station is to maintain pressure in pipelines transporting sweet natural gas between gas storage fields in southern Michigan and to inject natural gas into geological formations for storage. The Columbus Compressor Station consists of two reciprocating compressor engines which fire sweet natural gas and are used to increase the natural gas pressure, one emergency generator, two glycol dehydrators used to remove impurities from withdrawn natural gas, various auxiliary equipment, several organic liquid storage vessels, and one cold cleaner.

Regulatory Analysis

A portion of St. Clair County is currently designated by the U.S. Environmental Protection Agency (USEPA) as a non-attainment area with respect to the SO₂ standard.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70 because the potential to emit of nitrogen oxides exceeds 100 tons per year.

Although EU007 and EU008 (FGDELAVALS) were installed after August 15, 1967, this equipment was exempt from New Source Review (NSR) permitting requirements at the time it was installed. However, future modifications of this equipment may be subject to NSR.

EUEMERGEN at the stationary source subject to the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and JJJJ.

EUDEHY1 and EUDEHY2 (FGDEHY) are not subject to the National Emissions Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities promulgated in 40 CFR Part 63, Subparts A and HHH because the facility is a minor source of hazardous air pollutants (HAP), based on emission calculations provided by DTE.

The emission limitation(s) or standard(s) for carbon monoxide from EU007 and EU008 (FGDELAVALS) at the stationary source is exempt from the federal Compliance Assurance Monitoring (CAM) regulation under 40 CFR 64.2(b)(1)(i) because carbon monoxide addressed by 40 CFR Part 63, Subpart ZZZZ. Therefore, EU007 and EU008 (FGDELAVALS) are exempt from CAM requirements for carbon monoxide.

Onsite Inspection

At 11:40 am, I arrived at the front gate of the facility and met with Mr. Joe Neruda, Environmental Specialist of DTE Gas Company-Columbus Compressor Station. In the office room, I met with Mr. Jeff Smither, Supervisor of DTE Energy-Columbus Compressor Station and Belle River, and Mr. Randy Ludwig, Technical person of DTE Energy-Columbus Compressor Station. I introduced myself to DTE staff and stated the purpose of the onsite inspection. I discussed the facility's operations and emissions units that are subject to the (ROP) No. MI-ROP-B6480-2018. I asked Mr. Smither to discuss the glycol dehydration process and enclosed flare. Two glycol dehydration units under FGDEHY are used to remove moisture from natural gas when it is withdrawn from the storage field at reduced pressure.

In the glycol contactor tower, wet gas contacts dry glycol (lean glycol), and the glycol absorbs water from the gas. The dry gas exits through the top of the glycol contactor to the gas meters to deliver the customers. Rich glycol exits through the bottom of the glycol contactors to the reflux condenser then is routed to the reboiler to regenerate the glycol. The regenerator is a distillation column, where glycol and water are separated. The rich glycol is preheated in heat exchangers before it is fed to the regenerator column. At the top of the column is a partly condenser, this provides reflux thus improving the separation between water and glycol.

Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) volatile organic compounds are a problem because of environmental concerns. BTEX is removed from the gas during glycol dehydration, the vented gas from the glycol regenerator can be flared or treated to remove the BTEX before it is vented to the atmosphere. The BTEX from reflux condensers exit through the top of the reflux condenser to waste gas heat exchanger to heat the BTEX. Then it is directed to the enclosed flare (thermal oxidizer) to remove the BTEX before it is vented to the atmosphere. In a thermal oxidizer, BTEX is burned at high temperatures to produce carbon dioxides and water.

The facility uses a flash tank separator (3 phase separator) before the regeneration column to remove the majority of the hydrocarbons from the rich glycol and to reduce VOC emissions from the still. The flash gas from the separator can be used as supplemental fuel gas or as stripping gas on the reboiler.

DTE staff and I walked through the glycol dehydration building. At the time of inspection, gas was being withdrawn from the storage field and glycol dehydration unit EUDEHY1 was operating to remove the moisture from natural gas. EUDEHY2 was not operating at the time of inspection.

Mr. Neruda and I walked through the FGDELAVALS building and observed two reciprocating internal combustion engines (RICE). FGDELAVALS are used to compress natural gas for storage during the summer months and transmission throughout the pipeline transmission system to customers during the winter months. At the time of inspection, both compressors were not operating because gas was being withdrawn from the storage field at high pressure.

Record review and regulatory analysis

Source-Wide Conditions

Monitoring/Record-keeping

As required in SC VI.1, Mr. Neruda provided me the source-wide natural gas consumption rate from January 2020 through Nov. 2021. The minimum source-wide natural gas consumption rate was 10 MCF in October 2020 and the maximum natural gas consumption rate was 16282 MCF in June 2021.

FGDEHY

FLEXIBLE GROUP CONDITIONS

Two glycol dehydration units each with an associated flash tank.

Emission Units: EUDEHY1, EUDEHY2

POLLUTION CONTROL EQUIPMENT

Enclosed flare

Emission Limits

Per SC I.1 and SC I.2, I reviewed the VOC records for EUDEHY1 and EUDEHY2 for January 2020 through Dec. 2021. The VOC emission limit for EUDEHY1 and EUDEHY2 is 6.2 tons per year and 1.9 tons per year respectively, based on a 12-month rolling period as determined at the end of each calendar month. According to Mr. Neruda, the permittee used Glycol Software (GRI-GLYCalc Version 3.0) to calculate the daily VOC emissions (lb/day). The inputs entered into the Glycol software program are the following: (These parameters are provided by operations daily)

- Inlet Pressure
- Average Glycol flowrate
- Average ECS temperature
- Flash tank pressure
- Flash tank temperature
- Hours of operation

For each day, these inputs are entered into the Glycalc program to calculate the emissions. The GlyCalc software calculates the emissions based on equations/calculations within the software itself. These calculations (from GRI-GLYCalc Version 3.0) are completed for each day that the DEHY is operating then entered in the spreadsheet by the Station analyst. The total VOC emission (lb/day) from GRI-GLYCalc is entered into a spread sheet to calculate the lb/month and 12 months rolling VOC.

EUDEHY1 VOC emissions

I reviewed the January 2020 through December 2021 data and found the highest 12-month rolling VOC emissions in the records for Jan 2020 – Dec 2021 was 199.43 lb for February 2020 which is below the permitted limit (6.2 ton/year).

EUDEHY2 VOC emissions

I reviewed the January through December 2021 data and found the highest 12-month rolling VOC emissions in the records for Jan 2020 – Dec 2021 was 362 lb for February 2020 which is below the permitted limit (1.3 ton/year).

Process/operational Restrictions

Per SC III.1, the permittee is required to keep the average glycol recirculation rate for EUDEHY2 below 14 gallons per minute. I reviewed the record of the average glycol recirculation rate for

EUDEHY2 from January 2020 through Nov. 2021 and found the average glycol recirculation rate for EUDEHY2 was below 14 gallons per minute. Based on records, the maximum glycol recirculation rate for EUDEHY2 was 11.62 gallons per minute in February 2021 which complied with the limit of 14 gallons per minute. This satisfies the permit conditions outlined in SC III.1.

As required in SC III.2 (Process and operational restrictions), the operation of the dehydrator shall not begin until the pilot flame reaches a minimum temperature of 1400 degrees Fahrenheit. Per records review, I observed, EUDEHY1 and EUDEHY2 flare temperature was above than 1400-degree Fahrenheit during the operational period of January 2021 through Nov. 2021.

Design/Equipment parameters

Per SC IV.1, the permittee shall not process natural gas in EUDEHY1 or EUDEHY2 unless the associated flash tank is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes routing the flash tank exhaust gas to the reboiler burner, the enclosed flare, or equivalent control device for destruction.

Per SC IV.1 and SC IV.2, at the time of the inspection, I observed, a flash tank (3-phase separator) was installed, and the flash tank exhaust gas is routed to the reboiler burner and an enclosed flare (thermal oxidizer).

Per SC IV.3, each enclosed flare is maintained and equipped with an operating temperature monitor.

Per SC IV.4, Each enclosed flare is equipped with a flame detector. During the inspection, I observed the flame detector on the digital monitoring screen of EUDEHY1 and the temperature of the enclosed flare was 1601-degree F. At the time of inspection, EUDEHY2 was not operating.

Testing/Sampling

As specified in SC V.1, at least once each withdrawal season, the permittee is required to analyze the natural gas for nitrogen, carbon dioxide, hydrogen sulfide, C1 through C6 series hydrocarbons, benzene, toluene, xylene ethylbenzene, and heptane. Most recently, the permittee has analyzed the natural gas for EUDEHY1 and EUDEHY2 on 1/7/2021. I reviewed the gas analysis report for EUDEHY1 and EUDEHY2 and found they have analyzed the natural gas for nitrogen, carbon dioxide, hydrogen sulfide, C1 through C6 series hydrocarbons, benzene, toluene, xylene ethylbenzene, and heptane.

Monitoring/Recordkeeping

Per SC VI.2, I reviewed the record of the amount of natural gas processed through each dehydrator (EUDEHY1 and EUDEHY 2) for each calendar month for January 2019 through December 2021.

Per SC VI.3, I reviewed the record of the average glycol recirculation rate for EUDEHY2 from January 2019 through December 2021 and found the average glycol recirculation rate for EUDEHY2 was below 14 gallons per minute.

Per SC VI.4, the operating temperature of each enclosed flare shall be monitored and recorded daily when the associated dehydrator is operating. I reviewed the enclosed flare operating temperature record associated with DEHY1 and DEHY2 from January through December 2021.

Per SC VI.5, the permittee shall calculate the VOC emission rates, as required in SC I.1 and I.2, from each dehydrator (EUDEHY1 and EUDEHY2) for each calendar month and 12-month rolling period. See details in SC 1.1 and I.2 of Emission Limits (FGDEHY).

Per VI.6, I reviewed the records of hours of natural gas processing, for each dehydrator (EUDEHY1 and EUDEHY2), for each month and 12-month rolling period.

For the requirement of SC VI.7, see details in SC III.1(Process/operational Restrictions-FGDEHY) and SC VI.3 (Monitoring and recordkeeping).

FGDELAVALS:

FGDELAVALS consists of two DeLaval 2000 horsepower, 4-cycle, lean-burn, spark ignition, natural gas-fired, reciprocating internal combustion engines, which are used to power natural gas pipeline compressors. At the time of inspection, I noted the operating hours for engine-1 and engine-2 were 96380 hours and 38822 hours respectively.

Emission Units: EU007, and EU008

Pollution control equipment: Catalytic Oxidizers (DVCATOX1, DVCATOX2)

Emission Limits

Per SC I.1, I received an emissions test report for carbon monoxide (CO) emissions for engines 1 & 2 for the DTE Gas Columbus Compressor station via email from Mr. Neruda. The test was performed on August 11, 2021. The results of the testing indicate that the average Carbon Monoxide Reduction Efficiency for engines 1 and 2 are 98.9 and 99.3 respectively. It appears that Engines 1 and 2 comply with permit requirements for CO of 93% destruction efficiency.

Process/Operational Restrictions

Per SC III.1 and 4, The permittee shall implement and maintain a plan that describes how emissions will be minimized during all startups, shutdowns, and malfunctions. The plan shall incorporate requirements listed in 40 CFR 63.6(e)(3). The permittee must operate and maintain the engine and associated air pollution control equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions. I received and reviewed the Startup, Shutdown, & Malfunction Plan (SSMP) for the gas-fired reciprocating internal combustion engines and oxidation catalysts that describe how emission will be minimized during all startups, shutdowns, and malfunctions.

- Per SSMP plan, Catalyst -Pressure differential across the catalyst and the catalyst inlet temperature is monitored continuously when the associated engine is operating.
- Per the SSMP plan, the catalyst is replaced based on the manufacturer's recommendations or if the catalyst was determined to be a factor in a stack test failure.
- Per the SSMP plan, the Catalyst inlet thermocouple-accuracy of the thermocouple for each catalyst inlet is checked once each calendar year and, if necessary, the thermocouple is replaced. Thermocouple accuracy must be within 1% of the measured value or 2.8 degrees C, whichever is higher. More details are explained in the Monitoring and record-keeping section.

As required in SC III.7 of Process/operational restrictions of FGDELAVALS, and as specified in 40 CFR 72.2, I received the records of natural gas usage per engine from January 2019 through December 2021. The reciprocating engines are fired only with pipeline natural gas.

Design/Equipment Parameters

Per SC IV.1, an oxidation catalyst system is installed. The permittee does not track four hour rolling averages. Instead, the permittee has controls and shutdowns in place to immediately shut down the engine if the catalyst inlet temperature exceeds 1350 degrees F. As noted in the SSMP (Startup, shutdown, and malfunction plan), there are alarms and shutdown procedures in place that will shut the system down before the temperature exceeds 1350 degrees F. This satisfies the permit conditions set forth in SC IV.1 that states, "immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 degrees F".

Testing/Sampling

Per SC V.1, The permittee shall annually verify the catalyst system efficiency from each engine, by testing at the owner's expense, in accordance with 40 CFR 63.6640(c). Verification of CO reduction

includes the submission of a complete report of the test results to the AQD within 60 days following the last day of the test.

On August 11, 2021, the permittee performed an emissions test for carbon monoxide (CO) emissions for engines 1 & 2 for the DTE Gas Columbus Compressor station to demonstrate compliance 40 CFR, Part 63, Subpart ZZZZ regulations. More details are explained in Emission Limits Section. Most recently, on January 26, 2022, the permittee conducted carbon monoxide (CO) emission tests for the DeLaval Engine (EU007) with catalytic oxidizer required by 40 CFR Part 63 Subpart ZZZZ (RICE MACT). The facility submitted the complete report of the test results to the AQD-TPU and AQD-District Office on time.

Monitoring/Recordkeeping

Per SC VI.1, The permittee shall install, operate, and maintain a continuous parameter monitoring system (CPMS) for each stationary RICE to continuously monitor the inlet temperature to the catalyst.

- a. The CPMS must collect continuous temperature readings, at least once every 15 minutes. The permittee has installed the CPMS and collects continuous temperature readings, at least once every 15 minutes. I received and reviewed the CPMS data that record the catalyst inlet temperature at all times that engines are operating from April 15, 2021, through September 2, 2021. The temperature sensor must have a minimum tolerance of 2.8°C (5°F) or 1% of the measurement range, whichever is larger. The permittee must conduct an accuracy audit of the thermocouple at least annually. Based on the thermocouple accuracy report dated 7/13/2021, it appears that the temperature sensor tolerance was more than 1% of the measurement range. The first and second measurements averages are 3.85% for DeLaval#1 and 4.55% for DeLaval#2. The permittee does not calibrate the thermocouple instead they verify the accuracy of the thermocouple annually. If the thermocouple accuracy is less than 1% of the measurement range, then they replace the thermocouple.

Per SC VI.2, The permittee shall monitor and record the catalyst inlet temperature at all times that the engines are operating, except during monitor malfunctions, associated repairs, performance evaluations, and required quality assurance or control activities. I received and reviewed the CPMS data that record the catalyst inlet temperature at all times that engines are operating except during monitor malfunctions, associated repairs, performance evaluations, and required quality assurance or control activities. Engines were operating during the following period: DeLaval #1 was operating from April 15, 2021, through 24 May 2021, and from June 1, 2021, through September 9, 2021. DeLaval#2 was operating from April 7, 2021, through June 6, 2021, and from June 2, 2021, to September 2, 2021.

Per SC VI.3, The permittee shall not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. Must use all the valid data collected during all other periods. There were no malfunctions from April 15, 2021, through September 2, 2021, according to Mr. Neruda.

Per SC VI.4, In lieu of the CPMS specified in SC VI.1, the permittee can opt to install, calibrate, maintain, and operate in a satisfactory manner a continuous emission monitoring system (CEMS) to monitor and record the CO and either the O₂ or CO₂ at both the inlet and outlet of the control device for each engine, according to the procedures in 40 CFR 63.6625(a)(1) through (4), 40 CFR 63.6635 and 40 CFR 63. The permittee has installed the CPMS.

Per SC VI.5, If the permittee opts to reduce the catalyst inlet temperature to a 4-hour rolling average, the permittee shall keep, in a satisfactory manner, records of the 4-hour rolling average for each catalyst inlet temperature for each catalyst, as required by SC VI.1. The permittee has controls and shutdowns in place to immediately shut down the engine if the catalyst inlet temperature exceeds 1350 degrees F. This satisfies the permit conditions set forth in SC IV.1 that states, “immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 degrees F”.

Per SC VI.7, The permittee shall keep the following records:

- a. **A copy of each notification and report submitted to comply with Subpart ZZZZ, and the documentation supporting any notification.**
 - **On February 2, 2022, AQD received the report required by 40 CFR Subpart ZZZZ. I reviewed it and there was no deviation.**
- b. **Records of the occurrence and duration of each malfunction of the engine, control equipment, and monitoring equipment.**
 - There was no malfunction of the engine according to Mr. Neruda.
- c. Records of actions taken during periods of malfunction to minimize emissions including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal manner of operation.
 - There was no malfunction of the engine according to Mr. Neruda.
 -
- d. Records of performance tests and performance evaluations.
 - Regarding the SC VI.7.d, more details are explained in SC V.1 (Testing/Sampling) and I.1 (Emission Limit).

As specified in SC VI.9, the permittee shall record the FGDELAVALS natural gas consumption rate for each calendar month. Mr. Neruda provided a record of natural gas consumption of DELAVAL #1 and DELAVAL#2 from January 2019 through December 2021.

Reporting

As specified in SC VII.2 and VII.3, semiannual and annual reports are being submitted on time and no deviations were reported.

Other Requirements

Per SC IX.1, the permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines. Requirements in 40 CFR Part 63, Subpart A and Subpart ZZZZ applicable to the DeLaval engines were evaluated in Section I – VII of FGDELAVALS.

EUEMERGEN engine

This facility has one emergency generator to generate electricity during the emergency period. There is no pollution control equipment for the emergency generator.

Emission Limits

Per SC I.1-3,

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	2.0 g/hp-hr	Per horsepower-hour, per engine	EUEMERGEN	SC III.5 SC V.1	40 CFR 60.4233(e) and 40CFR 60 Subpart JJJJ Table 1
2. CO	4.0 g/hp-hr	Per horsepower-hour, per engine	EUEMERGEN	SC III.5 SC V.1	40 CFR 60.4233(e) and 40CFR 60 Subpart JJJJ Table 1
3. VOC ^a	1.0 g/hp-hr	Per horsepower-hour, per engine	EUEMERGEN	SC III.5 SC V.1	40 CFR 60.4233(e) and 40CFR 60 Subpart JJJJ Table 1

Mr. Neruda sent a copy of the emergency engine EPA certification to me via email as required in SC VI.3, "If the engine is a certified engine operating in a certified manner, the permittee shall maintain documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable." It appears the engine is certified by USEPA. The certification contains the following emission standards: CO (g/hp-hr): 4, VOC (g/hp-hr): 1, NOX (g/hp-hr):2. These are required in SC I.1-3.

Process/Operational restrictions

Per SC III.1, The permittee shall only fuel the engine with pipeline-quality natural gas.

- As required in SC III.1, Mr. Neruda provided me a copy of the emergency engine EPA certification which shows that the engine's fuel type is natural gas.

Per SC III.2, There is no time limit on the use of the engine in emergencies.

- For the calendar year 2021, the total hours of operation of the emergency generator were 110.7 hours for the power outage.

Per SC III.3, The permittee may operate each emergency stationary RICE for maintenance and readiness testing, provided that the tests are recommended by the Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance and readiness testing of such units is limited to 100 hours per calendar year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

- For the calendar year 2021, the total hours of operation of the emergency generator were 8.1 hours for the maintenance and readiness testing that was below the permitted limit.

Per SC III.4, The permittee may operate EUEMERGEN up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing in SC III.3. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

For the calendar year 2021, the total hours of operation of the emergency generator were 8.1 hours for the maintenance and readiness testing and 110.7 hours for the power outage.

Per SC III.5,

If the permittee does not operate the EUEMERGEN according to the requirements in 40 CFR 60.4243 (d) (EUEMERGEN SC III. 2 through 4), the engine will not be considered an emergency engine under 40 CFR 60 Subpart JJJJ and must meet all requirements for non-emergency engines.

- The permittee satisfied the SC III.2 through 4.

Per SC III.6, The permittee shall demonstrate compliance with the emission limitations in SC I. 1 through 3 according to one of the following methods:

- a. Purchasing a certified engine and operating it as a certified engine, according to the following requirements:
 - i. Operating and maintaining the certified engine according to the manufacturer's emission-related written instructions
 - ii. Changing only those emission-related settings that are permitted by the manufacturer.
 - iii. Meeting the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to the permittee.

If the permittee does not operate and maintain the certified engine and control device according to the requirements in this condition, the engine will be considered a non-certified engine.

The permittee has purchased a certified engine and operates it as a certified engine.

Design/Equipment Parameters

On January 10, 2022, I received a screenshot of the generator hours meter via email. The hour's meter displayed 1009 hrs. It indicates that the total hours of operation of the emergency generator were 1009 hours as of January 10, 2022.

Testing/Sampling

Since the engine is certified, the permittee does not require testing the engine. More details are explained in SC I.1-3 (emission limit) and SC III.1-6 (Process/operational restrictions).

Monitoring/recordkeeping

As required in SC VI.1, Mr. Neruda provided me a record mentioning the operation hours of an emergency generator. Based on his record, in 2021, the total operating hours of the emergency generator were 118.5 hours. Among them, 110.7 hours were spent for emergency operations and 8.1 hours were run for non-emergency situations. This satisfies the permit conditions outlined in SC VI.1.

2021 Columbus Emergency Generator Hours

	Total	*Monthly	Comments				

				Power outage/Emergency use	Non- Emergency Use	maintenance and readiness testing	
Jan-21	890.5	0.3	exercise			0.3	
Feb-21	890.5	0					
Mar-21	890.5	0					
Apr-21	890.5	0					
May-21	892	1.5	exercise			1.5	
Jun-21	901.3	9.3	outage	9.3			
Jul-21	905.9	4.6	exercise			4.6	
Aug-21	926.9	21	power outage	21			
Sep-21	992.3	65.4	power outage	65.4			
Oct-21	992.5	0.2	exercise			0.2	
Nov-21	994	1.5	exercise			1.5	
Dec-21	1009	15	outage	15			
Yearly total		118.8		110.7		0	8.1

Per SC VI.2, the permittee shall maintain records of all maintenance conducted on the engine. Mr. Neruda provided a record that stated the date and what services were conducted on the engine. Per SC VI.3, I received the documentation that the engine is certified. More details are explained in SC I.1-3 (emission limit) and SC III.1-6 (Process/operational restrictions).

FG-COLD Cleaners

The permittee frequently uses the FG-COLD Cleaners per Mr. Neruda's statement.

Emission Unit: EUCOLDCLEANER

Pollution Control Equipment: NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

Per SC IV.1, 1, The cold cleaner must meet one of the following design requirements:

- a. The air/vapor interface of the cold cleaner is no more than ten square feet. (R 336.1281 (2)(h))
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. (R 336.1285((2)r)(iv))
- According to Mr. Neruda, the air/vapor interface of the cold cleaner is 7.93 square feet.
1. The cold cleaner shall be equipped with a device for draining cleaned parts.
 - According to Mr. Neruda, the device for draining the cleaned parts is located inside the Cold cleaner.
 1. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. (R 336.1611(2)(a), R 336.1707(3) (a))

- At the time of inspection, I observed the cold cleaner is equipped with a cover.
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. (R 336.1707(3)(a))
- The Reid vapor pressure of the solvent is 0.067 kPA.

MONITORING/RECORDKEEPING

As required in SC VI.2, the permittee provided the following information:

Station	Location	Model	Serial	Interface Area	Install Date	Solvent	Reid Vapor Pressure	Exemption
COL	Compressor Building	906601	87765	7.96 sqft	8/1/2001	Zep Dyna 143	0.067 kPA	281(h0

CONCLUSION

Based on the onsite inspection, review of records, and discussion with facility staff, the facility appears to comply with the conditions of ROP No. MI-ROP-B6480-2018.

NAME Shamim Ahammod

DATE 03/17/2022

SUPERVISOR *K. Kelly*