

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

B372150144

FACILITY: ANR Pipeline - Reed City Compressor Station		SRN / ID: B3721
LOCATION: 7677 230th Ave., REED CITY		DISTRICT: Cadillac
CITY: REED CITY		COUNTY: OSCEOLA
CONTACT: Brad Stermer, Sr. Environmental Specialist		ACTIVITY DATE: 06/26/2019
STAFF: Caryn Owens	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection and Records Review		
RESOLVED COMPLAINTS:		

On Wednesday, June 26, 2019, Caryn Owens and Jodi Lindgren of the Department of Environment, Great Lakes, and Energy (EGLE) – Air Quality Division (AQD) conducted a scheduled field inspection of ANR Pipeline (ANR) – Reed City Compressor Station (SRN: B3721) located at 7677 230th Avenue, Reed City, Osceola County, Michigan. Majority of the site is located on the west side of 230th Road, and one of the glycol dehydrators and associated equipment is located on the east side of 230th Avenue. The entrance to the facility is approximately 2.25 miles north of US-10 and 230th Avenue (Norman Road) intersection.

The field inspection and records review were to determine compliance with the Renewable Operating Permit (ROP) MI-ROP-B3721-2014a. The site is a major source for hazardous air pollutants (HAPs), and is subject to the following National Emissions Standards for Hazardous Air Pollutants (NESHAPs) under 40 CFR Part 63: NESHAP from Natural Gas Transmission and Storage Facilities (40 CFR Part 63, Subpart HHH); NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63 Subpart DDDDD); and NESHAP for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ).

Summary:

The activities covered during the field inspection and records review for the facility indicates the facility was in compliance with ROP MI-ROP-B3721-2014a. I should be noted that the if the facility is installing a new glycol dehydration system to replace EURC024, the facility should apply for a Permit to Install (PTI) prior to construction and installation of the new glycol dehydration system for EURC024. Specific permit conditions that were reviewed are discussed below.

On-site Inspection:

At the time of the inspection, I met with Matt Feltman of ANR TransCanada who accompanied me throughout the facility and provided onsite records.

The Reed City Compressor Station is a natural gas transmission and compression station which operates two natural gas storage fields, the Loreed and the Reed City (RC) Stray Storage Fields. The Reed City Compressor Station operates under varying conditions. The pipeline transports natural gas to and from the storage reservoirs and typically operates between 400 and 2000 psig. During injection, natural gas free flows into the reservoir until the field pressure approaches pipeline pressure. At this point one or more internal combustion engines will be used to compress the natural gas into the reservoir. Compression injection usually continues until the field reaches its maximum rated pressure. Two of the engines at the site are equipped with catalytic converters to control NOx emissions. The station utilizes nine natural gas-fired engines in total for transmission and processing. Depending on storage and delivery, gas availability, and demand, the engines may operate simultaneously, independently or not at all. During the field inspection, only one of the compressor engines (EURC011) was operating.

Gas withdrawn from the RC Stray Storage Field, that is conditioned through the RC Stray glycol dehydration system to remove liquids that are transported out of the reservoir with the gas. After conditioning the natural gas, it is fed into a separator to further remove liquids that remain in the gas stream before it is compressed and transported into the pipeline downstream. The emissions from the glycol dehydrator are controlled by a condenser and thermal oxidizer. The RC Stray glycol dehydrator was not operating during the inspection, since it is summertime, they are not withdrawing gas from the reservoir. It should also be noted that Mr. Feltman stated the RC Stray storage field is currently shut-in, and they will be getting a new glycol dehydrator system to replace the former RC Stray unit. AQD

recommends ANR to get a PTI prior to installation of the new glycol dehydration system.

Each well site in the Loreed Storage Field has a small gas-liquid separator that is used to separate the hydrocarbons from the gas at the well head. Gas is routed to the compressor station, while liquids are routed to one of the three condensate tank battery areas. Prior to entering the pipeline from the Loreed Storage Field, the natural gas is conditioned through the Loreed glycol dehydration system to remove liquids from the gas before it is compressed or transported into the pipeline downstream. The emissions from the glycol dehydrator are controlled by a condenser and thermal oxidizer. At the time of the inspection, the Loreed glycol dehydrator was not operating during the inspection, since it is summertime, they are not withdrawing gas from the reservoir.

During the inspection, the two smaller Ingersoll-Rand engines and large Clark TCVD engine in the northwest corner of the site were shut-in because the facility was replacing piping, and the area was taped off. These engines are typically used to put gas into the storage reservoir during the summer months.

There was only one engine operating during the inspection which was EU011 which is used to regulate the flow and pressure to and from the storage field. The engine parameters were recorded below:

EURC011	Readings
Catalyst Differential Pressure:	2.48 inches water column
Catalyst Inlet Temperature	973oF
Catalyst Outlet Temperature	1,056oF
Engine Horsepower:	648 Hp
Torque:	72.5%

The facility is claiming the following exemptions at the facility:

- A hot water heater less than 120 gallons (0.125 MMBtu/hr) meets exemption Rule 336.1282(2)(b)(i).
- Maintenance oil storage tank (1,760 gallon) meets exemption Rule 336.1284(2)(c).
- Four 10,000 gallon oil storage tanks meets exemption Rule 336.1284(2)(c).
- Seven oil stage tanks less than 500 gallon meets exemption Rule 336.1284(2)(c).
- Ten condensate and hydrocarbon storage tanks ranging between 1,200 to 8,820 gallon meets exemption Rule 336.1284(2)(e).
- A methanol storage (7,500 gallons) meets exemption Rule 336.1284(2)(n).
- Three glycol storage tanks (less than 12,800 gallons) meets exemption Rule 336.1284(2)(i).
- Two fuel storage tanks of 500 gallons (one of diesel fuel and one gasoline) meets exemption Rule 336.1284(2)(g)(i).
- A wastewater storage tank (15,000 gallons) meets exemption Rule 336.1284(2)(i).
- Three Ambitol storage tanks meets exemption Rule 336.1284(2)(i).
- A Flare meets exemption Rule 336.1285(2)(f).

Records Review:

EURC015: Loreed glycol dehydration system. System includes flash vessel, heat exchangers and filters, distillation column and a reboiler surge tank. The system is controlled by a condenser and thermal oxidizer. At the time of the inspection, the Loreed glycol dehydration system was not operating.

I. Emission Limits:

Below is the table showing the emission limits permitted limits versus the highest reported emission limit from June 1, 2018 through May 31, 2019:

Pollutant	Permitted limit	Reported limit
VOC (lb/day):	295 lb/day	25.4 lb/day
VOC (tpy):	19 tons per year (tpy)	0.166 tpy
Benzene (tpy):	Less than 1 ton per year	0.005 tpy

The reported emission limits were within the permitted limits.

II. Material Limits:

Material Limits are not applicable for EURC015.

III. Process/Operational Restrictions:

At the time of the inspection EURC015 was equipped with a thermal oxidizer and a condenser as back-up. An hour's meter was installed, and the glycol dehydrator had operated for a total of 1,508 hours per 12-month rolling time period. The glycol dehydration system and control devices were not operating during the inspection.

The glycol dehydrator is installed with a flash tank, which routes the emissions from the flash tank to the reboiler, and the access emissions are routed through the thermal oxidizer (or condenser if the thermal oxidizer is not in operation).

Additionally, based on the records reviewed, ANR stated that stripping gas is not used at the facility.

IV. Design/Equipment Parameters:

As previously stated, the Loreed glycol dehydrator is equipped with a thermal oxidizer and a condenser, which is used for back-up if the thermal oxidizer is not operating.

V. Testing/Sampling:

The processed natural gas stream of the Loreed glycol dehydrator system shall be analyzed for VOC and benzene content in the natural gas at least once every five years. The most recent analysis was conducted April 3, 2019, using GRI-GLYCalc Version 4.0. The GRI-GLYCalc analyses for the condenser and thermal oxidizer are attached.

VI. Monitoring/Recordkeeping:

The facility continuously monitors the temperature of the thermal oxidizer and condenser, and has an alarm installed if the thermal oxidizer falls below 1,400 degrees Fahrenheit when operating, and an alarm on the condenser that activates if the condenser goes above 120 degrees Fahrenheit. The temperature of the thermal oxidizer and condenser is recorded daily.

The facility monitors the natural gas usage for processed through the Loreed Glycol Dehydrator on a continuous basis and records the daily fuel use. The facility records monthly and 12-month rolling time period calculations for VOC and benzene and the hours of operation. The 12-month rolling time period emissions are discussed above under emission limits. The natural gas usage, monthly and 12-month rolling time period emissions records are attached.

VII. Reporting:

The semi-annual reports and annual compliance reports for ROP certification were submitted to the EGLE in timely manner. During the reporting period the permittee reported all monitoring and associated recordkeeping requirements.

VIII. Stack/Vent Restrictions:

Stack parameters for the Loreed Glycol Dehydrator have not changed from the previous inspection and appear to meet the specifications in the ROP.

IX. Other Requirements:

No Other Requirements are applicable for EURC015.

EURC024: Reed City glycol dehydration system removes water from the natural gas. System includes flash vessel, heat exchangers and filters, distillation column and a reboiler surge tank. The system is controlled by either a thermal oxidizer or condenser. At the time of the inspection the Reed City glycol dehydration system was not operating. It should be noted that ANR stated this glycol dehydration system is being replaced. A Permit to Install (PTI) should be applied for prior to installation and construction of the new glycol dehydration system.

I. Emission Limits:

Below is the table showing the emission limits permitted limits versus the highest reported emission limit from June 1, 2018 through May 31, 2019:

Pollutant	Permitted limit	Reported limit
VOC (lb/day):	90 lb/day	12.8 lb/day
VOC (tpy):	15.4 tons per year (tpy)	0.159 tpy
Benzene (tpy):	Less than 1 ton per year	0.022 tpy

The reported emission limits were within the permitted limits.

II. Material Limits:

Material Limits are not applicable for EURC024.

III. Process/Operational Restrictions:

At the time of the inspection EURC024 was equipped with a thermal oxidizer and a condenser as back-up. An hour's meter was installed, and the glycol dehydrator had operated for a total of 2,134 hours per 12-month rolling time period. The glycol dehydration system and control equipment were not operating during the inspection.

The condenser was not operating during the inspection. The glycol dehydrator is installed with a flash tank, which routes the emissions from the flash tank to the reboiler, and the access emissions are routed through the thermal oxidizer (or condenser if the thermal oxidizer is not in operation).

Additionally, based on the records reviewed, ANR stated that stripping gas is not used at the facility.

IV. Design/Equipment Parameters:

As previously stated, the RC Stray glycol dehydrator is equipped with a thermal oxidizer and a condenser, which is used for back-up if the thermal oxidizer is not operating.

V. Testing/Sampling:

The processed natural gas stream of the RC Stray glycol dehydrator system shall be analyzed for VOC and benzene content in the natural gas at least once every five years. The most recent analysis was conducted April 3, 2019, using GRI-GLYCalc Version 4.0. The GRI-GLYCalc analyses for the condenser and thermal oxidizer are attached.

VI. Monitoring/Recordkeeping:

The facility continuously monitors the temperature of the thermal oxidizer and condenser, and has an alarm installed if the thermal oxidizer falls below 1,400 degrees Fahrenheit when operating, and an alarm on the condenser that activates if the condenser goes above 90 degrees Fahrenheit. The temperature of the thermal oxidizer and condenser is recorded daily.

The facility monitors the natural gas usage for processed through the RC Stray glycol dehydrator on a continuous basis and records the daily fuel use. The facility records monthly and 12-month rolling time period calculations for VOC and benzene and the hours of operation. The 12-month rolling time period

emissions are discussed above under emission limits. The natural gas usage, monthly and 12-month rolling time period emissions records are attached.

VII. Reporting:

The semi-annual reports and annual compliance reports for ROP certification were submitted to the EGLE in timely manner. During the reporting period the permittee reported all monitoring and associated recordkeeping requirements.

VIII. Stack/Vent Restrictions:

Stack parameters for the RC Stray glycol dehydrator have not changed from the previous inspection and appear to meet the specifications in the ROP.

IX. Other Requirements:

No Other Requirements are applicable for the RC Stray glycol dehydrator system.

FGRC001: Four white Superior 8GT825 1,000 hp natural gas fired 4-stroke lean burn (4SLB) reciprocating internal combustion engines (RICE), Two Ingersol-Rand KVS 2,000 hp natural gas fired 4SLB RICE, One Clark TCVD 16M 8,600 hp natural gas fired 2SLB RICE, Two white Superior 8G825 660 hp natural gas fired 4-stroke rich burn (4SRB) RICE.

I. Emission Limits:

Emission Limits are not applicable for FGRC001.

II. Material Limits:

Material Limits are not applicable for FGRC001.

III. Process/Operational Restrictions:

The previous gas analysis indicated the natural gas fuel contained less than 2 grains of total sulfur per 100 cubic feet of natural gas.

IV. Design/Equipment Parameters:

Design/Equipment Parameters are not applicable for FGRC001.

V. Testing/Sampling:

Testing/Sampling are not applicable for FGRC001.

VI. Monitoring/Recordkeeping:

Monitoring/Recordkeeping are not applicable for FGRC001.

VII. Reporting:

The semi-annual reports and annual compliance reports for ROP certification were submitted to the EGLE in timely manner. During the reporting period the permittee reported all monitoring and associated recordkeeping requirements.

VIII. Stack/Vent Restrictions:

Stack/Vent Restrictions are not applicable for FGRC001.

IX. Other Requirements:

Other Requirements are not applicable for FGRC001.

FGMACTZZZZ: The facility uses two, 4-stroke, rich burn, natural gas-fired RICE (EURC011 and EURC012) with a site-rating of 660 hp each to compress natural gas to recycle gas captured from the storage field liquid handling system. These MACT subject engines are used as needed to regulate flow to and from the storage field.

I. Emission Limits:

FGMACTZZZZ has an emission limit of 75 percent reduction of formaldehyde. Compliance with this limit is demonstrated through testing, which is further discussed below, and the continuous parameter monitoring system (CPMS) described in Monitoring and Recordkeeping below.

II. Material Limits:

Material Limits are not applicable for FGMACTZZZZ.

III. Process/Operational Restrictions:

Based on the design of the engines, EURC011 and EURC012 are online at the time of ignition, there is no bypass for the engines, so there isn't a start-up period, and the engine speed responds to the load.

A new catalyst was installed on EURC011 on May 24, 2019, but testing has not been scheduled yet to test the new catalyst. The catalyst on EURC012 was installed and tested February 26, 2015. The testing data from EURC012 indicated a baseline pressure drop of 2.53 for EURC012 which ranges between 0.53-4.53. Until the new catalyst for EURC011 is tested, the previous testing data for EURC011 indicated a baseline pressure drop of 2.37 which ranges between 0.37 to 4.37. Additionally, the results of the February 26, 2015 test indicate formaldehyde reduction is 94 percent for EURC011 and 98 percent for EURC012, which meets the FGMACTZZZZ operating limits. During the inspection, only EURC011 was operating. The inlet temperature of the catalyst was 973 degrees Fahrenheit and the outlet temperature was 1,056 degrees Fahrenheit. The catalyst pressure drop was 2.48 inches of water column. The engine was operating within the tested operating parameters in accordance with FGMACTZZZZ.

IV. Design/Equipment Parameters:

Design/Equipment Parameters are not applicable for FGMACTZZZZ.

V. Testing/Sampling:

As previously stated, the catalyst (EURC011) was changed on May 24, 2019, but the catalyst has not been tested yet. The catalyst (EURC012) most recent catalyst was changed and tested February 26, 2015. The testing is discussed above under Process/Operational Restrictions. The facility chooses to comply with the 76 percent reduction and completes a performance test each time the catalyst is changed.

VI. Monitoring/Recordkeeping:

EURC011 and EURC012 are equipped with CPMS, and the temperature and pressure drop of the catalysts are continuously monitored when in operation, and log data every 15 minutes as required. ANR maintains the necessary records. During the inspection I reviewed malfunction and maintenance records which were up to date. Monitoring of the catalyst parameters indicates the EURC011 and EURC012 comply with the formaldehyde reduction limits.

VII. Reporting:

The semi-annual reports and annual compliance reports for ROP certification were submitted to the EGLE in timely manner. During the reporting period the permittee reported all monitoring and associated recordkeeping requirements.

As previously stated, compliance testing of EURC012 catalytic converter was conducted February 26, 2015. The Test plan and test results were provided within the required timeframes. AQD will review the test protocol when it is submitted by the facility for EURC011.

The FGMACTZZZZ compliance reports were submitted and reviewed. The most recent CMS Audit was completed August 9, 2018. The report followed the format specified in the regulation and there were no incidents of excess emissions, malfunctions, deviations, or periods during which the CPMS were out of control.

VIII. Stack/Vent Restrictions:

Stack/Vent Restrictions are not applicable for FGMACTZZZZ.

IX. Other Requirements:

All of the requirements of the site-specific monitoring plan have been addressed. Based on the Conditions in the permit, the facility complies with the applicable provisions for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ).

FGMACTEMERGENCY: One Caterpillar G379 4SRB 355hp emergency generator (EURC019) and one Waukesha L1616GSIU 4SRB 475 hp emergency generator (EURC020).

I. Emission Limits:

Emission Limits are not applicable for FGMACTEMERGENCY.

II. Material Limits:

Material Limits are not applicable for FGMACTEMERGENCY.

III. Process/Operational Restrictions:

At the time of the inspection the engines of FGMACTEMERGENCY were equipped with hour meters. Both engines for FGMACTEMERGENCY operate one hour per month to test the engines. EURC019 operated for a total of 773 hours since it was installed, and EURC020 operated for a total of 223 hours since it was installed. The usage is well below the permit limit of 500 hours per 12-month rolling time period.

During the inspection FGMACTEMERGENCY were not in operation. The facility utilizes oil analysis to determine the frequency of oil changes. Records indicate spark plugs, hoses and belts are inspected, and oil changed as necessary based on the oil analysis.

IV. Design/Equipment Parameters:

As previously stated, EURC019 and EURC020 are equipped with non-resettable hour meters.

V. Testing/Sampling:

Testing/Sampling is not applicable for FGMACTEMERGENCY.

VI. Monitoring/Recordkeeping:

The FGMACTEMERGENCY operated during maintenance purposes only. I reviewed records of the maintenance and hours of operation of the engines. Records are maintained as required.

VII. Reporting:

The semi-annual reports and annual compliance reports for ROP certification were submitted to the EGLE in timely manner. During the reporting period the permittee reported all monitoring and associated recordkeeping requirements.

VIII. Stack/Vent Restrictions:

Stack/Vent Restrictions are not applicable for FGMACTEMERGENCY.

IX. Other Requirements:

Based on the Conditions in the permit, the facility complies with the applicable provisions for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ).

FGMACTHHH: Two affected small glycol dehydration units (EURC015 and EURC024) as defined in 40 CFR 63.1271 constructed prior to August 23, 2011 which must attain compliance with the requirements in 40 CFR, Part 63, Subpart HHH.

I. Emission Limits:

Equation 1 in Appendix 7 of the ROP was used to calculate a BTEX emission limit from each glycol dehydration system. The following BTEX emission limits were calculated from the stack test and Equation 1 in Appendix 7 of the ROP: 48.96 megagrams per year (Mg/yr) for EURC015 and 6.92 Mg/yr for EURC024, using the daily throughput rates from 2009 through 2013. The average BTEX emissions from the stack test were <0.0053 Mg/year for EURC015 and <0.0054 Mg/year for EURC024.

II. Material Limits:

Material Limits are not applicable for FGMACTHHH.

III. Process/Operational Restrictions:

The systems appear to be a closed vent system with a bypass line. The process vents (reboiler still) are directed first to a condenser, then vents to the thermal oxidizer.

At the time of the inspection both EURC015 and EURC024 were equipped with thermal oxidizers, and condensers that operate when the thermal oxidizers are not operating. Hour meters were installed, and the facility continuously monitors hours of operation and the temperatures of the thermal oxidizers and condensers which are used to show proper operation of the glycol dehydrators.

Based on the most recent stack test, February 5 and 6, 2015, indicates the BTEX emissions from the thermal oxidizer are less than the limit calculated in SC I.4. The BTEX emissions determined during stack testing are used in GRI-GlyCALC to calculate throughput-based emission factors.

IV. Design/Equipment Parameters:

The facility shows compliance with the emission standard by using a properly operating control device, which was already mentioned above in the Process/Operational Restrictions, and by a closed-vent system that has no detectable emissions. According to the MACT HHH Periodic Report, dated February 12, 2019, there were no periods in which the seal or closure mechanism was broken, the bypass valve position changed, or the key to unlock the bypass line valve was checked out. No leaks or defects were detected during the leak detection and repair assessment.

AQD received a 40 CFR Part 63 Subpart HHH compliance notification from ANR that certifies thermocouples are installed and maintained, calibrated and inspected in accordance with manufacturer's specifications. Additionally, as previously stated, facility continuously monitors the temperature of the thermal oxidizers and condensers, and has alarms installed if one of the thermal oxidizers falls below 1,400 degrees Fahrenheit when operating, and an alarm on the condensers that activates if the condenser of EURC024 goes above 90 degrees Fahrenheit, and the condenser of EURC015 goes above 120 degrees Fahrenheit. The temperature of the thermal oxidizers and condensers are recorded on an hourly basis.

V. Testing/Sampling:

ANR has installed a monitor to measure the natural gas flow rate to the thermal oxidizers and condensers. Based on the most recent periodic report, dated February 12, 2019, the most recent Leak Detection and Repair (LDAR) Assessment completed January 17, 2018, no detectable emissions were detected in the closed loop system.

ANR conducted stack testing to determine BTEX emissions from each glycol dehydration system's thermal oxidizer on February 5 and 6, 2015, as required by MACT Subpart HHH. Since the temperatures within the combustion chamber were greater than 1,400 degrees Fahrenheit during the stack test, no further stack testing needs to take place on the units per MACT Subpart HHH. Actual emissions of BTEX are required to be calculated by a yearly wet gas sampling analysis and GRI-GLYCalc. The most recent analysis was conducted April 4, 2019, using GRI-GLYCalc Version 4.0. The GRI-GLYCalc analyses for the condenser and thermal oxidizer are attached.

VI. Monitoring/Recordkeeping:

As previously stated, 40 CFR Part 63 Subpart HHH requires temperature monitors for the thermal oxidizers and condensers be maintained. AQD received a Notification of Compliance Status Report, dated April 11, 2016 from ANR that certifies thermocouples are installed and maintained, calibrated and inspected in accordance with manufacturer's specifications.

ANR demonstrates compliance with BTEX emission limit for the condensers by establishing a site-specific condenser performance curve, recording the daily average condenser outlet temperatures, and determining the condensers efficiencies for the current operating day.

ANR subcontracted LDAR testing of the closed-vent system to Bureau Veritas, which was completed February 6, 2015. According to the LDAR Assessment Results, no leaks were detected from the Loreed glycol dehydration system, and one leak was detected from the RC Stray glycol dehydration system during the February 6, 2015 assessment, and repaired on February 7, 2015, and retested on February 9, 2015 and no leaks were detected. The LDAR Assessment Report indicated 17 difficult areas to inspect at the Loreed glycol dehydration system (EURC015) and 16 difficult areas to inspect at the RC Stray glycol dehydration system (EURC024). The LDAR Assessment Report did not indicate any areas as unsafe to inspect. Additionally, ANR conducts annual LDAR assessments of the closed loop system, with a bypass line. The most recent LDAR Assessment was completed January 17, 2018 and no leaks were detected.

ANR established minimum operating parameter values or maximum operating parameter values, as appropriate for the control devices, to define the conditions at which the control devices must be operated to continuously achieve the emission limits in Section I of FGMACTHHH for control devices used to comply with 40 CFR, Part 63 Subpart HHH. The minimum operating parameter of 1,400 degrees Fahrenheit for the thermal oxidizer was established by ANR through stack testing conducted on

February 5 and 6, 2015. The maximum condenser operating parameter of 90 degrees Fahrenheit for the RC Stray glycol dehydrator, and 120 degrees Fahrenheit for the Loreed glycol dehydrator, were established by a condenser performance curve using the procedures in "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1) as inputs for the model GRI-GLYCalc, Version 4.0.

VII. Reporting:

The semi-annual reports and annual compliance reports for ROP certification were submitted to the EGLE in timely manner. During the reporting period the permittee reported all monitoring and associated recordkeeping requirements.

As previously stated, compliance testing of EURC015 and EURC024 was conducted February 5 and 6, 2015. Test plans and test results were provided with in the required timeframes. A Notification of Compliance was submitted to the AQD April 11, 2016 and contained the required information from Condition VII.5 of the ROP. Additionally, ANR submitted Periodic Reports in accordance with Condition VII.6 of the ROP. The latest Periodic Report was submitted February 14, 2019. The report followed the format specified in the regulation and there were no incidents of excess emissions, malfunctions, deviations, or periods during which the CPMS were out of control.

ANR submitted an annual and semi-annual deviation report on time received by AQD on February 14, 2019. No deviations were reported in either of these reports. I reviewed records of the operating parameters and hours of operation of the glycol dehydrators. The vent stream of the glycol dehydrators was not diverted from the control devices. Records are maintained as required.

The facility submitted the results of the performance testing to the EPA's CDX database in April 2015 as required by MACT Subpart HHH.

VIII. Stack/Vent Restrictions:

Stack/Vent Restrictions are not applicable for FGMACTHHH.

IX. Other Requirements:

The facility is considered a major source of HAPs due to formaldehyde, which has the potential to emit greater than 10 tons per year. ANR has developed a site-specific monitoring plan; the plan includes the CPMS which identifies the method for determining daily average values, system accuracy audits, recordkeeping and reporting requirements. ANR complied with all applicable requirements in 40 CFR Part 63, Subpart HHH by October 15, 2015.

FGMACTDDDDDD-EXISTING GAS1: Unit Designed to Burn Gas 1 Subcategory requirements for Existing Boilers and Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD with heat input values less than 50 mmbtu/hr. Originally, ANR included EURC001 (8 MMBtu/hr) Kewanee boiler L3W-200-G, and EURC025 (0.125 MMBtu/hr) Maintenance garage boiler as equipment covered in this flexible group. However, EURC001 was removed from this facility on October 2, 2017 and was replaced with two Cleaver Brooks CFC-3300 natural gas-fired boilers and each rated at 2.97 MMBtu/hr under exemption R 282(2)(b)(i). These two new boilers would be covered under FGMACTDDDDDD-NEWGAS1.

Additionally, ANR claims that EURC025 meets exemption R 282(2)(b)(i) and meets definition of a hot water heater in 40 CFR Part 63, Subpart DDDDD (Boiler MACT). Therefore, this FGMACTDDDDDD-Existing Gas 1 is not necessary.

FGMACTDDDDDD-NEWGAS1: Unit Designed to Burn Gas 1 Subcategory requirements for New or Reconstructed Boilers and Process Heaters at major sources of Hazardous Air Pollutants per 40 CFR Part 63, Subpart DDDDD. New and reconstructed boilers or process heaters must comply with this subpart upon startup. The equipment covered in this flexible group is EURC016 25.5 MMBtu gas withdrawal heater, EURC017 25.5 MMBtu gas withdrawal heater.

As previously stated, two new two Cleaver Brooks CFC-3300 natural gas-fired boilers and each rated at 2.97 MMBtu/hr were installed in October 2017 that are also subject to this Flexible Group. The facility is using the Emission Unit names (EURC026 and EURC027).

I. Emission Limits:

Emission Limits are not applicable for FGMACTDDDDDD-NEWGAS1.

II. Material Limits:

The facility only burns natural gas in the withdraw heaters and new boilers.

III. Process/Operational Restrictions:

The facility conducts annual tune-ups on EURC016 and EURC017. The most recent tune-up was conducted February 10, 2019 and the Annual Compliance Report was mailed to the EGLE March 15, 2019. EGLE received a Notification of Compliance Statement indicating that the facility complies with the required initial tune-up requirements according to the procedures in 40 CFR 63.7540(a)(10), and the facility has had an energy assessment performed according to 40 CFR 63.7530(e).

The first tune-ups for EURC026 and EURC027 haven't been completed, the facility has 61 months from the initial startup.

IV. Design/Equipment Parameters:

Design/Equipment Parameters are not applicable for FGMACTDDDDDD-NEWGAS1.

V. Testing/Sampling:

Testing/Sampling are not applicable for FGMACTDDDDDD-NEWGAS1.

VI. Monitoring/Recordkeeping:

The permittee maintains all monitoring and associated recordkeeping requirements at the facility.

VII. Reporting:

Reporting of any semi-annual reports, and annual compliance reports for ROP certification were submitted to the EGLE in timely manner. EGLE received a NOC status on February 19, 2015 for EURC016 and EURC017. EGLE received a NOC for EURC026 and EURC027 was received on October 14, 2017. During the reporting period the permittee reported all monitoring and associated recordkeeping requirements.

VIII. Stack/Vent Restrictions:

Stack/Vent Restrictions are not applicable for FGMACTDDDDDD-NEWGAS1.

IX. Other Requirements:

Based on the Conditions in the permit, the facility complies with the applicable provisions for the NESHAP for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63 Subpart DDDDD).

NAME Caryn Owens DATE 7/29/19 SUPERVISOR SW