

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

N676741259

| | | |
|--|-------------------------------|---------------------------|
| FACILITY: New Covert Generating Company, LLC | | SRN / ID: N6767 |
| LOCATION: 26000 77th Street, COVERT | | DISTRICT: Kalamazoo |
| CITY: COVERT | | COUNTY: VAN BUREN |
| CONTACT: Chris Head, Operations Manager | | ACTIVITY DATE: 08/15/2017 |
| STAFF: Amanda Chapel | COMPLIANCE STATUS: Compliance | SOURCE CLASS: MAJOR |
| SUBJECT: Air Quality Inspection | | |
| RESOLVED COMPLAINTS: | | |

On August 15, 2017 AQD's Amanda Chapel (staff) conducted an unannounced inspection of New Covert Generating (facility) located in Covert, Van Buren County. The purpose of the inspection was to determine compliance with Renewable Operating Permit (ROP) MI-ROP-N6767-2014c and all applicable state and federal air regulations. The following will summarize plant operations and facility compliance status.

I arrived on site at about 8:30 am. Tom Gasloli from Technical Programs Unit (TPU) arrived at the same time. There were no visible emissions from the engines and steam was visible from the cooling towers. We entered the facility where Mr. Chris Head, Operations Manager met us. We went into his office and Tom asked about data for Unit 1 which was submitted for the second quarter. I stated that I was there to observe the stack test and conduct the air quality inspection. Mr. Head said he would bring us to the testing trailer and then he and I could proceed with the facility tour and records review.

Mr. Head took us into the control room and we saw the monitors where they control all the operations associated with the engines and turbines at the facility. The RATA was being run concurrently with the inspection. Because of this, all units were running at full capacity. We then proceeded into the room which houses units 1, 2, and 3. Each unit is identical and has a combustion turbine, steam turbine, and heat recovery steam generator (HRSG). Within the HRSG there is a gas fired duct burner which adds about 300°F to create more steam. Next, we entered the Unit 1 CEMs housing unit. From here we proceeded to the trailer to observe the testing taking place. The observation results from this are below. I left with Mr. Head to complete the inspection of the facility.

Mr. Head and I stepped out of the trailer and observed the cooling towers at the facility. He told me that they are not equipped with mist eliminators which was previously stated in a phone conversation. We proceeded to the west end of the facility to observe EU-AUXBOILER, a natural gas fired start up boiler with low NOx burner. This is only used during startup and shutdown. EU-AUXBOILER was not run in August 2017. The most recent time run was June 2 and June 9, 2017.

We continued past large tanks for well water storage and deionized water storage. The facility is also commissioning a reverse osmosis unit. There is a building which houses the EU-EMERGFIRE, a diesel fuel fired emergency fire pump engine. There is a laminated sheet of paper attached to the engine detailing the annual maintenance SOP. The engine has run for 501.7 hours total. At the time of the annual maintenance performed on May 17, 2017, the engine had run for 495.1 hours. Maintenance performed includes crane case oil change, replace oil and fuel filter, cleaned air filter, and cooling water strainers cleaned.

Next, we walked to EU-EMERGENG, a diesel fuel fired emergency generator engine. It is a Caterpillar 3512 model from 2002. It is run once per week for testing. The rolling total for the generator is at 565 hours. Both EU-EMERGFIRE and EU-EMERGENG are individually filled by the vendor. KAR Laboratories, Inc tested the diesel fuel on May 28, 2015. Results indicate the fuel is less than 0.0015% by weight which is a low sulfur content fuel.

The EU-GASHEATER is located at the southeast corner of the property. This has been abandoned on site by the owners. It was commissioned in 2004 and has not been run since 2004. The piping is still attached. The wording in the permit indicates that all the 40 CFR Part 63 Subpart DDDDD requirements must be completed after initial startup after January 31, 2015. Since the unit has not been run since 2004, it is not subject to the requirements.

Mr. Head and I went back to his office. We decided to break for lunch from 12-1 and then review records

when I return. I returned at 1pm, signed back in, and proceeded to Mr. Heads office. We went through the permit and reviewed the required records. Below will summarize the records review for the facility.

EU-AUXBOILER

The last run of the AUXBOILER was in June 2017. It ran for 7.7 hours. In the last 12 months, the highest running month was June 2016 which was 28.64 hours. The 12-month rolling hour total is 81.04 hours which is well below the limit of 1,600 hours 12-month rolling. Monthly natural gas usage records are also being kept. It was most recently run June 2017 on June 2 and June 9. One June 2 230.1 MMBtu of gas was used and on June 9 234.8 MMBtu of gas was used.

The annual tune up is scheduled for the last week in September. The last tune up was on September 26, 2016. Subpart DDDDD requires a one-time energy assessment (EA) to be completed by the facility. This was completed by a consulting company on June 19, 2015. The initial notification of compliance for Subpart DDDDD was submitted to the EPA on September 30, 2013. A copy is in the file. Also, a printed copy of the CO and O2 concentrations measured in the effluent at typical operating loads is in the file.

EU-AUXBOILER appears to be in compliance with the permit.

EU-GASHEATER

The GASHEATER has been abandoned on site and not run since 2004. Since it has not had the initial startup required by Subpart DDDDD, it is not currently subject to its requirements.

FG-DUCTBURNERS

Units 1, 2, and 3 each have a 4,000 hour 12-month rolling time period limit. In June 2017 and August 2017, the 12-month rolling totals were Unit #1 600 hours, 770 hours Unit #2 433 hours, 682 hours, Unit #3 489 hours, 706 hours respectively. Monthly hours of operation are being kept. In May 2017 and June 2017 the hours of operation were Unit #1 62.5 hours, 167 hours, Unit #2 57.5 hours, 136 hours, Unit #3 45.7 hours, 131 hours respectively.

Each is equipped with a dry, low NOx burner. Testing for PM10 was completed in 2013 and it is scheduled again for next year, 2018.

FG-DUCTBURNERS appears to be in compliance with the permit.

FG-TURB/DB1-3

| Pollutant | Limit | Unit 1 | Unit 2 | Unit 3 |
|--|------------|--------|--------|--------|
| NOx (24-hr rolling avg) | 2.5 ppmvd | 2.0 | 2.0 | 1.8 |
| NOx (12-mo rolling avg as of July 2017) | 103.0 tpy | 45.7 | 53.2 | 57.7 |
| CO (24-hr rolling avg) | 33.7 lb/hr | 2.7 | 3.2 | 1.7 |
| CO (12-mo rolling avg as of July 2017) | 125.2 tpy | 15 | 21.9 | 14.2 |
| VOC (24-hr rolling avg) | 7.7 lb/hr | 4.8 | 4.6 | 5.3 |
| VOC (12-mo rolling avg as of July 2017) | 22.6 tpy | 9.5 | 12.6 | 19.0 |
| PM10 (24-hr rolling avg) | 33.8 lb/hr | 4.8 | 4.6 | 4.6 |
| PM10 (12-mo rolling avg as of July 2017) | 126.1 tpy | 8.8 | 9.5 | 8.9 |
| Formaldehyde (12-mo rolling avg as of July 2017) | 8.1 tpy | 4.6 | 0.7 | 2.3 |

The facility only burns natural gas in the turbines and duct burners. According to ANR pipeline, the sulfur content was last tested on 8/1/2017 and was 0.263 grains/100 scf. This was calculated using the numbers 4.2102 ppmv and 16 ppmv = 1 grain/100 scf. The sulfur content is below the permit limit of 0.8 grains/100 scf.

Total hours of startup and shutdown are being recorded. In June 2017 the 12-month rolling time period for Units 1, 2, 3 is 62 hours, 41 hours, and 64 hours respectively. In August 2017 the 12-month rolling time period for Units 1, 2, 3 is 60 hours, 38 hours, and 61 hours respectively. This is below the limit of 724 hours per turbine. Monthly emission calculations for Unit 1 are as follows as of July 2017; 11,601.5 lb of NOx, 948.7 lb SO2, 4993 lb CO, 2611 lb VOC, and 3237 lb PM-10. Monthly emission calculations for

Unit 2 are as follows as of July 2017; 11,812.5 lb NOx, 933.4 lb SO₂, 3139 lb CO, 2332 lb VOC, and 3228 lb PM-10. Monthly emission calculations for Unit 3 are as follows as of July 2017; 11,171.6 lb NOx, 933.3 lb SO₂, 1562 lb CO, 4351 lb VOC, and 3111 lb PM-10.

The selective catalytic reduction (SCR) catalyst have never been replaced during its life. It has 98% of life left and will be replaced during the turbine upgrade. The facility does have a startup/shutdown/malfunction plan as well as a malfunction abatement plan. Each turbine and duct burner is equipped with an SCR system.

Testing for ammonia, CO, formaldehyde, NOx, PM 10/2.5, and VOC was performed in 2013. NOx and CO emissions are tracked by the CEMs. Heat input is tracked hourly via CeDAR. A printout is included in the file. In July 2017 the average heat input was 10.57 BTU.

Visible emissions are evaluated and recorded once per quarter by a non-certified reader. Records include date, time, name of observer, certification status, and VE determination. The last VE reading was done on July 1, 17 at 11:10 am. The one previously was done on April 1, 2017. No readings have found emissions that lasted longer than 30 minutes.

The facility's compliance status of the acid rain permitting requirements was not evaluated. The facility reports to the EPA for these requirements. Provisions of the transport rule NOx annual trading program, transport NOx ozone trading program, transport rule SO₂ group 1 trading program, and transport rule SO₂ group 1 trading programs are utilized at the corporate level. This is reported to the EPA.

FG-TURB/DB1-3 appears to be in compliance with the permit.

FG-EMERGENCY

FG-EMERGENCY consists of EU-EMERGGEN and EU-EMERGFIRE. In 2015, the facility had the diesel fuel tested by KAR Laboratories. The sulfur content analysis showed that the sulfur was less the 15 ppm. As of July 2017, EU-EMERGGEN has a 12-month rolling total of 14 operating hours with a total of 565 hours. EU-EMERGFIRE has a 12-month rolling total of 27 operating hours with a total of 498 hours. The site plan for operation of EU-EMERGFIRE is the manufacturers operating recommendations tailored to this specific facility. Startup of this emission unit takes less than 1 minute. The procedure for inspection of EU-EMERGFIRE is addressed above. The last inspection was in May 2017.

Logs are kept documenting the reason for operation, hours of operation in an emergency, and why it is an emergency. Engines have not run for an emergency situation for over a year. There have been no deviations reported per Subpart ZZZZ.

FG-EMERGENCY appears to be in compliance with the permit.

FG-COLDCLEANERS

There is one cold cleaner in the facility located in the maintenance area. The cold cleaner is heated and filled with Armakleen Combo Cleaner Concentrate. An MSDS is included with the report. The MSDS does not indicate that the cleaning solution contains any of the listed halogenated compounds. The DEQ operating procedure was taped to the lid of the cold cleaner, which was closed. Additional care and operational procedures from the company were taped to the cleaner as well.

The cleaning solution is changed every 6-8 weeks and disposed of as non-hazardous waste. It is then recycled. The cold cleaner is maintained by Safety Klean, a third party. The air vapor interface is 5 square feet, per the permit. The operating pressure of the cold cleaner is 78 psi. The cold cleaner does appear to be mechanically assisted. The temperature of the cold cleaner is monitored constantly and recorded once per week.

FG-COLDCLEANERS appears to be in compliance with the permit.

When I finished reviewing the records, I thanked Mr. Head for his time and left the facility around 3:10 pm. It appears that the facility is in compliance with all of the permit conditions.

NAME Aimee Chyle

DATE 8/28/17

SUPERVISOR MD8/29/2017