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

N676759409

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: 06/29/2021
STAFF: Rachel Benaway	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: On-site inspection for compliance verification with all state and federal air use regulations.		
RESOLVED COMPLAINTS:		

Due to Covid-19 health and safety precautions, all AQD inspections are currently announced prior to entry to a facility. The purpose of this inspection on 6/29/2021 by AQD staff, Rachel Benaway, was to verify New Covert Generating Company, LLC (N6767), an electric power generation plant, is in compliance with their Renewable Operating Permit (ROP) MI-ROP-N6767-2020 and all state and federal air use regulations. New Covert is considered a major source of emissions for HAPs, NOx, CO, GHG, and PM. They are a minor source of SOx, Pb, and VOCs. The facility is subject to New Source Performance Standard (NSPS) 40 CFR 60 Subparts A, Da, Dc, and GG. They are also subject to National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subparts DDDDD, YYYY, and ZZZZ. The last inspection was completed at the facility on 7/26/2019. John Reese is the Senior Vice President and Responsible Official for the facility. Chris Head, the Operations Manager, was present for the on-site inspection and is responsible for submitting requested records. Personal protection equipment includes a hard hat, safety glasses, ear protection, and safety shoes.

#	Permitted Equipment	Unit ID
1	Diesel fired emergency generator	EU-EMERGENG
1	Diesel fired emergency fire pump engine	EU-EMERGFIRE
1	Natural gas fired auxiliary boiler	EU-AUXBOIL
3	Natural gas fired duct burners	EU-DB1-2-3
3	Natural gas fired combustion turbine w/ Heat Recovery Steam Generator	EU-TURBINE1-2-3
1	Parts washer	EU-COLDCLEAN
1	Natural gas heater	EU-GASHEATER
3	Cooling towers	EU-COOLTWR1-2-3
1	Natural gas fired portable boiler	EU-TEMPBOILER

EUAUXBOIL

The natural gas fired Nebraska (auxiliary) boiler (Serial #D-4501) has a maximum steam flow of 66,110 pph and a heat rating of 90 MMBtu/hr on the Siemens 353 burner. The boiler is equipped with a low NOx burner. The unit is subject to the 5D MACT (40 CFR 63 Subpart DDDDD) and was last serviced between 9/28/2020 and 9/30/2020. A Combustion Data Report and a Service Report was submitted from that tune up. A report with the daily fuel use and monthly operating hours was also submitted. Between July 2020 and July 2021, the unit ran for a total of 11.81 hours and used 1,015.56 MSCF (1,082.70 MMBtu) of natural gas.

SC	Condition	Compliant?
II.1	Only burn pipeline quality natural gas	X
III.1	Do not operate for more than 1,600 hours per 12MRT	X
IV.1	Equip and maintain with flue gas recirculation	X

Monitoring/Recordkeeping:

SC	Condition	Compliant?
VI.2	Keep written log of monthly hours of operation	X
VI.3	Keep daily natural gas use records	X
VI.4	Calculate total hours of operation, 12MRT	X

FG-MACTDDDDD_Large:

SC	Condition	Compliant?
III.1	Conduct annual tune up	X

Monitoring/Recordkeeping:

SC	Condition	Compliant?
VI.3	Submit tune-up report if requested	X

Reporting:

SC	Condition	Compliant?
VI.6	Annual boiler tune-up compliance reports submitted by 3/15 for previous calendar year	X

The auxiliary boiler appears to be in compliance with permit requirements at this time.

EU-TEMPBOILER

New Covert's ROP lists EU-TEMPBOILER as a natural gas fired 111.2 MMBtu/hr portable unit. The unit is not currently on site and the facility reported there are no current plans to install it.

FG-TURB/DB1-3

New Covert produces electricity for PJM Interconnection, LLC, by utilizing three natural gas fired combined cycle combustion turbines (CTs) and heat recovery steam generator (HRSG) trains. Each Mitsubishi model 501G KIA turbine has a maximum design heat input capacity of 2,829 MMBtu/hr and is equipped with dry low NOx combustor and inlet air evaporative cooling. Each HRSG has a natural gas fired duct burner with a 256 MMBtu/hr heat input capacity. Each CT has a dry low NOx combustor, each duct burner has a dry low NOx burner and each CT/HRSG train uses a selective catalytic reduction (SCR) and oxidation catalyst system. The turbines have all recently been upgraded and a new ROP was issued last year.

SC	Condition	Compliant?
II.1	Only burn natural gas	X
II.2	Sulfur content of gas shall not exceed 0.8 grains per 100 scf	X
III.1	Submit a MAP and update as needed	X

III.2	Do not operate without emissions minimization plan	X
III.3	Operate and maintain in a manner consistent with safety and good air pollution control practice	X
III.4	Do not operate more than 2 CTs in startup simultaneously	X
III.5	Total hours for startup and shutdown for each CT shall not exceed 692 hr per 12MRT	X
III.6	Total hours of operation for each duct burner shall not exceed 3,308 hrs per 12MRT	X
IV.1	Max design heat input capacity for each CT shall not exceed 2,829 MMBtu/hr	X
IV.2	Max design heat input capacity for each duct burner shall not exceed 256 MMBtu/hr	X
IV.3	Shall not operate CT without dry low NOx burners, SCR, and oxidation catalyst	X
IV.4	Shall install CEMS to record NOx emissions and O2 or CO2 content of exhaust gas from each CT/HRSG train and meet timelines, requirements, and reporting	X
IV.5	Shall install CEMS to record CO emissions and O2 or CO2 content of exhaust gas from each CT/HRSG train and meet timelines, requirements, and reporting	X
IV.6	Shall install device to record natural gas usage for each CT/HRSG train on continuous basis	X
IV.7	Net heat rate for each CT/HRSG train shall not exceed 7,978 Btu/kWh on 12MRT	X
IV.8	Shall install device to record net electric output from each CT/HRSG train on continuous basis	X
V.2	Verify PM10, PM2.5, VOC, H2SO4, and NH3 emission rates every 5 years	X
V.3	Conduct annual VOC emission test to verify capacity of catalyst bed	X

The facility submitted a fuel analysis report indicating no exceedance of the 0.8 grains per 100 scf limit. The facility submitted hours of operation for the duct burner and turbines with startup and shutdown hours demonstrating compliance with the 12-month rolling time limits listed above. The facility records the NOx, CO, and O2 content of exhaust gas from each CT/HRSG train with a Continuous Emissions Monitor (CEMs) for which they meet all timelines and reporting requirements. The facility is tracking natural gas usage for each CT/HRSG train on a continuous basis and submitted reports with monthly and 12-month rolling totals for each unit. A report was submitted verifying compliance with the net heat rate limit for each unit.

Monitoring/Recordkeeping:

SC	Condition	Compliant? U1	U2	U3
VI.2	Continuously monitor/record NOx, CO, O2/CO2 emissions from each CT/HRSG (SC I.1-4, I.6-7)	X	X	X
VI.3	Record natural gas usage for each CT and duct burner: Hourly / Monthly	X	X	X

VI.4	Record NOx concentration and mass emission records for each CT (SC I.1-3): Hourly / 24-hr rolling / Daily / 30-day rolling	X	X	X
VI.5	Record CO concentration and mass emission records for each CT (SC I.6-7): Hourly / 24-hr rolling average	X	X	X
VI.6	Calculate NOx, CO, VOC, and CO2e Monthly and 12 MRT emissions for each CT (SC I.5, I.8, I.10, I.16)	X	X	X
VI.7	Record total hours of startup and shutdown for each CT	X	X	X
VI.8	Total hours of operation for each duct burner: Monthly / 12MRT	X	X	X
VI.9	Calculate net heat rate for each CT (SC IV.7): Monthly / 12MRT	X	X	X
VI.11	Record outlet CO concentration as indicator of proper operation of catalytic oxidizer to prove compliance with VOC limit (SC I.12)	X	X	X
VI.13	Proper response to excursion			X
VI.14	Monitor continuously while emission units are operating			X
VI.15	Properly maintain monitors			X
VI.16	Maintain records of monitoring data, performance, and corrective actions			X

Reporting:

SC	Condition	Compliant?
VII.7-9	Provide notification of excess emissions and monitor downtime	X

In December of 2020, the facility reported the following 12-month rolling totals:

(TONS)	Unit 1	Unit 2	Unit 3	ROP LIMIT
NOx:	54.7	61.4	61.9	116 tpy
CO:	15.6	9.3	8.3	357 tpy
VOCs:	2.8	10.8	13.4	48 tpy
GHGs as CO2e:	833,405.1	976,334	981,191.5	1,425,081 tpy

The facility tracks all downtime for the CEMs including failed and quality assurance calibration times and submits the information in their quarterly reports. All excursions and corrective actions are reported according to the required timelines and delivery methods. Deviations and all communications are documented. The facility has a record of good communication and attention to corrective actions when necessary.

The facility performed testing for PM10, PM2.5, VOC, H2SO4, and NH3 emissions on all three units within 180 days of initial startup. The facility also conducted a VOC emission test within 180 days of startup to verify capacity of the catalyst bed.

The CT/HRSG trains appear to be in compliance with permit requirements at this time.

FG-COOLTWRS

Each of the three 6-cell mechanical draft evaporative cooling towers are equipped with high efficiency drift eliminators. The facility submitted maintenance records for 2019 to present, listing preventative inspections, corrective actions, monthly PH calibrations, yearly PH probe replacements, and recommendations for future repair actions. A "Cooling Tower Specifications and Equipment Data Sheet" was also submitted. A vendor certification sheet was submitted for the Brentwood CF80Max Counterflow Cellular Drift Eliminators listing a drift loss of 0.0005%.

The ROP lists a TDS content limit for the circulating water of 3,144 ppmw monthly for each tower. A Total Dissolved Solids (TDS) Report was submitted for 2020 demonstrating that Trace Analytical (third party laboratory) determined the following minimum and maximum TDS rates for each tower:

Tower	Minimum TDS	Maximum TDS
1	660	2900
2	860	3100
3	1100	2940

A separate report was submitted listing the same information for January through June 21, 2021 indicating the following:

Tower	Minimum TDS	Maximum TDS
1:	1500	3000
2:	1500	2500
3:	1400	2600

SC	Condition	Compliant?
II.1	Total Dissolved solids content limit of the circulating water per tower 3,144 ppmw per month	X
III.1	Submit inspection and maintenance program	X
IV.1	Equip and maintain vendor certified mist/drift eliminators w/ max drift rate of 0.0005% or less	X
IV.1	If no vendor certification of drift, verify drift with test upon request	X

Monitoring/Recordkeeping:

SC	Condition	Compliant?		
VI.1	Keep vendor certification of drift rate			X
VI.2	Keep record of maintenance conducted			X
VI.3	Monitor and record weekly parameters to determine TDS content of circulating water and monthly parameters to determine water recirculation rate	T1 X	T2 X	T3 X
VI.4	Calculate monthly TDS of circulating water for each cooling tower	X	X	X
VI.5	Keep test reports on file			X

The cooling towers appear to be in compliance with permit requirements at this time.

FG-EMERGENCY

The emergency engines at the facility consist of a 14.9 MMBTU/hr heat input capacity, diesel fuel fired emergency generator (G) and a 3.8 MMBTU/hr heat input capacity, diesel fuel fired emergency fire pump engine (F). Conditions and compliance verified during this inspection are listed below.

EU-EMERGENG, EU-EMERGFIRE

SC	Condition	Compliant?

III.1	Do not operate for more than 500 hours per 12MRT	X
III.3	Only burn diesel fuel and keep fuel specification sheet from each delivery	X

Monitoring/Recordkeeping:

SC	Condition	Compliant?	
III.3	Keep fuel spec sheet for each delivery of diesel		X
VI.1	Keep log of monthly hours of operation for each engine	G X	F X
VI.2	Calculate 12MRT total hours of operation for each engine	X	X

The facility submitted reports including hours of operation for both engines, 12-month rolling time operating hours, and fuel specifications sheets from the supplier for each delivery of diesel.

FG-MACTZZZZ_ENG

Both emergency engines are subject to 40 CFR 63 Subpart ZZZZ. Conditions and compliance verification during this inspection are listed below.

EU-EMERGENG

HOURS METER READING: 156,743 hours

SC	Condition	Compliant?
II.1	Only burn diesel fuel w/ mas sulfur content of 15 ppm by weight and min Cetane index of 40 or max aromatic content volume of 35 volume %	X
III.1	a) change oil and filter every 500 hours of operation or annually b) inspect air cleaner every 1,000 hours of op or annually c) inspect hoses and belts every 500 hours of operation or annually	X X X
III.6	Operate for no more than 100 hrs per year for maintenance	X
III.7	May operate up to 50 hrs per year in non-emergency situations- counting towards 100 hrs total annually	X
IV.1	Install non-resettable hours meter	X

Monitoring/Recordkeeping:

SC	Condition	Compliant?
VI.1-4	Records of any malfunction of unit or air pollution control or monitoring devices	X
VI.5	Total number of hours of operation per year: -# hours spent in emergency and non-emergency use, what emergency was, date, start/end time	X

Reporting:

SC	Condition	Compliant?
VII.4	Semi-annual compliance report (40 CFR 63.6650)	X

FG-MACTZZZZ_FP

EU-EMERGFIRE

HOURS METER READING: 603.9 hours

SC	Condition	Compliant?
II.1		X

	Only burn diesel fuel w/ max sulfur content of 15 ppm by wt and min Cetane index of 40 or max aromatic content volume of 35 volume %	
III.1	a) change oil and filter every 500 hours of operation or annually b) inspect air cleaner every 1,000 hours of op or annually c) inspect hoses and belts every 500 hours of operation or annually	X
III.6	Operate for no more than 100 hrs per year for maintenance	X
III.7	May operate up to 50 hrs per year in non-emergency situations- counting towards 100 hrs total annually	X
IV.1	Install non-resettable hours meter	X

SC	Condition	Compliant?
VI.1-4	Records of any malfunction of unit or air pollution control or monitoring devices	X
VI.5	Total number of hours of operation per year: -# hours spent in emergency and non-emergency use, what emergency was, date, start/end time	X

Reporting:

SC	Condition	Compliant?
VII.4	Semi-annual compliance report (40 CFR 63.6650)	X

The facility submitted a Generator System Preventative Maintenance Report listing service actions and a work order list for preventative and corrective actions on the fire pump.

Both emergency engines appear to be in compliance with permit requirements at this time.

FG-COLDCLEANERS

The facility has one parts washer in the maintenance area that is a heated unit. The washer had the mechanically assisted lid down at the time of inspection. The facility submitted an MSDS for the cleaning ArmaKleen 4-in-1 cleaning solvent. The facility also submitted a log sheet listing the weekly solvent bath temperature.

SC	Condition	Compliant?
II.1	Shall not use cleaning solvents w more than 5% by wt listed halogenated compounds	X
III.1	Drain parts for no less than 15 sec or until not dripping	X
IV.2	Must be equipped with device for draining cleaned parts	X
IV.3	Equipped with cover, closed	X
IV.4	Is cover mechanically assisted?	X

Monitoring/Recordkeeping:

SC	Condition	Compliant?
VI.1	If heated- solvent temp shall be monitored and recorded at least once each week	X
VI.4	Waste solvent is stored in closed containers unless no more than 20% by wt is allowed to evaporate and records are kept to verify disposal practices	X

The parts washer appears to be in compliance with permit requirements at this time.

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EU-GASHEATER

The 1.074 MMBtu/hr natural gas heater has not run since 2004. The facility indicated they have no plans to utilize the gas heater in the near future. No tune-up, maintenance, or corrective action records are available as the unit is not operating at this time.

All records submitted to demonstrate compliance with permit requirements and emissions limits are included with this report.

NAME Rachel Benaway DATE 8/19/2021 SUPERVISOR RIL 8/30/21