

AQM NOV POSTING MEMORANDUM

SEP 30 2016

TO: Paul E. Foster, P.E. *PEF*
 THROUGH: Joanna L. French, P.E. *JLF*
 FROM: Jordan G. Matthews JGM
 SUBJECT: **AQM NOTICE OF VIOLATION**
Required Information for Posting on DNREC's Environmental Navigator

Date: September 28, 2016

PARTY RECEIVING NOTICE	Delaware Electric Cooperative, Inc.		
VIOLATOR MAILING ADDRESS	P.O. Box 600 14198 Sussex Highway Greenwood, DE 19950		
VIOLATOR LOCATION	14198 Sussex Highway Greenwood, DE 19950		
DATE(S) OF VIOLATION	June 1, 2016		
DATE VIOLATION DISCOVERED	Stack test report received on July 20, 2016		
HOW WAS VIOLATION DISCOVERED?	Stack test		
DATE OF NOTICE OF VIOLATION	September 28, 2016		
VIOLATION CORRECTED?	No	DATE VIOLATION CORRECTED (IF APPLICABLE)	TBD
HOW WAS CORRECTION CONFIRMED?	Violation Not Corrected		
PUBLIC CONTACT	Paul E. Foster, P.E.		
AIR PROGRAM(S) VIOLATED (NOTE: PLEASE MARK ALL THAT ARE APPROPRIATE)	<input type="checkbox"/> ACID RAIN <input type="checkbox"/> FESOP (SM Permit) <input type="checkbox"/> MACT <input type="checkbox"/> TITLE V <input checked="" type="checkbox"/> SIP <input type="checkbox"/> NSR(PSD) <input type="checkbox"/> NSR(EOP) <input type="checkbox"/> PART 61 NESHAP <input type="checkbox"/> NSPS		
LIST THE KEY POLLUTANT(S) INVOLVED IN THE VIOLATION.	NH ₃		
NATURE OF VIOLATION - provide description and all applicable Statutory/Regulatory/Permit Citations	Failed stack test for NH ₃ .		
IS VIOLATION AN HPV? IF SO, LIST APPLICABLE HPV CRITERION/CRITERIA	No		
ENVIRONMENTAL IMPACT?	Yes		
ENVIRONMENTAL IMPACT DESCRIPTION	Excess NH ₃ emissions		
GENERAL COMMENTS	N/A		

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pc: Dover File
 Dawn Minor

SEP 30 2016

MEMORANDUM

TO: Paul E. Foster, P.E. *PEF*

THROUGH: Joanna L. French, P.E. *JLF*

FROM: Jordan G. Matthews *JGM*

SUBJECT: Delaware Electric Cooperative, Inc.
Permit: APC-2011/0023-OPERATION (NSPS)(MACT)
Notice of Violation
Failure to Complete Re-Verification within 5 Years

DATE: September 8, 2016

BACKGROUND

On June 1, 2016, the Montrose Air Quality Services, LLC (MAQS) – Roanoke, VA Office (The Air Compliance Group, LLC – ACG) conducted air emissions testing at Delaware Electric Cooperative, Inc. The test, which was required by 7 DE Admin. Code 1144 Section 7.4 and Condition 4.4 of **Permit: APC-2011/0023-OPERATION (NSPS)(MACT)**, included three, 60-minute sampling periods and focused on the following pollutants:

- Filterable Particulate Matter (Filterable PM),
- Ammonia (NH₃),
- Nitrogen oxides (NO_x),
- Carbon monoxide (CO)
- Nonmethane volatile organic compounds (VOCs), and
- Carbon dioxide (CO₂)

The unit tested was a 517 kW Caterpillar C-15 DITA diesel-fired stationary compression ignition internal combustion engine (CI ICE). The test, which is required to be conducted at least once every five (5) years, was due to be conducted by April 27, 2016. An NOV was issued on July 1, 2016 for failure to complete the "re-verification" testing by the April 27, 2016 deadline. Following the receipt of the test report on July 20, 2016, it was determined that NH₃ emissions exceeded the permitted limits. Consequently, Delaware Electric Cooperative, Inc. is in violation of the following permit condition:

1. Condition 2.1.6 of Permit : APC-2011/0023-OPERATION (NSPS)(MACT)

NH₃ emissions shall not exceed five tenths (0.5) pounds per Megawatt hour (lb/MWh), 0.1 pounds per hour; and 0.44 tons per twelve (12) month rolling period.

The ammonia emissions from the three test runs are broken down in Table 1, below.

Run #	NH ₃ Emission Rate		Permit Limit		Exceedance?
	lb/hr	lb/MWh	lb/hr	lb/MWh	
1	0.6583	1.5132	0.1	0.5	YES
2	0.5773	1.3272			YES
3	0.4791	2.1014			YES
Average	0.5716	1.3139			YES

Table 1: NH₃ Emissions from June 1, 2016 Stack Test

As Table 1 shows, each of the individual runs, as well as the average of those runs, exceeded the permitted emission limits.

Delaware Electric Cooperative, Inc.

Notice of Violation

September 8, 2016

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To resolve this violation, the Department is requiring Delaware Electric Cooperative, Inc. to conduct a thorough inspection of the distributed generator and associated selective catalytic reduction (SCR) system and complete all maintenance necessary to ensure that all pollutants are in compliance with the applicable emission limits contained in **Permit: APC-2011/0023-OPERATION (NSPS)(MACT)**. This inspection and maintenance shall be completed within 30 days of receiving the attached letter. A report on the findings shall be completed and submitted to the Department within 45 days of receiving the attached letter.

Additionally, a retest of the generator's exhaust shall be conducted in which NO_x, CO, and NH₃ are sampled and compared to the applicable emission limits. This test shall be conducted within 45 days of receiving the attached NOV. The proposed test date and testing parameters shall be coordinated with the Division's Air Surveillance Group. The stack test report shall be submitted to the Division of Air Quality within sixty (60) days of the test completion.

FEDERALLY REPORTABLE VIOLATION (FRV) DISCUSSION

The FRV Guidance issued September 23, 2014 was reviewed. For purposes of this policy, the applicable universe of sources whose violations of federally enforceable requirements are to be reported to EPA is the following:

- Title V Major Sources: Major sources as defined in CAA 501(2);
- SM-80 Sources: Minor sources that have taken an enforceable limit to remain minor sources, called synthetic minor sources, that emit or have the potential to emit (PTE) at or above 80 percent of the Title V major source threshold;
- Sources included in an alternative CAA Stationary Source Compliance Monitoring Strategy (CMS) plan;
- Any source at which a HPV has been identified.

DEC is not a Title V Major Source, synthetic minor source, or source with a CMS plan. DEC is a natural minor source with the distributed generator being their only permitted emission unit. In order to determine if this violation fits the criteria of a FRV, we must determine whether it falls within the criteria for a HPV.

HIGH PRIORITY VIOLATION (HPV) DISCUSSION

The High Priority Violators (HPV) Policy was reviewed to determine if this violation was a high priority violation. According to the General HPV Criteria, the following criteria trigger HPV status: (1) the source must be a major source as defined in CAA Sec. 501(2) or (2) the source is a minor or area source with a Compliance Management Strategy (CMS) plan. As Delaware Electric Cooperative, Inc. is not a Title V source and is not subject to a CMS plan, the violations are not subject to HPV analysis. Since this violation does not constitute a HPV, it is also not a FRV.

RECOMMENDATIONS

I recommend that the attached Notice of Violation be sent to Delaware Electric Cooperative, Inc. regarding the exceedance of the permitted NH₃ emission limits of **Permit: APC-2011/0023-OPERATION (NSPS)(MACT)**.

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pc: Dover File
 Joanna L. French, P.E.
 Jordan G. Matthews
 Dawn Minor



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF AIR QUALITY
STATE STREET COMMONS
100 W. Water Street, Suite 6A
DOVER, DELAWARE 19904

Telephone: (302) 739 - 9402
Fax No.: (302) 739 - 3106

September 30, 2016

Delaware Electric Cooperative, Inc.
P.O. Box 600
14198 Sussex Highway
Greenwood, Delaware 19950

Certified # 7004 2510 0004 2344 1627
RETURN RECEIPT REQUESTED

ATTENTION: Steve Perry
Manager of Fleet & Property

SUBJECT: **Notice of Violation**
Permit: APC-2011/0023-OPERATION (NSPS)(MACT)
NH₃ Emission Limit Exceedance

Dear Mr. Perry:

On June 1, 2016, air emissions testing was conducted on the 517 kW distributed generator at Delaware Electric Cooperative, Inc. The test program included three, 60-minute sampling periods during which samples of filterable particulate matter (Filterable PM), ammonia (NH₃), nitrogen oxides (NO_x), carbon monoxide (CO), nonmethane volatile organic compounds (VOCs), and carbon dioxide (CO₂) were collected from the diesel-fired stationary compression ignition internal combustion engine (CI ICE) stack. The testing was required by 7 DE Admin. Code 1144 Section 7.4 as well as by Condition 4.4 of **Permit: APC-2011/0023-OPERATION (NSPS)(MACT)**. The test report, received by the Department on July 20, 2016, indicated that ammonia emissions from the generator exceeded the permitted emission limits. Consequently, Delaware Electric Cooperative, Inc. is found to be in violation of the following permit condition:

- **Condition 2.1.6 of Permit : APC-2011/0023-OPERATION (NSPS)(MACT)**
NH₃ emissions shall not exceed five tenths (0.5) pounds per Megawatt hour (lb/MWh), 0.1 pounds per hour; and 0.44 tons per twelve (12) month rolling period.

The results for ammonia for each of the three, 60-minute test runs were: Run 1 – 0.66 lbs/hr (1.51 lbs/MWh), Run 2 – 0.58 lbs/hr (1.33 lbs/MWh), and Run 3 – 0.48 lbs/hr (1.10 lbs/MWh). The average emission rates of 0.572 lbs/hr and 1.314 lbs/MWh both exceed the permitted limit.

Action: Delaware Electric Cooperative, Inc. shall, within 30 days of receipt of this letter, perform a thorough inspection of the distributed generator and associated selective catalytic reduction (SCR) system and complete all maintenance necessary to ensure that all applicable pollutants are in compliance with the emission limits contained in **Permit: APC-2011/0023-OPERATION (NSPS)(MACT)**. A report on the results of this inspection and maintenance shall be submitted to the Department within 45 days of receipt of this letter.

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Delaware Electric Cooperative, Inc.

Notice of Violation

September 30, 2016

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In addition, Delaware Electric Cooperative, Inc. shall retest the generator exhaust for NO_x, CO, and NH₃ within 45 days of receipt of this NOV to demonstrate compliance with each pollutant's permitted emission limits. The stack test date and testing parameters shall be coordinated with the Division's Air Surveillance Group. The stack test report shall be submitted to the Division of Air Quality within sixty (60) days of the test completion.

Please be advised that this Notice of Violation will be made available through the Department's Internet site, which can be found at <http://www.dnrec.delaware.gov>. Information concerning your Company's noncompliance with 7 **DE Admin. Code** 1100 will be posted within 24 hours following confirmation by the Department of your receipt of this letter. Upon further review of the violation(s), the Department reserves the right to pursue additional enforcement action.

If you have any questions, please contact me at (302) 323-4542.

Sincerely,



Paul E. Foster, P.E.
Program Manager
Engineering & Compliance Branch

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