Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020
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Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

Jerome A. Brooks
Regional Director

September 19, 2023

via Electronic Mail

Mr. Jeff Bertocci
Datacenter Operations Manager
Microsoft Corporation
101 Herbert Drive, Office 1118
Boydton, VA 23917
Jeff.Bertocci@microsoft.com

Location: Mecklenburg County
Registration No.: 21527

Dear Mr. Bertocci:

Attached is a significant amendment to your new source review permit to construct and operate diesel engine generator sets at a data center back-up power electric generating facility in accordance with the provisions of the Virginia Regulations for the Control and Abatement of Air Pollution. This amended permit supersedes your permit dated September 23, 2022.

The Department of Environmental Quality (DEQ) deemed the application complete on August 17, 2023 and has determined that the application meets the requirements of 9 VAC 5-80-1290 A for a significant amendment to a new source review permit.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

This permit approval to construct and operate shall not relieve Microsoft Corporation of the responsibility to comply with all other local, state, and federal permit regulations.

The generators are subject to 40 CFR 63, Maximum Achievable Control Technology (MACT), Subpart ZZZZ and 40 CFR 60, New Source Performance Standard (NSPS), Subpart IIII. Virginia has accepted delegation of these rules for major sources as defined in 9VAC5-80-60 and subject to Article 1, Federal operating Permits for Stationary Sources. In summary, the units are required to comply with certain federal emission standards and operating limitations. The Department of Environmental Quality (DEQ) advises you to review the referenced MACT and

NSPS to ensure compliance with applicable emission and operational limitations. As the owner/operator you are also responsible for any monitoring, testing, notification, reporting and recordkeeping requirements of the MACT and NSPS. Notifications shall be sent to Virginia DEQ.

To review any federal rules referenced in the above paragraph or in the attached permit, the US Government Publishing Office maintains the text of these rules at www.ecfr.gov, Title 40, Part 60 and 63.

The Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the DEQ within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact the regional office at (804) 527-5020.

Sincerely,

James E. Kyle, P.E.
Air Permit Manager

JEK/EDS/21527-15 Microsoft ECDC NSR

Attachment: Permit
Source Testing Report Format

Federal regulations can be found at: http://www.gpo.gov/fdsys/search/showcitation.action
40 CFR Part 60 Subpart IIII and 40 CFR Part 63 Subpart ZZZZ

cc: File

Manager/Inspector, Air Compliance
Andy Nishida, Consultant, AECOM (andy.nishida@aecom.com)

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Jerome A. Brooks
Regional Director

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE
This permit includes designated equipment subject to New Source Performance Standards (NSPS).

This permit supersedes your permit dated September 23, 2022.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Microsoft Corporation – East Coast Data Center
101 Herbert Drive
Boydton, VA 23917
Registration No.: 21527

is authorized to construct and operate

a data center back-up power electric generating facility
(BN1-BN4, BN6-BN14, BN49 and BN80)

located at

101 Herbert Drive near Boydton, Virginia

in accordance with the Conditions of this permit.

Approved on September 19, 2023.

_____

James E. Kyle, P.E.
Air Permit Manager, Department of Environmental Quality

Permit consists of 23 pages.
Permit Conditions 1 to 57.

INTRODUCTION

This permit approval is based on and combines permit terms and conditions from the following:

BN1-BN4 (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45)
The permit applications dated August 27, 2010, including supplemental information dated September 22, 2010; November 20, 2012 including supplemental information dated January 8, 2013; September 16, 2013 including amendment information dated November 13, 2013 and supplemental information dated May 1, 2014; September 10, 2015, including supplemental information dated September 16, 2015, September 23, 2015, and September 30, 2015; and August 15, 2018 including supplemental information dated September 28, 2018 and January 9, 2019.

BN6-BN13 (Ref. Nos. ENG46 – ENG110 and ENG113 – ENG155)
The permit application dated June 19, 2014, including supplemental information dated June 25, 2014 and July 14, 2014; permit application dated June 15, 2015, including supplemental information dated June 30, 2015, July 1, 2015, July 6, 2015, July 21, 2015, July 23, 2015, September 15, 2015, November 2, 2015, November 12, 2015 and December 17, 2015; and permit application dated August 15, 2018, including supplemental information dated September 28, 2018 and January 9, 2019.

BN14 (Ref. Nos. ENG156 – ENG160)
The permit application dated November 21, 2018 including supplemental information dated December 4, 2018 and January 9, 2019.

BN49 and BN80 (Ref. Nos. ENG161 – ENG175)
The permit application dated May 3, 2022 including supplemental information dated September 5, 2022 and amendment information dated July 25, 2023.

Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action. In addition, this facility may be subject to additional applicable requirements not listed in this permit.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-10 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

Equipment List - Equipment at this facility covered by this permit consists of:

Equipment included in the project:

Reference No.	Location	Equipment Description	Rated Capacity	Delegated Federal Requirements
ENG161– ENG175	Power Harvesting BN49 and BN80	Fifteen (15) Caterpillar 2,500 kWe Model 3516C standby generators	3,633 bhp, each	NSPS IIII

Other permitted equipment:

Reference No.	Location	Equipment Description	Rated Capacity	Delegated Federal Requirements
ENG1 – ENG11	BN1-BN4	Eleven (11) Caterpillar 2,500 kWe 3516C standby generators	3,633 bhp, each	NSPS IIII
ENG17, ENG32, ENG45	BN1-BN4	Three (3) Caterpillar 1,000 kWe C32C standby generators	1,474 bhp, each	NSPS IIII
ENG20, ENG31, ENG44	BN1-BN4	Three (3) Caterpillar 1,500 kWe 3512C standby generators	2,206 bhp, each	NSPS IIII
ENG21 – ENG30, ENG34 – ENG43	BN1-BN4	Twenty (20) Caterpillar 2,000 kWe 3516C standby generators	2,937 bhp, each	NSPS IIII
ENG46 – ENG61, ENG67 – ENG110	BN6-BN13	Sixty (60) Cummins 2,500 kWe Model 2500DQKAN standby generators	3,640 bhp, each	NSPS IIII
ENG62 – ENG65	BN6-BN13	Four (4) Cummins 2,000 kWe Model 2000DQKAB standby generators	2,919 bhp, each	NSPS IIII
ENG66	BN6-BN13	One (1) Cummins 750 kWe Model 750DQCB standby generator	1,100 bhp	NSPS IIII
ENG113 – ENG152	BN6-BN13	Forty (40) Cummins 3,000 kWe Model C3000D6e standby generators	4,307 bhp, each	NSPS IIII
ENG153 – ENG154	BN6-BN13	Two (2) Cummins 1,750 kWe Model 1750DQAD standby generators	2,922 bhp, each	NSPS IIII
ENG 155	BN6-BN13	One (1) Cummins 800 kWe Model 800DQCC standby generator	1,183 bhp	NSPS IIII
ENG156 – ENG160	BN14	Five (5) Caterpillar 2,500 kWe Model 3516C standby generators	3,633 bhp, each	NSPS IIII

Specifications included in the above tables are for informational purposes only and do not form enforceable terms or conditions of the permit.

BN1-BN4 (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45)

PROCESS REQUIREMENTS

1. **Monitoring Devices** - The engines (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45) shall be equipped with a non-resettable hour metering device to monitor the operating hours and a fuel flow meter to monitor the fuel throughput. The non-resettable hour meter used to continuously measure the hours of operation and fuel flow meter used to continuously measure the amount of fuel consumed by each engine shall be observed by the owner with a frequency of not less than once each day the engine is operated. The owner shall keep a log of these observations.

   Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when each of the engines is operating.
   (9VAC5-80-1180)

OPERATING LIMITATIONS

2. **Fuel** - The approved fuel for the engines (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45) is diesel. A change in the fuel may require a permit to modify and operate.
   (9VAC5-80-1180 and 9VAC5-50-260)

3. **Fuel Throughput** - The engines (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45) shall consume no more than the following:

Reference Number	Throughput Limit (combined)
ENG1 – ENG11	108,785 gallons diesel per year
ENG17, ENG32, ENG45	12,295 gallons diesel per year
ENG20, ENG31, ENG44	17,887 gallons diesel per year
ENG21 – ENG30, ENG34 – ENG43	157,320 gallons diesel per year

   Each throughput shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
   (9VAC5-80-1180)

4. **Fuel Specification** - The diesel shall meet the specifications below:

   DIESEL which meets the ASTM D975 specification for Grades 1 or 2:
   Maximum sulfur content per shipment: 0.0015%

   (9VAC5-80-1180)

5. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of diesel. Each fuel supplier certification shall include the following:

   a. The name of the fuel supplier;

   b. The date on which the diesel was received;

   c. The quantity of diesel delivered in the shipment;

   d. A statement that the diesel complies with the American Society for Testing and Materials specifications (ASTM D975) for Grades 1 or 2;

   e. The sulfur content of the diesel.

   Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 4. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
   (9VAC5-80-1180)

EMISSION LIMITS

6. Emission Limits - Emissions from the operation of each engine (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45) shall not exceed the limits specified below:

   Emission Factors for BN1-BN4 Engines:

Pollutant	ENG1 – ENG11 Caterpillar 3516C (each unit)	ENG17, ENG32, ENG45 Caterpillar C32C (each unit)	ENG20, ENG31, ENG44 Caterpillar 3512C (each unit)	ENG21 – ENG30, ENG34 – ENG43 Caterpillar 3516C (each unit)
PM_{10}	0.01 lb/gal	0.01 lb/gal	0.01 lb/gal	0.02 lb/gal
$PM_{2.5}$	0.01 lb/gal	0.01 lb/gal	0.01 lb/gal	0.02 lb/gal
Nitrogen Oxides (as NO_2)	0.29 lb/gal	0.27 lb/gal	0.29 lb/gal	0.31 lb/gal
Carbon Monoxide	0.15 lb/gal	0.22 lb/gal	0.20 lb/gal	0.15 lb/gal
Volatile Organic Compounds	0.03 lb/gal	0.03 lb/gal	0.03 lb/gal	0.04 lb/gal
Sulfur Dioxide	0.00025 lb/gal	0.00025 lb/gal	0.00026 lb/gal	0.00026 lb/gal

   (9VAC5-80-1180 and 9VAC5-50-260)

7. **Emission Limits** - Emissions from the operation of the engines (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45) shall not exceed the limits specified below:

Hourly Emission Limits for BN1-BN4 Engines:

Pollutant	ENG1 – ENG11 Caterpillar 3516C (each unit)	ENG17, ENG32, ENG45 Caterpillar C32C (each unit)	ENG20, ENG31, ENG44 Caterpillar 3512C (each unit)	ENG21 – ENG30, ENG34 – ENG43 Caterpillar 3516C (each unit)
PM_{10}	0.4 lb/hr	0.2 lb/hr	0.4 lb/hr	0.6 lb/hr
$PM_{2.5}$	0.4 lb/hr	0.2 lb/hr	0.4 lb/hr	0.6 lb/hr
Nitrogen Oxides (as NO_2)	51.1 lb/hr	19.4 lb/hr	29.6 lb/hr	42.3 lb/hr
Carbon Monoxide	6.1 lb/hr	2.8 lb/hr	4.0 lb/hr	4.0 lb/hr
Volatile Organic Compounds	1.2 lb/hr	0.3 lb/hr	0.8 lb/hr	1.1 lb/hr

Annual Emission Limits for BN1-BN4 Engines:

Pollutant	Annual Emission Limit (all units combined)
PM_{10}	2.1 tons/yr
$PM_{2.5}$	2.1 tons/yr
Nitrogen Oxides (as NO_2)	44.4 tons/yr
Carbon Monoxide	23.0 tons/yr
Volatile Organic Compounds	5.1 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 3, 4, and 6.
(9VAC5-80-1180 and 9VAC5-50-260)

8. **Visible Emission Limit** - Visible emissions from each engine (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, ENG34 – ENG45) exhaust stack shall not exceed 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction. (9VAC5-80-1180 and 9VAC5-50-260)

RECORDS

9. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:

   a. Annual hours of operation of each engine (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45), calculated monthly as the sum of each consecutive 12-month period.

b. Annual fuel consumption of each engine (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months to verify compliance with the annual limitation specified in Condition 3.

c. An annual emissions calculation for the engines (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45) using calculation methods approved by the Piedmont Regional Office. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months to verify compliance with the annual emission limitations specified in Condition 7.

d. All fuel supplier certifications.

e. Engine information including make, model, serial number, model year, maximum engine power (bhp), and engine displacement for each engine-generator set.

f. Written operating procedures, scheduled and unscheduled maintenance, and operator training, as required by Condition 52.

g. Records of the reasons for operation for each engine, including, but not limited to, the date, cause of operation, cause of the emergency, the ISO-declared emergency notification, and the hours of operation.

h. Copies of all notifications required by State and Federal Regulations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-1180 and 9VAC5-50-50)

BN6-BN13 (Ref. Nos. ENG46 – ENG110 and ENG113 – ENG155)

PROCESS REQUIREMENTS

10. **Emission Controls** - Nitrogen oxides (NO_X) emissions from the engines (Ref. Nos. ENG46 – ENG110 and ENG113 – ENG155) shall be controlled by electronic fuel injection and/or turbocharged engine and aftercooler. The permittee shall maintain documentation that demonstrates the electronic fuel injection and/or turbocharged engine and aftercooler has been installed on the engines.
(9VAC5-80-1180 and 9VAC5-50-260)

11. **Emission Controls** - Visible emissions, particulate emissions, carbon monoxide (CO) emissions, and volatile organic compound (VOC) emissions shall be controlled by the use of good operating practices and performing appropriate maintenance in accordance with the manufacturer recommendations. In addition, the permittee may only change those settings that are permitted by the manufacturer and does not increase air emissions. (9VAC5-80-1180 and 9VAC5-50-260)

12. **Monitoring Devices** - The engines (Ref. Nos. ENG46 – ENG110 and ENG113 – ENG155) shall be equipped with a non-resettable hour metering device to monitor the operating hours and a fuel flow meter to monitor the fuel throughput. The non-resettable hour meter used to continuously measure the hours of operation and fuel flow meter used to continuously measure the amount of fuel consumed by each engine shall be observed by the owner with a frequency of not less than once each day the engine is operated. The owner shall keep a log of these observations.

    Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when each of the engines is operating.
    (9VAC5-80-1180D)

OPERATING/EMISSION LIMITATIONS

13. **Operation of the Engine-Generator Set** - The permittee shall operate and maintain each engine and control device according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may only change those settings that are permitted by the manufacturer and does not increase air emissions.
    (9VAC5-80-1180)

14. **Fuel** - The approved fuel for the engines (Ref. Nos. ENG46 – ENG110 and ENG113 – ENG155) is diesel. A change in the fuel may require a permit to modify and operate. (9VAC5-80-1180 and 9VAC5-50-260)

15. **Fuel Throughput** - The engines (Ref. Nos. ENG46 – ENG110 and ENG113 – ENG155) shall consume no more than the following:

Reference Number	Throughput Limit (combined)
ENG46 – ENG61, ENG67 – ENG110	564,984 gallons diesel per year
ENG62 – ENG65	32,216 gallons diesel per year
ENG66	2,924 gallons diesel per year
ENG113 – ENG152	474,240 gallons diesel per year
ENG153 – ENG154	13,931 gallons diesel per year
ENG155	3,067 gallons diesel per year

Each throughput shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-1180)

16. **Fuel Specification** - The diesel shall meet the specifications below:

    DIESEL which meets the ASTM D975 specification for Grades 1-D or 2-D:
    Maximum sulfur content per shipment: 0.0015%

    (9VAC5-80-1180 and 9VAC5-50-260)

17. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of diesel. Each fuel supplier certification shall include the following:

    a. The name of the fuel supplier;

    b. The date on which the diesel was received;

    c. The quantity of diesel delivered in the shipment;

    d. A statement that the diesel complies with the American Society for Testing and Materials specifications (ASTM D975) for Grades 1-D or 2-D;

    e. The sulfur content of the diesel.

    Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 16. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
    (9VAC5-80-1180)

EMISSION LIMITS

18. **Emission Limits** - Emissions from the operation of each engine (Ref. No. ENG46 – ENG110 and ENG113 – ENG155) shall not exceed the limits specified below:

    Emission Factors for BN6-BN13 Engines:

Pollutant	ENG46 – ENG61, ENG67 – ENG110 Cummins 2500DQKAN (each unit)	ENG62 – ENG65 Cummins 2000DQKAB (each unit)	ENG66 Cummins 750DQCB
PM_{10}	0.02 lb/gal	0.02 lb/gal	0.01 lb/gal
$PM_{2.5}$	0.02 lb/gal	0.02 lb/gal	0.01 lb/gal

Pollutant	ENG46 – ENG61, ENG67 – ENG110 Cummins 2500DQKAN (each unit)	ENG62 – ENG65 Cummins 2000DQKAB (each unit)	ENG66 Cummins 750DQCB
Nitrogen Oxides (as NO_2)	0.32 lb/gal	0.28 lb/gal	0.29 lb/gal
Carbon Monoxide	0.09 lb/gal	0.07 lb/gal	0.04 lb/gal
Volatile Organic Compounds	0.01 lb/gal	0.02 lb/gal	0.03 lb/gal
Sulfur Dioxide	0.0049 lb/gal	0.01 lb/gal	0.00027 lb/gal

Pollutant	ENG113 – ENG152 Cummins C3000D6e (each unit)	ENG153 – ENG154 Cummins 1750DQKAD (each unit)	ENG155 Cummins 800DQCC
PM_{10}	0.02 lb/gal	0.02 lb/gal	0.03 lb/gal
$PM_{2.5}$	0.02 lb/gal	0.02 lb/gal	0.03 lb/gal
Nitrogen Oxides (as NO_2)	0.31 lb/gal	0.37 lb/gal	0.4 lb/gal
Carbon Monoxide	0.09 lb/gal	0.19 lb/gal	0.1 lb/gal
Volatile Organic Compounds	0.04 lb/gal	0.04 lb/gal	0.08 lb/gal
Sulfur Dioxide	0.00023 lb/gal	0.00029 lb/gal	0.00027 lb/gal

(9VAC5-80-1180 and 9VAC5-50-260)

19. **Emission Limits** - Emissions from the operation of the engines (Ref. Nos. ENG46 – ENG110 and ENG113 – ENG155) shall not exceed the limits specified below:

Hourly Emission Limits for BN6-BN13 Engines:

Pollutant	ENG46 – ENG61, ENG67 – ENG110 Cummins 2500DQKAN (each unit)	ENG62 – ENG65 Cummins 2000DQKAB (each unit)	ENG66 Cummins 750DQCB
PM_{10}	2.8 lb/hr	1.0 lb/hr	0.2 lb/hr
$PM_{2.5}$	2.8 lb/hr	1.0 lb/hr	0.2 lb/hr
Nitrogen Oxides (as NO_2)	52.9 lb/hr	39.2 lb/hr	14.8 lb/hr
Carbon Monoxide	14.4 lb/hr	5.3 lb/hr	0.6 lb/hr
Volatile Organic Compounds	0.6 lb/hr	0.9 lb/hr	0.5 lb/hr
Sulfur Dioxide	0.8 lb/hr	0.7 lb/hr	0.01 lb/hr

Pollutant	ENG113 – ENG152 Cummins C3000D6e (each unit)	ENG153 – ENG154 Cummins 1750DQAD (each unit)	ENG 155 Cummins 800DQCC
PM_{10}	1.3 lb/hr	1.0 lb/hr	0.4 lb/hr
$PM_{2.5}$	1.3 lb/hr	1.0 lb/hr	0.4 lb/hr
Nitrogen Oxides (as NO_2)	63.6 lb/hr	45.1 lb/hr	21.6 lb/hr
Carbon Monoxide	3.8 lb/hr	4.0 lb/hr	1.8 lb/hr
Volatile Organic Compounds	1.5 lb/hr	1.0 lb/hr	0.8 lb/hr
Sulfur Dioxide	0.05 lb/hr	0.04 lb/hr	0.01 lb/hr

Annual Emission Limits for BN6-BN13 Engines:

Pollutant	Annual Emission Limit (all units combined)
PM_{10}	10.0 tons/yr
$PM_{2.5}$	10.0 tons/yr
Nitrogen Oxides (as NO_2)	171.0 tons/yr
Carbon Monoxide	49.6 tons/yr
Volatile Organic Compounds	12.3 tons/yr
Sulfur Dioxide	1.5 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 15, 16, and 18.
(9VAC5-80-1180 and 9VAC5-50-260)

20. **Visible Emission Limit** - Visible emissions from each engine (Ref. Nos. ENG46 – ENG155) exhaust stack shall not exceed 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9VAC5-80-1180 and 9VAC5-50-260)

21. **Emissions Testing** - The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility/equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided.
(9VAC5-50-30 F and 9VAC5-80-1180)

RECORDS

22. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:

    a. Annual hours of operation of each engine (Ref. Nos. ENG46 – ENG155), calculated monthly as the sum of each consecutive 12-month period.

    b. Annual fuel consumption of each engine (Ref. Nos. ENG46 – ENG155), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months to verify compliance with the annual emission limitations specified in Condition 15.

c. An annual emissions calculation for the engines (Ref. Nos. ENG46 – ENG155) using calculation methods approved by the Piedmont Regional Office. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months to verify compliance with the annual emission limitations specified in Condition 19.

d. All fuel supplier certifications.

e. Engine information including make, model, serial number, model year, maximum engine power (bhp), and engine displacement for each engine-generator set.

f. Written operating procedures, scheduled and unscheduled maintenance, and operator training, as required by Condition 52.

g. Records of the reasons for operation for each engine (Ref. Nos. ENG46 – ENG155), including, but not limited to, the date, cause of operation, cause of the emergency, the ISO-declared emergency notification, and the hours of operation.

h. Copies of all notifications.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-1180 and 9VAC5-50-50)

BN14 (Ref. Nos. ENG156 – ENG160)

PROCESS REQUIREMENTS

23. **Emission Controls** - Nitrogen oxides (NO_X) emissions from the engines (Ref. Nos. ENG156 – ENG160) shall be controlled by electronic fuel injection and aftercooler. The permittee shall maintain documentation that demonstrates the electronic fuel injection and aftercooler has been installed on the engines.
(9VAC5-80-1180 and 9VAC5-50-260)

24. **Emission Controls** - Visible emissions, particulate emissions, carbon monoxide (CO) emissions, and volatile organic compound (VOC) emissions shall be controlled by the use of good operating practices and performing appropriate maintenance in accordance with the manufacturer recommendations. In addition, the permittee may only change those settings that are permitted by the manufacturer and does not increase air emissions.
(9VAC5-80-1180 and 9VAC5-50-260)

25. **Monitoring Devices** - The engines (Ref. Nos. ENG156 – ENG160) shall be equipped with a non-resettable hour metering device to monitor the operating hours and a fuel flow meter

to monitor the fuel throughput. The non-resettable hour meter used to continuously measure the hours of operation and fuel flow meter used to continuously measure the amount of fuel consumed by each engine shall be observed by the owner with a frequency of not less than once each day the engine is operated. The owner shall keep a log of these observations.

Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when each of the engines is operating.
(9VAC5-80-1180 D)

OPERATING/EMISSION LIMITATIONS

26. **Operation of the Engine-Generator Set** - The permittee shall operate and maintain each engine and control device according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may only change those settings that are permitted by the manufacturer and does not increase air emissions.
(9VAC5-80-1180)

27. **Fuel** - The approved fuel for the engines (Ref. Nos. ENG156 – ENG160) is diesel fuel. The diesel fuel shall meet the ASTM D975 specification for S15 diesel fuel oil with a maximum sulfur content per shipment of 0.0015%. A change in the fuel shall be considered a change in the method of operation of the engines and may require a new or amended permit. However, if a change in the fuel is not subject to new source review permitting requirements, this condition should not be construed to prohibit such a change.
(9VAC5-80-1180 and 9VAC5-50-260)

28. **Fuel Throughput** - The engines (Ref. Nos. ENG156 – ENG160) combined shall consume no more than 49,448 gallons of diesel fuel per year calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-1180)

29. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of diesel. Each fuel supplier certification shall include the following:

    a. The name of the fuel supplier;

    b. The date on which the diesel fuel was received;

    c. The quantity of diesel fuel delivered in the shipment;

d. A statement that the diesel fuel complies with the American Society for Testing and Materials specifications (ASTM D975) for S15 diesel fuel oil; and

e. The sulfur content of the diesel fuel.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 27. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
(9VAC5-80-1180)

EMISSION LIMITS

30. **Emission Limits** - Emissions from the operation of each engine (Ref. Nos. ENG156 – ENG160) shall not exceed the limits specified below:

Emission Factors for BN14 Engines:

Pollutant	ENG156 – ENG160 Caterpillar 3516C (each unit)
PM_{10}	0.01 lb/gal
$PM_{2.5}$	0.01 lb/gal
Nitrogen Oxides (as NO_2)	0.29 lb/gal
Carbon Monoxide	0.15 lb/gal
Volatile Organic Compounds	0.03 lb/gal
Sulfur Dioxide	0.00025 lb/gal

(9VAC5-80-1180 and 9VAC5-50-260)

31. **Emission Limits** - Emissions from the operation of the engines (Ref. Nos. ENG156 – ENG160) shall not exceed the limits specified below:

Pollutant	ENG156 – ENG160 Caterpillar 3516C (each unit)	Annual Emission Limit (all units combined)
Nitrogen Oxides (as NO_2)	51.1 lb/hr	7.3 tons/yr
Carbon Monoxide	6.1 lb/hr	3.7 tons/yr
Volatile Organic Compounds	1.2 lb/hr	0.8 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 27, 28, and 30.
(9VAC5-80-1180 and 9VAC5-50-260)

32. **Visible Emission Limit** - Visible emissions from each engine (Ref. Nos. ENG156 – ENG160) exhaust stack shall not exceed 10 percent opacity except during one 6-minute

period in any one hour in which visible emissions shall not exceed 20% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9VAC5-80-1180 and 9VAC5-50-260)

33. **Emissions Testing** - The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility/equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided.
(9VAC5-50-30 F and 9VAC5-80-1180)

RECORDS

34. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:

    a. Annual hours of operation of each engine (Ref. Nos. ENG156 – ENG160), calculated monthly as the sum of each consecutive 12-month period.

    b. Annual fuel consumption of each engine (Ref. Nos. ENG156 – ENG160), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months to verify compliance with the annual emission limitations specified in Condition 28.

    c. An annual emissions calculation for the engine (Ref. Nos. ENG156 – ENG160) using calculation methods approved by the Piedmont Regional Office. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months to verify compliance with the annual emission limitations specified in Condition 31.

    d. All fuel supplier certifications.

    e. Engine information including make, model, serial number, model year, maximum engine power (bhp), and engine displacement for each engine-generator set.

    f. Written operating procedures, scheduled and unscheduled maintenance, and operator training, as required by Condition 52.

g. Records of the reasons for operation for each engine, including, but not limited to, the date, cause of operation, cause of the emergency, the ISO-declared emergency notification, and the hours of operation.

h. Copies of all notifications.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-1180 and 9VAC5-50-50)

Power Harvesting BN49 and BN80 (Ref. Nos. ENG161 – ENG175)

PROCESS REQUIREMENTS

35. **Emission Controls** - Nitrogen oxides (NO_X) emissions from the engine-generator sets (Ref. Nos. ENG161 – ENG175) shall be controlled by electronic fuel injection and aftercooler. The permittee shall maintain documentation that demonstrates the electronic fuel injection and aftercooler has been installed on the engine-generator sets.
(9VAC5-80-1180 and 9VAC5-50-260)

36. **Emission Controls** - Visible emissions, particulate (PM, PM_{10} and $PM_{2.5}$), volatile organic compound (VOC), nitrogen oxides (NOx) and carbon monoxide (CO) emissions from the engine-generator sets (Ref. Nos. ENG161 – ENG175) shall be controlled by the use of good operating practices and performing appropriate maintenance in accordance with the manufacturer recommendations. In addition, the permittee may only change those settings that are permitted by the manufacturer and does not increase air emissions.
(9VAC5-80-1180 and 9VAC5-50-260)

37. **Monitoring Devices** - Each engine-generator set (Ref. Nos. ENG161 – ENG175) shall be equipped with a non-resettable hour metering device to monitor the operating hours and a fuel flow meter to monitor the fuel throughput. Each non-resettable hour meter used to continuously measure the hours of operation and fuel flow meter used to continuously measure the amount of fuel consumed by each engine shall be observed by the owner with a frequency of not less than once each day the engine is operated. The owner shall keep a log of these observations.

Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when each of the engines is operating.
(9VAC5-80-1180 D)

OPERATING/EMISSION LIMITATIONS

38. **Operation of the Engine-Generator Set** - The permittee shall operate and maintain each engine-generator set and control device according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may only change those settings that are permitted by the manufacturer and does not increase air emissions.
(9VAC5-80-1180)

39. **Fuel** - The approved fuel for the engine-generator set (Ref. Nos. ENG161 – ENG175) is diesel fuel. The diesel fuel shall meet the ASTM D975 specification for S15 diesel fuel oil with a maximum sulfur content per shipment of 0.0015%. A change in the fuel shall be considered a change in the method of operation of the engines and may require a new or amended permit. However, if a change in the fuel is not subject to new source review permitting requirements, this condition should not be construed to prohibit such a change.
(9VAC5-80-1180 and 9VAC5-50-260)

40. **Fuel Throughput** - The engine-generator set (Ref. Nos. ENG161 – ENG175) combined shall consume no more than 149,882 gallons of diesel fuel per year calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
(9VAC5-80-1180)

41. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of diesel. Each fuel supplier certification shall include the following:

    a. The name of the fuel supplier;

    b. The date on which the diesel fuel was received;

    c. The quantity of diesel fuel delivered in the shipment;

    d. A statement that the diesel fuel complies with the American Society for Testing and Materials specifications (ASTM D975) for S15 diesel fuel oil; and

    e. The sulfur content of the diesel fuel.

    Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 39. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
    (9VAC5-80-1180)

EMISSION LIMITS

42. **Emission Limits** - Emissions from the operation of each engine-generator set (Ref. Nos. ENG161 – ENG175) shall not exceed the limits specified below:

Emission Factors for BN49 & BN80 Engines:

Pollutant	ENG161 – ENG175 Caterpillar 3516C (each unit)
PM_{10}	0.01 lb/gal
$PM_{2.5}$	0.01 lb/gal
Nitrogen Oxides (as NO_2)	0.27 lb/gal
Carbon Monoxide	0.15 lb/gal
Volatile Organic Compounds	0.03 lb/gal
Sulfur Dioxide	0.00025 lb/gal

(9VAC5-80-1180 and 9VAC5-50-260)

43. **Emission Limits** - Emissions from the operation of the engine-generator set (Ref. Nos. ENG161 – ENG175) shall not exceed the limits specified below:

Pollutant	ENG161 – ENG175 Caterpillar 3516C (each unit)	Annual Emission Limit (all units combined)
PM_{10}	0.4 lb/hr	0.8 tons/yr
$PM_{2.5}$	0.4 lb/hr	0.8 tons/yr
Nitrogen Oxides (as NO_2)	48.0 lb/hr	20.5 tons/yr
Carbon Monoxide	6.1 lb/hr	11.3 tons/yr
Volatile Organic Compounds	1.2 lb/hr	2.4 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 39, 40, 42, and 45.
(9VAC5-80-1180 and 9VAC5-50-260)

44. **Visible Emission Limit** - Visible emissions from each engine (Ref. Nos. ENG161 – ENG175) exhaust stack shall not exceed 10 percent opacity except during one 6-minute period in any one hour in which visible emissions shall not exceed 20% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.
(9VAC5-80-1180 and 9VAC5-50-260)

INITIAL COMPLIANCE DETERMINATION

45. Stack Test - Initial performance tests shall be conducted for nitrogen oxides (as NO_2) and carbon monoxide (CO) on two (2) engine-generator sets (Ref. Nos. ENG161 – ENG175) to

determine compliance with the emission limits contained in Condition 43. The tests shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Piedmont Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the Piedmont Regional Office within 45 days after test completion or 180 days of startup, as applicable, and shall conform to the test report format enclosed with this permit.

a. Emissions testing of each pollutant for each selected engine-generator set shall consist of three one-hour test runs under load. The average of the three runs shall be reported as the short-term emission rate for that engine-generator.

b. Testing shall be conducted with the engine(s) operating at greater than 90% electrical capacity, unless multiple load band testing is approved by DEQ.

c. Recorded information shall include, but not be limited to:

   i. Generator load/kilowatt output.

   ii. Fuel consumption and fuel sulfur content of the diesel fuel oil.

(9 VAC 5-50-30 and 9 VAC 5-80-1200)

CONTINUING COMPLIANCE DETERMINATION

46. Emissions Testing - The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility/equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided.
(9 VAC 5-50-30 F and 9 VAC 5-80-1180)

47. Emission Testing/Visible Emissions Evaluation - Upon request by the DEQ, the permittee shall conduct stack tests and/or visible emission evaluations of the engine-generator sets (Ref. Nos. ENG161 – ENG175) to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Piedmont Regional Office.
(9VAC5-80-1200 and 9VAC5-50-30 G)

RECORDS

48. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Piedmont Regional Office. These records shall include, but are not limited to:

    a. Annual hours of operation of each engine-generator set (Ref. Nos. ENG161 – ENG175), calculated monthly as the sum of each consecutive 12-month period.

    b. Annual fuel consumption of diesel fuel for the combined operation of the engine-generator sets (Ref. Nos. ENG161 – ENG175), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months to verify compliance with the annual emission limitations specified in Condition 40.

    c. An annual emissions calculation for combined operation of the engine-generator sets (Ref. Nos. ENG161 – ENG175) using calculation methods approved by the Piedmont Regional Office. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months to verify compliance with the annual emission limitations specified in Condition 43.

    d. All fuel supplier certifications.

    e. Engine information including make, model, serial number, model year, maximum engine power (bhp), and engine displacement for each engine-generator set.

    f. Written operating procedures, scheduled and unscheduled maintenance, and operator training, as required by Condition 52.

    g. Records of the reasons for operation for each engine-generator set (Ref. Nos. ENG 161 – ENG175), including, but not limited to, the date, cause of operation, cause of the emergency, the ISO-declared emergency notification, and the hours of operation.

    h. Results of all stack tests and visible emission evaluations.

    i. Copies of all notifications.

    These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
    (9VAC5-80-1180 and 9VAC5-50-50)

NOTIFICATIONS

49. Initial Notifications - The permittee shall furnish written notification to the Piedmont Regional Office of:

    a. The actual date on which construction of the engine-generator sets (Ref. Nos. ENG161 – ENG175) commenced within 30 days after such date.

    b. The anticipated start-up date of the engine-generator sets (Ref. Nos. ENG161 – ENG175) postmarked not more than 60 days nor less than 30 days prior to such date.

    c. The actual start-up date of the engine-generator sets (Ref. Nos. ENG161 – ENG175) within 15 days after such date. The actual start-up date shall be the date on which each engine completes manufacturer's trials, but shall be no later than thirty days after the initial start up for manufacturer's trials.

    d. The anticipated date of performance tests of the engine-generator sets postmarked at least 30 days prior to such date.

    (9 VAC 5-80-1180 and 9 VAC 5-50-50)

GENERAL CONDITIONS (BN1-BN4, BN6-BN14, BN49 and BN80)

50. Permit Suspension/Revocation - This permit may be suspended or revoked if the permittee:

    a. Knowingly makes material misstatements in the permit application or any amendments to it;

    b. Fails to comply with the conditions of this permit;

    c. Fails to comply with any emission standards applicable to a permitted emissions unit;

    d. Causes emissions from the stationary source which result in violations of, or interfere with the attainment and maintenance of, any ambient air quality standard; or

    e. Fails to operate in conformance with any applicable control strategy, including any emission standards or emissions limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.

    (9 VAC 5-80-1210 G)

51. Right of Entry - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
(9 VAC 5-170-130 and 9 VAC 5-80-1180)

52. Maintenance/Operating Procedures - At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

b. Maintain an inventory of spare parts.

c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)

53. Record of Malfunctions - The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour.

Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.
(9 VAC 5-20-180 J and 9 VAC 5-80-1180 D)

54. Notification for Facility or Control Equipment Malfunction - The permittee shall furnish notification to the Piedmont Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour. Such notification shall be made no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Piedmont Regional Office.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

55. Violation of Ambient Air Quality Standard - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I and 9 VAC 5-80-1180)

56. Change of Ownership - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Piedmont Regional Office of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-1240)

57. Permit Copy - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-80-1180)

SOURCE TESTING REPORT FORMAT

Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates
4. Tester; name, address and report date

Certification

1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. *Signed by reviewer

Copy of approved test protocol

Summary

1. Reason for testing
2. Test dates
3. Identification of unit tested & the maximum rated capacity
4. *For each emission unit, a table showing:
    a. Operating rate
    b. Test Methods
    c. Pollutants tested
    d. Test results for each run and the run average
    e. Pollutant standard or limit
5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section. Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

Test Results

1. Detailed test results for each run
2. *Sample calculations
3. *Description of collected samples, to include audits when applicable

Appendix

1. *Raw production data
2. *Raw field data
3. *Laboratory reports
4. *Chain of custody records for lab samples
5. *Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures

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* Not applicable to visible emission evaluation