Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020
www.deq.virginia.gov

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

April 24, 2024

via Electronic Mail

Mr. Jeff Bertocci
Datacenter Operations Manager
Microsoft Corporation
Microsoft Corp – East Coast Data Center
101 Herbert Drive, Office 1118
Boydton, VA 23917
Jeff.Bertocci@microsoft.com

Location: Mecklenburg County
Registration No.: 21527

Dear Mr. Bertocci:

Attached is an initial Title V permit to operate your facility pursuant to 9VAC5 Chapter 80 Article 1 of the Virginia Regulations for the Control and Abatement of Air Pollution. The attached permit will be in effect beginning April 24, 2024.

In the course of evaluating the application and arriving at a final decision to issue this permit, the Department of Environmental Quality (DEQ) deemed the application complete on November 30, 2023, and solicited written public comments by placing a newspaper advertisement in *The News-Progress* on Wednesday, March 13, 2024. The thirty-day required comment period, provided for in 9VAC5-80-270 expired on April 12, 2024.

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

The Board's 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.
Regional Air Permit Manager

JEK/eds/21527 Microsoft Corp – East Coast Data Center Initial TV Permit

Attachment: Permit
Source Testing Report Format

cc: Lexi Jones, Microsoft Corporation (lexijones@microsoft.com)
Andy Nishida, Consultant, AECOM (andy.nishida@aecom.com)
Chief, Air Permits Branch (3AD10), U.S. EPA Region 3 (c/o He.Yongtian@epa.gov)
DEQ, Office of Air Permit Programs (electronic file submission)
DEQ, PRO Air Compliance Manager/Inspector (electronic file submission)

Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
(804) 527-5020
www.deq.virginia.gov

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

Federal Operating Permit
Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Microsoft Corporation
Facility Name:	Microsoft Corp – East Coast Data Center
Facility Location:	101 Herbert Drive Boydton, VA 23917
Registration Number:	21527
Permit Number:	PRO-21527

This permit includes the following program:
Federally Enforceable Requirements - Clean Air Act

April 24, 2024	April 23, 2029
Effective Date	Expiration Date

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

April 24, 2024
Signature Date

Table of Contents, page 1
Permit Conditions, pages 6 through 39

Table of Contents

FACILITY INFORMATION **2**
EMISSION UNITS **3**
INTERNAL COMBUSTION ENGINE REQUIREMENTS – BN1 - BN4 (EMISSION UNIT ID#S ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG45) **6**
LIMITATIONS 6
MONITORING 8
RECORDKEEPING 9
INTERNAL COMBUSTION ENGINE REQUIREMENTS – BN6 - BN13 (EMISSION UNIT ID#S ENG 46-ENG110 AND ENG113-ENG155) **10**
LIMITATIONS 10
MONITORING 14
RECORDKEEPING 15
INTERNAL COMBUSTION ENGINE REQUIREMENTS – BN14 (EMISSION UNIT ID#S ENG 156-ENG160) **17**
LIMITATIONS 17
MONITORING 19
RECORDKEEPING 20
INTERNAL COMBUSTION ENGINE REQUIREMENTS – BN49 AND BN80 (EMISSION UNIT ID#S ENG161-ENG175) **21**
LIMITATIONS 21
MONITORING 24
RECORDKEEPING 25
NOTIFICATIONS 26
TESTING 26
40 CFR 60 SUBPART IIII (NSPS FOR STATIONARY COMPRESSION IGNITION (CI) INTERNAL COMBUSTION ENGINES) (EMISSION UNIT ID#S ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, AND ENG113-ENG175) EMERGENCY ENGINE GENERATOR REQUIREMENTS **27**
LIMITATIONS 27
MONITORING 28
RECORDKEEPING 28
40 CFR 63 SUBPART ZZZZ (NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES (RICE MACT) (EMISSION UNIT ID#S ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, AND ENG113-ENG175) EMERGENCY ENGINE GENERATOR REQUIREMENTS **29**
FACILITY WIDE REQUIREMENTS **29**
INSIGNIFICANT EMISSION UNITS **30**
PERMIT SHIELD & INAPPLICABLE REQUIREMENTS **31**
GENERAL CONDITIONS **31**

Facility Information

Permittee
Microsoft Corporation
101 Herbert Drive
Boydton, VA 23917

Responsible Official
Mr. Jeff Bertocci
Datacenter Operations Manager

Facility
Microsoft Corp – East Coast Data Center
101 Herbert Drive
Boydton, VA 23917
Mecklenburg County

Contact Person
Mr. Jeff Bertocci
Datacenter Operations Manager
(434) 738-9243
jeff.bertocci@microsoft.com

County-Plant Identification Number: 51-117-00071

Facility Description: NAICS 518210 – Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services.

Microsoft Corp – East Coast Data Center is a data center backup electric generating facility consisting of 165 engine-generator sets (ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, ENG113- ENG175) housed in 15 buildings (BN1-BN4, BN6-BN13, BN14, BN49, and BN80) to make up the East Coast Data Center campus.

Emission Units

Process Equipment to be operated consists of:

BN1 - BN4

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
ENG1 – ENG11	ENG1-STK1 through ENG-STK11	Caterpillar Standby Generator, Model 3516C (Manufacture Date: 2010) (BN1)	2,500 kWe/ 3,633 bhp, each	--	--	--	September 19, 2023
ENG17, ENG32, ENG45	ENG17-STK1, ENG32-STK1, ENG45-STK1	Caterpillar Standby Generator, Model C32 (Manufacture Date: 2010) (BN1, BN3, BN4)	1,000 kWe/ 1,474 bhp, each	--	--	--	September 19, 2023
ENG20, ENG31, ENG44	ENG20-STK1, ENG31-STK1, ENG44-STK1	Caterpillar Standby Generator, Model 3512C (Manufacture Date: 2010) (BN1, BN3, BN4)	1,500 kWe/ 2,206 bhp, each	--	--	--	September 19, 2023
ENG21 – ENG30, ENG34 – ENG43	ENG21-STK1 through ENG30-STK1; ENG34-STK1 through ENG43-STK1	Caterpillar Standby Generator, Model 3516C (Manufacture Date: 2012) (BN3, BN4)	2,000 kWe/ 2,937 bhp, each	--	--	--	September 19, 2023

BN6 - BN13

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
ENG46 – ENG61, ENG67 – ENG110	ENG46-STK1 through ENG61-STK1; ENG67-STK1 through ENG110-STK1	Cummins Standby Generator, Model 2500DQKAN (Manufacture Date: 2014) (BN6, BN7, BN8) (Cummins G19 Low NOx calibration)	2,500 kWe/ 3,640 bhp	--	--	--	September 19, 2023

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
ENG62 – ENG65	ENG62-STK1 through ENG65-STK1	Cummins Standby Generator, Model 2000DQKAB (Manufacture Date: 2014) (BN6) (Cummins G15 Low NOx calibration)	2,000 kWe/ 2,919 bhp, each	--	--	--	September 19, 2023
ENG66	ENG66-STK1	Cummins Standby Generator, Model 750DQCB (Manufacture Date: 2014) (BN6)	750 kWe/ 1,100 bhp	--	--	--	September 19, 2023
ENG113 – ENG 152	ENG113-STK1 through ENG152-STK1	Cummins Standby Generator, Model C3000D6e (Manufacture Date: 2019) (BN9, BN10, BN11, BN12, BN13)	3,000 kWe/ 4,307 bhp, each	--	--	--	September 19, 2023
ENG153 – ENG154	ENG153-STK1 through ENG154-STK1	Cummins Standby Generator, Model 1750DQKAD (Manufacture Date: 2019) (BN9, BN10)	1,750 kWe/ 2,922 bhp, each	--	--	--	September 19, 2023
ENG155	ENG155-STK1	Cummins Standby Generator, Model 800DQCC (Manufacture Date: 2019) (BN13)	800 kWe/ 1,183 bhp	--	--	--	September 19, 2023

BN14

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
ENG156 – ENG160	ENG156-STK1 through ENG160-STK1	Caterpillar Standby Generator, Model 3516C (Manufacture Date: 2018) (BN14)	2,500 kWe/ 3,633 bhp, each	--	--	--	September 19, 2023

BN49 and BN80

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
ENG161 – ENG175	ENG161-STK1 through ENG175-STK1	Caterpillar Standby Generators, Model 3516C (Manufacture Date: TBD) (BN49, BN80)	2,500 kWe/ 3,633 bhp, each	--	--	--	September 19, 2023

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only and is not an applicable requirement.

Internal Combustion Engine Requirements – BN1 - BN4 (Emission Unit ID#s ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG45)

Limitations

1. Internal Combustion Engine Requirements (BN1 - BN4) - 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.
(9VAC5-80-110 and Condition 2 of 9/19/2023 Permit)

2. Internal Combustion Engine Requirements (BN1 - BN4) - 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.
(9VAC5-80-110 and Condition 3 of 9/19/2023 Permit)

3. Internal Combustion Engine Requirements (BN1 - BN4) - 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%

(9VAC5-80-110, 40 CFR 60.4207(b), and Condition 4 of 9/19/2023 Permit)

4. Internal Combustion Engine Requirements (BN1 - BN4) - 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 3. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
(9VAC5-80-110 and Condition 5 of 9/19/2023 Permit)

5. Internal Combustion Engine Requirements (BN1 - BN4) - 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

(9VAC5-80-110 and Condition 6 of 9/19/2023 Permit)

6. Internal Combustion Engine Requirements (BN1 - BN4) - 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 2, 3, and 5.
(9VAC5-80-110 and Condition 7 of 9/19/2023 Permit)

7. Internal Combustion Engine Requirements (BN1 - BN4) - 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.
(9VAC5-80-110 and Condition 8 of 9/19/2023 Permit)

Monitoring

8. Internal Combustion Engine Requirements (BN1 - BN4) - 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.
   (9VAC5-80-110, 40 CFR 60.4209(a), and Condition 1 of 9/19/2023 Permit)

9. Internal Combustion Engine Requirements (BN1 - BN4) - Visible Emission Observation - Observations for the presence of visible emissions from each engine (Ref. Nos. ENG1 – ENG11, ENG17, ENG20 – ENG32, and ENG34 – ENG45) exhaust stack shall be made at the following frequencies, as applicable:

Emissions Unit Operating Hours per Year (hr/yr)	Frequency of Observations for Presence of Visible Emissions
Less than 200 hr/yr	Once per year
Greater than or equal to 200 hr/yr	Once every 200 hours

"Year" as used above means each rolling 12-month period, calculated monthly as the sum of each consecutive 12-month period. Each observation shall be at least two minutes duration. If visible emissions are seen during the observation or at any time, the permittee shall:

a. Take timely corrective action such that the emissions unit resumes operation with no visible emissions, or,

b. Conduct a visible emission evaluation (VEE) on the emissions unit exhaust stack with visible emissions in accordance with EPA Test Method 9 (reference 40 CFR 60, Appendix A) for a minimum of six minutes, to assure visible emissions from the emission unit is 10 percent opacity or less. If any observations exceed 10 percent opacity, the observation period shall continue until a total of 60 minutes of observation have been completed. Timely corrective action shall be taken, if necessary, such that the emissions unit resumes operation within the 10 percent opacity limit.

The permittee shall maintain written or electronic logs of operating hours and observations for each emergency engine to demonstrate compliance. The logs shall include the hours of operation for each engine, the date and time of each observation, whether visible emissions were seen during the observation, the results of all VEEs, any corrective action taken, and the name of the observer. If any emissions unit has not been operated for any period, it shall be noted in the log.
(9VAC5-80-110 E & K)

Recordkeeping

10. Internal Combustion Engine Requirements (BN1 - BN4) - 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 2.

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 6.

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 59.

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.

i. A log of monitoring device observations as required by Condition 8.

j. Results of monitoring for visible emissions, any corrective actions taken, and VEE results as required by Condition 9.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110, 40 CFR 60.4214(b), and Condition 9 of 9/19/2023 Permit)

Internal Combustion Engine Requirements – BN6 - BN13 (Emission Unit ID#s ENG 46-ENG110 and ENG113-ENG155)

Limitations

11. Internal Combustion Engine Requirements (BN6 - BN13) - 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. (9VAC5-80-110 and Condition 10 of 9/19/2023 Permit)

12. Internal Combustion Engine Requirements (BN6 - BN13) - 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.
(9VAC5-80-110, §60.4211(a)(2), and Condition 11 of 9/19/2023 Permit)

13. Internal Combustion Engine Requirements (BN6 - BN13) - 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.
(9VAC5-80-110, §60.4211(a)(1) & (a)(2), and Condition 13 of 9/19/2023 Permit)

14. Internal Combustion Engine Requirements (BN6 - BN13) - 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.
(9VAC5-80-110 and Condition 14 of 9/19/2023 Permit)

15. Internal Combustion Engine Requirements (BN6 - BN13) - 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.
(9VAC5-80-110 and Condition 15 of 9/19/2023 Permit)

16. Internal Combustion Engine Requirements (BN6 - BN13) - 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%

    (9VAC5-80-110, 40 CFR 60.4207(b), and Condition 16 of 9/19/2023 Permit)

17. Internal Combustion Engine Requirements (BN6 - BN13) - 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.
    (9VAC5-80-110 and Condition 17 of 9/19/2023 Permit)

18. Internal Combustion Engine Requirements (BN6 - BN13) - 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
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

(9VAC5-80-110 and Condition 18 of 9/19/2023 Permit)

19. Internal Combustion Engine Requirements (BN6 - BN13) - 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.
(9VAC5-80-110 and Condition 19 of 9/19/2023 Permit)

20. Internal Combustion Engine Requirements (BN6 - BN13) - 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.
(9VAC5-80-110 and Condition 20 of 9/19/2023 Permit)

Monitoring

21. Internal Combustion Engine Requirements (BN6 - BN13) - 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.
    (9VAC5-80-110, 40 CFR 60.4209(a), and Condition 12 of 9/19/2023 Permit)

22. Internal Combustion Engine Requirements (BN6 - BN13) - Visible Emission Observation - Observations for the presence of visible emissions from each engine (Ref. Nos. ENG46 – ENG110 and ENG113 – ENG155) exhaust stack shall be made at the following frequencies, as applicable:

Emissions Unit Operating Hours per Year (hr/yr)	Frequency of Observations for Presence of Visible Emissions
Less than 200 hr/yr	Once per year
Greater than or equal to 200 hr/yr	Once every 200 hours

"Year" as used above means each rolling 12-month period, calculated monthly as the sum of each consecutive 12-month period. Each observation shall be at least two minutes duration. If visible emissions are seen during the observation or at any time, the permittee shall:

a. Take timely corrective action such that the emissions unit resumes operation with no visible emissions, or,

b. Conduct a visible emission evaluation (VEE) on the emissions unit exhaust stack with visible emissions in accordance with EPA Test Method 9 (reference 40 CFR 60, Appendix A) for a minimum of six minutes, to assure visible emissions from the emission unit is 10 percent opacity or less. If any observations exceed 10 percent opacity, the observation period shall continue until a total of 60 minutes of observation have been completed. Timely corrective action shall be taken, if necessary, such that the emissions unit resumes operation within the 10 percent opacity limit.

The permittee shall maintain written or electronic logs of operating hours and observations for each emergency engine to demonstrate compliance. The logs shall include the hours of operation for each engine, the date and time of each observation, whether visible emissions were seen during the observation, the results of all VEEs, any corrective action taken, and the name of the observer. If any emissions unit has not been operated for any period, it shall be noted in the log.
(9VAC5-80-110 E & K)

Recordkeeping

23. Internal Combustion Engine Requirements (BN6 - BN13) - 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 59.

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.

i. Documentation that demonstrates the electronic fuel injection and/or turbocharged engine and aftercooler has been installed on the engines as required by Condition 11.

j. Documentation that demonstrates the Cummins G19 – Low NOx Calibration changes made to each engine's software (Ref. Nos. ENG46 – ENG61, ENG67 – ENG110) and the resulting emission rates.

k. Documentation that demonstrates the Cummins G15 – Low NOx Calibration changes made to each engine's software (Ref. Nos. ENG62 – ENG 65) and the resulting emission rates.

l. A log of monitoring device observations as required by Condition 21.

m. Results of monitoring for visible emissions, any corrective actions taken, and VEE results as required by Condition 22.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110, 40 CFR 60.4214(b), and Condition 22 of 9/19/2023 Permit)

Internal Combustion Engine Requirements – BN14 (Emission Unit ID#s ENG 156-ENG160)

Limitations

24. Internal Combustion Engine Requirements (BN14) - 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. (9VAC5-80-110 and Condition 23 of 9/19/2023 Permit)

25. Internal Combustion Engine Requirements (BN14) - 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.
(9VAC5-80-110, §60.4211(a)(2), and Condition 24 of 9/19/2023 Permit)

26. Internal Combustion Engine Requirements (BN14) - 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.
(9VAC5-80-110, §60.4211(a)(1) & (a)(2), and Condition 26 of 9/19/2023 Permit)

27. Internal Combustion Engine Requirements (BN14) - 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.
(9VAC5-80-110, 40 CFR 60.4207(b), and Condition 27 of 9/19/2023 Permit)

28. Internal Combustion Engine Requirements (BN14) - 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.
(9VAC5-80-110 and Condition 28 of 9/19/2023 Permit)

29. Internal Combustion Engine Requirements (BN14) - 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.
    (9VAC5-80-110 and Condition 29 of 9/19/2023 Permit)

30. Internal Combustion Engine Requirements (BN14) - 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

    (9VAC5-80-110 and Condition 30 of 9/19/2023 Permit)

31. Internal Combustion Engine Requirements (BN14) - 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

Pollutant	ENG156 – ENG160 Caterpillar 3516C (each unit)	Annual Emission Limit (all units combined)
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.
(9VAC5-80-110 and Condition 31 of 9/19/2023 Permit)

32. Internal Combustion Engine Requirements (BN14) - 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.
(9VAC5-80-110 and Condition 32 of 9/19/2023 Permit)

Monitoring

33. Internal Combustion Engine Requirements (BN14) - 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.
    (9VAC5-80-110, 40 CFR 60.4209(a), and Condition 25 of 9/19/2023 Permit)

34. Internal Combustion Engine Requirements (BN14) - Visible Emission Observation - Observations for the presence of visible emissions from each engine (Ref. Nos. ENG156 – ENG160) exhaust stack shall be made at the following frequencies, as applicable:

Emissions Unit Operating Hours per Year (hr/yr)	Frequency of Observations for Presence of Visible Emissions
Less than 200 hr/yr	Once per year
Greater than or equal to 200 hr/yr	Once every 200 hours

"Year" as used above means each rolling 12-month period, calculated monthly as the sum of each consecutive 12-month period. Each observation shall be at least two minutes duration. If visible emissions are seen during the observation or at any time, the permittee shall:

a. Take timely corrective action such that the emissions unit resumes operation with no visible emissions, or,

b. Conduct a visible emission evaluation (VEE) on the emissions unit exhaust stack with visible emissions in accordance with EPA Test Method 9 (reference 40 CFR 60, Appendix A) for a minimum of six minutes, to assure visible emissions from the emission unit is 10 percent opacity or less. If any observations exceed 10 percent opacity, the observation period shall continue until a total of 60 minutes of observation have been completed. Timely corrective action shall be taken, if necessary, such that the emissions unit resumes operation within the 10 percent opacity limit except during one 6-minute period in which visible emissions shall not exceed 20% opacity.

The permittee shall maintain written or electronic logs of operating hours and observations for each emergency engine to demonstrate compliance. The logs shall include the hours of operation for each engine, the date and time of each observation, whether visible emissions were seen during the observation, the results of all VEEs, any corrective action taken, and the name of the observer. If any emissions unit has not been operated for any period, it shall be noted in the log.
(9VAC5-80-110 E & K)

Recordkeeping

35. Internal Combustion Engine Requirements (BN14) - 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 59.

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.

i. Documentation that demonstrates the electronic fuel injection and aftercooler has been installed on the engines as required by Condition 24.

j. A log of monitoring device observations as required by Condition 33.

k. Results of monitoring for visible emissions, any corrective actions taken, and VEE results as required by Condition 34.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110, 40 CFR 60.4214(b), and Condition 34 of 9/19/2023 Permit)

Internal Combustion Engine Requirements – BN49 and BN80 (Emission Unit ID#s ENG161-ENG175)

Limitations

36. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.
(9VAC5-80-110 and Condition 35 of 9/19/2023 Permit)

37. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.
(9VAC5-80-110, §60.4211(a)(2), and Condition 36 of 9/19/2023 Permit)

38. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.
(9VAC5-80-110, §60.4211(a)(1) & (a)(2), and Condition 38 of 9/19/2023 Permit)

39. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.
(9VAC5-80-110, 40 CFR 60.4207(b), and Condition 39 of 9/19/2023 Permit)

40. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.
(9VAC5-80-110 and Condition 40 of 9/19/2023 Permit)

41. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.
(9VAC5-80-110 and Condition 41 of 9/19/2023 Permit)

42. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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

(9VAC5-80-110 and Condition 42 of 9/19/2023 Permit)

43. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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 49.
(9VAC5-80-110 and Condition 43 of 9/19/2023 Permit)

44. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.
(9VAC5-80-110 and Condition 44 of 9/19/2023 Permit)

Monitoring

45. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.
    (9VAC5-80-110, 40 CFR 60.4209(a), and Condition 37 of 9/19/2023 Permit)

46. Internal Combustion Engine Requirements (BN49 and BN80) - Visible Emission Observation - Observations for the presence of visible emissions from each engine (Ref. Nos. ENG161 – ENG175) exhaust stack shall be made at the following frequencies, as applicable:

Emissions Unit Operating Hours per Year (hr/yr)	Frequency of Observations for Presence of Visible Emissions
Less than 200 hr/yr	Once per year
Greater than or equal to 200 hr/yr	Once every 200 hours

    "Year" as used above means each rolling 12-month period, calculated monthly as the sum of each consecutive 12-month period. Each observation shall be at least two minutes duration. If visible emissions are seen during the observation or at any time, the permittee shall:

    a. Take timely corrective action such that the emissions unit resumes operation with no visible emissions, or,

    b. Conduct a visible emission evaluation (VEE) on the emissions unit exhaust stack with visible emissions in accordance with EPA Test Method 9 (reference 40 CFR 60, Appendix A) for a minimum of six minutes, to assure visible emissions from the emission unit is 10 percent opacity or less. If any observations exceed 10 percent opacity, the observation period shall continue until a total of 60 minutes of observation have been completed. Timely corrective action shall be taken, if necessary, such that

the emissions unit resumes operation within the 10 percent opacity limit except during one 6-minute period in which visible emissions shall not exceed 20% opacity.

The permittee shall maintain written or electronic logs of operating hours and observations for each emergency engine to demonstrate compliance. The logs shall include the hours of operation for each engine, the date and time of each observation, whether visible emissions were seen during the observation, the results of all VEEs, any corrective action taken, and the name of the observer. If any emissions unit has not been operated for any period, it shall be noted in the log.
(9VAC5-80-110 E & K)

Recordkeeping

47. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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 59.

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.

j. Documentation that demonstrates the electronic fuel injection and aftercooler has been installed on the engines as required by Condition 36.

k. A log of monitoring device observations as required by Condition 45.

l. Results of monitoring for visible emissions, any corrective actions taken, and VEE results as required by Condition 46.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9VAC5-80-110, 40 CFR 60.4214(b), and Condition 48 of 9/19/2023 Permit)

Notifications

48. Internal Combustion Engine Requirements **(**BN49 and BN80) - Initial Notifications - The permittee shall furnish written notification to the Piedmont Regional Office of:

a. 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.

b. The anticipated date of performance tests of the engine-generator sets (as referenced in Condition 49) postmarked at least 30 days prior to such date.

(9VAC5-80-110 and Condition 49 of 9/19/2023 Permit)

Testing

49. Internal Combustion Engine Requirements **(**BN49 and BN80) - 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.

(9VAC5-80-110 and Condition 45 of 9/19/2023 Permit)

40 CFR 60 Subpart IIII (NSPS for Stationary Compression Ignition (CI) Internal Combustion Engines) (Emission Unit ID#s ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113-ENG175) Emergency Engine Generator Requirements

Limitations

50. NSPS Subpart IIII Requirements – For Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175, the permittee shall comply with the emissions standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power.
(9VAC5-80-110 and 40 CFR 60.4205(b))

51. NSPS Subpart IIII Requirements – The permittee shall operate Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175 according to the requirements of 40 CFR 60.4211(f) (1), (2) and (3). To be considered an emergency engine under 40 CFR 60 Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f) (1) through (3), is prohibited. If an engine is not operated according to the requirements in 40 CFR 60.4211(f) (1) through (3), the engine will not be considered an emergency engine under 40 CFR 60 Subpart IIII and must meet all requirements for non-emergency engines. Operation for non-emergency purposes may require a permit to modify and operate pursuant to 9VAC5-80 Article 6.
(9VAC5-80-110 and 40 CFR 60.4211(f))

52. NSPS Subpart IIII Requirements – The permittee shall operate and maintain Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175 so that the emissions standards as required in 40 CFR 60.4204 and 40 CFR 60.4205 are achieved over the entire life of the engine.
(9VAC5-80-110 and 40 CFR 60.4206)

53. NSPS Subpart IIII Requirements – For Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175, the permittee shall comply with the requirements of 40 CFR 60.4211(a) (1) through (3), except as permitted in 40 CFR 60.4211(g).
(9VAC5-80-110 and 40 CFR 60.4211(a))

54. NSPS Subpart IIII Requirements – For Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175, the permittee shall comply by purchasing, installing and configuring an engine certified to the emissions standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, National Fire Protection Association nameplate) engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g).
(9VAC5-80-110 and 40 CFR 60.4211(c))

55. NSPS Subpart IIII Requirements – For Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175, the permittee shall comply with the applicable General Provisions (40 CFR 60 Subpart A) as indicated in Table 8 to 40 CFR 60 Subpart IIII.
(9VAC5-80-110 and 40 CFR 60.4218)

Monitoring

56. NSPS Subpart IIII Requirements – For Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175, if the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance according to 40 CFR 60.4211(g) (1) through (3).
(9VAC5-80-110 and 40 CFR 60.4211(g))

Recordkeeping

57. NSPS Subpart IIII Requirements **–** Unless the permittee can demonstrate that Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175 meet the Subpart IIII standards applicable to non-emergency engines, the permittee shall keep records as described in 40 CFR 60.4214(b).
(9VAC5-80-110 and 40 CFR 60.4214(b))

40 CFR 63 Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Rice MACT) (Emission Unit ID#s ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113-ENG175) Emergency Engine Generator Requirements

58. MACT Subpart ZZZZ Requirements – For Engines ENG1-ENG11, ENG17, ENG20-ENG32, ENG34-ENG110, and ENG113- ENG175, the permittee shall meet the requirements of 40 CFR 63, Subpart ZZZZ by complying with the applicable requirements of 40 CFR 60, Subpart IIII. No other requirements of Subpart ZZZZ apply to this source. (9VAC5-80-110 and 40 CFR 63.6590(c)(1))

Facility Wide Requirements

59. Facility Wide - 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.
    (9VAC5-80-110 and Condition 52 of 9/19/2023 Permit)

60. Facility Wide - 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.
(9VAC5-80-110 and Condition 53 of 9/19/2023 Permit)

61. Facility Wide - 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.
(9VAC5-80-110, 9VAC5-50-30, and Conditions 21, 33 and 46 of 9/19/2023 Permit)

62. Facility Wide - 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 to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Piedmont Regional Office.
(9VAC5-80-110 and Condition 47 of 9/19/2023 Permit)

Insignificant Emission Units

63. Insignificant Emission Units - The following emission units at the facility are identified in the application as insignificant emission units under 9VAC5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9VAC5-80-720B)	Rated Capacity (9VAC5-80-720C)
Tanks for ENG1 – ENG11	9,000 gallon fuel tank for each generator	9VAC5-80-720B	VOC	9,000 gallons
Tank for ENG17	3,460 gallon fuel tank	9VAC5-80-720B	VOC	3,460 gallons
Tank for ENG20	5,100 gallon fuel tank	9VAC5-80-720B	VOC	5,100 gallons
Tanks for ENG21 – ENG30, ENG34 – ENG43	7,123 gallon fuel tank for each generator	9VAC5-80-720B	VOC	7,123 gallons
Tanks for ENG31, ENG44	5,830 gallon fuel tank for each generator	9VAC5-80-720B	VOC	5,830 gallons
Tanks for ENG32, ENG45	3,802 gallon fuel tank for each generator	9VAC5-80-720B	VOC	3,802 gallons
Tanks for ENG46 – ENG61	9,817 gallon fuel tank for each generator	9VAC5-80-720B	VOC	9,817 gallons
Tanks for ENG62 – ENG65	8,473 gallon fuel tank for each generator	9VAC5-80-720B	VOC	8,473 gallons
Tank for ENG66	3,172 gallon fuel tank	9VAC5-80-720B	VOC	3,172 gallons
Tanks for ENG67 – ENG110	10,080 gallon fuel tank for each generator	9VAC5-80-720B	VOC	10,080 gallons

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9VAC5-80-720B)	Rated Capacity (9VAC5-80-720C)
Tanks for ENG113 – ENG152	9,181 gallon fuel tank for each generator	9VAC5-80-720B	VOC	9,181 gallons
Tanks for ENG153 – ENG154	7,000 gallon fuel tank for each generator	9VAC5-80-720B	VOC	7,000 gallons
Tank for ENG155	3,100 gallon fuel tank	9VAC5-80-720B	VOC	3,100 gallons
Tanks for ENG156 – 160	9,100 gallon fuel tank for each generator	9VAC5-80-720B	VOC	9,100 gallons
Tanks for ENG161 – ENG175	9,181 gallon fuel tank for each generator	9VAC5-80-720B	VOC	9,181 gallons

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9VAC5-80-110. (9VAC5-80-110)

Permit Shield & Inapplicable Requirements

64. Permit Shield & Inapplicable Requirements - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
None		

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act or (ii) the DEQ pursuant to §10.1-1307.3 or §10.1-1315 of the Virginia Air Pollution Control Law.
(9VAC5-80-110 and 9VAC5-80-140)

General Conditions

65. General Conditions - Federal Enforceability - All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9VAC5-80-110)

66. General Conditions - Permit Expiration

a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9VAC5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

c. If an applicant submits a timely and complete application for an initial permit or renewal under 9VAC5-80-80 F, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9VAC5 Chapter 80, until the DEQ takes final action on the application under 9VAC5-80-150.

d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9VAC5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9VAC5 Chapter 80.

e. If an applicant submits a timely and complete application under section 9VAC5-80-80 for a permit renewal but the DEQ fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9VAC5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

f. The protection under subsections F 1 and F 5 (ii) of section 9VAC5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9VAC5-80-80 D, the applicant fails to submit by the deadline specified in writing by the DEQ any additional information identified as being needed to process the application.

(9VAC5-80-80, 9VAC5-80-110 and 9VAC5-80-170)

67. General Conditions - Recordkeeping and Reporting - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

a. The date, place as defined in the permit, and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of such analyses; and

f. The operating conditions existing at the time of sampling or measurement.

(9VAC5-80-110)

68. General Conditions - Recordkeeping and Reporting - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. (9VAC5-80-110)

69. General Conditions - Recordkeeping and Reporting - The permittee shall submit the results of monitoring contained in any applicable requirement to the DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and

b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:

i. Exceedances of emissions limitations or operational restrictions;

ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring or periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semiannual reporting period."

(9VAC5-80-110)

70. General Conditions - Annual Compliance Certification - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to the

Environmental Protection Agency (EPA) and the DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a) (3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

a. The time period included in the certification. The time period to be addressed is January 1 to December 31;

b. The identification of each term or condition of the permit that is the basis of the certification;

c. The compliance status;

d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;

e. Consistent with subsection 9VAC5-80-110, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;

f. Such other facts as the permit may require to determine the compliance status of the source; and

g. One copy of the annual compliance certification shall be submitted to the EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3_APD_Permits@epa.gov

(9VAC5-80-110)

71. General Conditions - Permit Deviation Reporting - The permittee shall notify the Piedmont Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semiannual compliance monitoring report pursuant to Condition 69 of this permit.
(9VAC5-80-110 F. 2)

72. General Conditions - Failure/Malfunction Reporting - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall no later than four daytime business hours after the malfunction is discovered, notify the Piedmont Regional Office of such failure or malfunction and within 14 days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Piedmont Regional Office.
(9VAC5-80-110 and 9VAC5-20-180)

73. General Conditions - Severability - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9VAC5-80-110)

74. General Conditions - Duty to Comply - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9VAC5-80-110)

75. General Conditions - Need to Halt or Reduce Activity not a Defense - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9VAC5-80-110)

76. General Conditions - Permit Modification - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9VAC5-80-50, 9VAC5-80-1100, 9VAC5-80-1605, or 9VAC5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9VAC80-110, 9VAC5-80-190, and 9VAC5-80-260)

77. General Conditions - Property Rights - The permit does not convey any property rights of any sort, or any exclusive privilege.
(9VAC5-80-110)

78. General Conditions - Duty to Submit Information - The permittee shall furnish to the DEQ, within a reasonable time, any information that the DEQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit and, for information claimed to be

confidential, the permittee shall furnish such records to the DEQ along with a claim of confidentiality.
(9VAC5-80-110)

79. General Conditions - Duty to Submit Information - Any document (including reports) required in a permit condition to be submitted to the DEQ shall contain a certification by a responsible official that meets the requirements of 9VAC5-80-80 G.
(9VAC5-80-110)

80. General Conditions - Duty to Pay Permit Fees - The owner of any source for which a permit was issued under 9VAC5-80-50 through 9VAC5-80-300 shall pay annual emissions fees, as applicable, consistent with the requirements of 9VAC5-80-310 through 9VAC5-80-350 and annual maintenance fees, as applicable, consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350.
(9VAC5-80-110, 9VAC5-80-310 et seq., and 9VAC5-80-2310 et seq.)

81. General Conditions - Fugitive Dust Emission Standards - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

    a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

    b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

    c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;

    d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

    e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

    (9VAC5-80-110 and [9VAC5-40-90 or 9VAC5-50-90])

82. General Conditions - Startup, Shutdown, and Malfunction - At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the DEQ, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9VAC5-80-110 and [9VAC5-50-20 E or 9VAC5-40-20 E])

83. General Conditions - Alternative Operating Scenarios - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9VAC5 Chapter 80, Article 1.
(9VAC5-80-110)

84. General Conditions - Inspection and Entry Requirements - The permittee shall allow the DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

    a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

    b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

    d. Sample or monitor at reasonable times' substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

    (9VAC5-80-110)

85. General Conditions - Reopening for Cause - The permit shall be reopened by the DEQ if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to

expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9VAC5-80-80 F. The conditions for reopening a permit are as follows:

a. The permit shall be reopened if the DEQ or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

b. The permit shall be reopened if the administrator or the DEQ determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

c. The permit shall not be reopened by the DEQ if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9VAC5-80-110 D.

(9VAC5-80-110)

86. General Conditions - Permit Availability - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to the DEQ upon request. (9VAC5-80-110 and 9VAC5-80-150)

87. General Conditions - Transfer of Permits

a. No person shall transfer a permit from one location to another, unless authorized under 9VAC5-80-130, or from one piece of equipment to another.

b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the DEQ of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9VAC5-80-200.

c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the DEQ of the change in source name within 30 days of the name change and shall comply with the requirements of 9VAC5-80-200.

(9VAC5-80-110 and 9VAC5-80-160)

88. General Conditions - Permit Revocation or Termination for Cause - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9VAC5 Chapter 80 Article 1. The DEQ may suspend, under such conditions and for such period of time as the DEQ may

prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.
(9VAC5-80-110, 9VAC5-80-190 C, and 9VAC5-80-260)

89. General Conditions - Duty to Supplement or Correct Application - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9VAC5-80-110 and 9VAC5-80-80 E)

90. General Conditions - Stratospheric Ozone Protection - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(9VAC5-80-110 and 40 CFR Part 82)

91. General Conditions - Asbestos Requirements - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9VAC5-60-70 and 9VAC5-80-110)

92. General Conditions - Accidental Release Prevention - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(9VAC5-80-110 and 40 CFR Part 68)

93. General Conditions - Changes to Permits for Emissions Trading - No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9VAC5-80-110)

94. General Conditions - Emissions Trading - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

    a. All terms and conditions required under 9VAC5-80-110, except subsection N, shall be included to determine compliance.

b. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

c. The owner shall meet all applicable requirements including the requirements of 9VAC5-80-50 through 9VAC5-80-300.

(9VAC5-80-110)

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

---

* Not applicable to visible emission evaluation