Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 FAX (804) 698-4178
www.deq.virginia.gov

Matthew J. Strickler
Secretary of Natural and Historic Resources

David K. Paylor
Director
(804) 698-4000

Thomas A. Faha
Regional Director

August 24, 2021

Mr. Daniel L. Rettig
Director of Operations
Corporate Office Properties Trust (COPT)
6711 Columbia Gateway Drive, Suite 300
Columbia, MD 21046

Location: Prince William County
Registration No.: 73683

Dear Mr. Rettig:

Attached is a permit document to construct and operate a project at a data center at COPT DC-6, LLC, in accordance with the provisions of the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. This permit document supersedes your permit document dated August 1, 2018.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on August 11, 2021.

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

This permit approval to construct and operate shall not relieve Corporate Office Properties Trust (COPT) of the responsibility to comply with all other local, state, and federal permit regulations.

The proposed emergency diesel engine gen-sets at the facility may be subject to the requirements of 40 CFR Part 60, New Source Performance Standards (NSPS) Subpart IIII and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (MACT) Subpart ZZZZ. In summary, the units may be required to comply with certain federal emission standards and

operating limitations. The DEQ advises you to review the referenced MACT and NSPS to ensure compliance with applicable emission and operational limitations. As the owner/operator you are also responsible for any monitoring, notification, reporting and recordkeeping requirements of the MACT and NSPS. Notifications shall only be sent to EPA, Region III.

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

The 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 Board 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:

David K. Paylor, 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 Ms. Katie DeVoss at (703) 583-3861.

Sincerely,

Justin A. Wilkinson
Regional Air Permit Manager

TAF/JAW/KD/73683 mNSR (2021-08-24)

Attachment: Permit

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Thomas A. Faha
Regional Director

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE
This permit document supersedes your permit document dated August 1, 2018.

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

Corporate Office Properties Trust (COPT)
6711 Columbia Gateway Drive, Suite 300
Columbia, MD 21046
Registration No.: 73683

is authorized to construct and operate

emergency diesel engine generator sets (gen-sets)

located at

COPT DC-6, LLC
9651 Hornbaker Road
Manassas, VA 20109
(Prince William County)

in accordance with the Conditions of this permit.

Approved on: August 24, 2021.

Thomas A. Faha
Regional Director

Permit consists of 23 pages.
Permit Conditions 1 to 40.

INTRODUCTION

This permit approval is based on and combines permit terms and conditions in accordance with 9 VAC 5-80-1255 from the following permit approvals and the respective permit applications:

Permit Program: Approval/Amendment Date	Application/Letter Signature Date	Application Supplemental Information Date
Minor NSR: June 24, 2008	March 6, 2008	April 3, 2008 and June 11, 2008
Minor amendment: May 26, 2009	February 27, 2009	April 2, 2009 and May 26, 2009
Minor amendment: April 29, 2010	April 7, 2010	--
Significant amendment November 23, 2010	August 26, 2010	September 24, 2010, October 15, 2010, and November 4, 2010
Significant amendment: July 19, 2011	March 1, 2011	March 28, 2011 and May 25, 2011
Minor amendment: September 15, 2011	September 7, 2011	--
Minor amendment: October 20, 2011	October 13, 2011	--
Significant amendment: March 13, 2012	January 17, 2012	--
Minor NSR: December 31, 2015	August 6, 2015	--
Minor NSR: October 25, 2017	April 5, 2017	June 6, 2017
Minor NSR: August 1, 2018	April 3, 2018	July 11, 2018
Minor NSR: August 24, 2021	February 22, 2021	March 19, 2021 and August 11, 2021

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

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition and the most recent effective date (if different from date of this combined permit) for a term or condition is listed in parentheses () after each condition. When identical conditions on approval for an emission unit or units are combined, the effective date listed in this permit does not alter the prior effective date(s) for any such conditions as issued in a previous permit approval. In accordance with 9 VAC 5-80-1120F, any condition not marked as state only enforceable is state and federally enforceable.

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

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

Equipment List – Equipment at this facility consists of the following:

Equipment to be Constructed:					
Ref. Nos.	**Equipment Description**	**Standby Rated Capacity**	**Add-On Control Technology**	**Delegated Federal Requirements**	**Original Permit Date**
G4 thru G6	Three (3) MTU Model 16V4000 emergency diesel engine gen-sets	2,935 bhp 2,000 ekW (each unit)	Selective Catalytic Reduction (SCR) Model CBL-49-24, ACIS-BLU	None	August 24, 2021

Equipment permitted prior to the date of this permit:				
Ref. No(s).	**Equipment Description**	**Standby Rated Capacity**	**Delegated Federal Requirements**	**Original Permit Date**
G1	One (1) MTU Model 20V4000G43 diesel fueled electric generator	3,675 bhp, generating 2,500 ekW	None	June 24, 2008
G2, G3, and RPU11 thru RPU15	Seven (7) MTU Model 16V4000 diesel fueled electrical generators	3,058 bhp, generating 2,050 ekW (each unit)	None	June 24, 2008
GE1, GE2, and GER1	Three (3) MTU Model 20V4000G43 diesel fueled electric generator	3,675 bhp, generating 2,500 ekW (each unit)	None	June 24, 2008
GE3, GE4, GE5	Three (3) MTU Model 20V4000G43 diesel fueled electrical generators	3,675 bhp, generating 2,500 ekW (each unit)	None	December 31, 2015

GM1 and GMR	Two (2) MTU Model 16V4000 diesel fueled electrical generators	3,058 bhp, generating 2,050 ekW (each unit)	None	June 24, 2008
GM2	One (1) MTU Model 16V4000 diesel fueled electrical generator	3,058 bhp, generating 2,050 ekW	None	December 31, 2015
GEN1	One (1) Caterpillar 3516C emergency diesel engine gen-set	2,937 bhp 2,000 ekW	None	August 1, 2018

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

PROCESS REQUIREMENTS

1. **Emission Controls** – Emissions from the diesel engine gen-sets, (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, and GER1) shall be controlled by the following:

   a. Nitrogen oxides (as NO_2) emissions from the diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, and GER1) shall be controlled by electronic fuel injection, turbocharged engine, after-cooler, and charge air cooler.

   b. Sulfur dioxide (SO_2) emissions from the diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, and GER1) shall be controlled by the use of ultra low sulfur diesel fuel with a sulfur content not to exceed 15 ppm (0.0015% by weight) and good combustion practices.

   c. Carbon monoxide (CO) and volatile organic compound (VOC) emissions from the diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, and GER1) shall be controlled by good combustion practices.

   d. Particulate matter (PM_{10} and $PM_{2.5}$) from the diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, and GER1) shall be controlled by the use of clean fuel and good operating practices.

   e. Use of good operating techniques and performing maintenance in accordance with the manufacturer's recommendations. In addition, the permittee may only change those settings that are permitted by the manufacturer and do not affect the air emissions of the diesel engine gen-sets.

   (9 VAC 5-80-1180 and 9 VAC 5-50-260)

2. **Emission Controls** – Emissions from the emergency diesel engine gen-sets (Ref. Nos. GEN1 and G4 thru G6) shall be controlled by the following:

   a. Nitrogen oxides (NO_X) emissions from the emergency diesel engine gen-set (Ref. No. GEN1) shall be controlled by electronic fuel injection, turbo-charged engine, and aftercooler. The permittee shall maintain documentation that demonstrates the control devices have been installed on the emergency diesel engine gen-set.

   b. Carbon monoxide (CO) emissions, particulate matter ($PM_{10}/PM_{2.5}$) emissions, volatile organic compounds (VOC) emissions, nitrogen oxides (NO_X) emissions, and visible emissions from the emergency diesel engine gen-sets (Ref. Nos. GEN1 and G4 thru G6) shall be controlled by the use of good operating practices and performing maintenance in accordance with the manufacturer recommendations. In addition, the permittee may only change those settings that are permitted by the manufacturer and do not degrade the air emissions from the emergency diesel engine gen-sets.

   (9 VAC 5-80-1180 and 9 VAC 5-50-260)

3. **Emission Controls** – Nitrogen oxide (NO_X) emissions from the engine-generator sets (Ref. Nos. G4 thru G6) shall be controlled by open loop Selective Catalytic Reduction (SCR). Each SCR system shall be equipped with a temperature probe to continuously monitor the catalyst bed exhaust temperature while the engine-generator set is operational. Engine exhaust gas shall be treated with urea when the engines are operating at or above twenty percent load and the catalyst bed exhaust temperature of 570°F is achieved, except for periods of start-up, shutdown, or malfunction. In the event that the engine exhaust gas temperature exceeds 900°F, urea injection shall be discontinued and any operations above that level will be considered a malfunction. The SCR shall be provided with adequate access for inspection and shall be in operation when the engine-generator sets are operating as stated above.
   (9 VAC 5-80-1180 and 9 VAC 5-50-260)

4. **Monitoring Devices** –

   a. **Engine Operating Hours** - Each diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G6, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) shall be equipped with a non-resettable hour meter, which measures the period that each engine is operated. A monthly log shall be maintained of the hours operated for each diesel engine gen-set. A record of each engine's operation shall include dates, reason for operation (as defined in Condition 7), and engine run times.

   The non-resettable hour meter used to continuously measure the hours of operation for each engine-generator set (Ref. Nos. G4 thru G6) shall be observed by the owner with a frequency of not less than once each day the engine-generator set is operated. Each engine-generator set shall also be equipped with a device to monitor and record the

engine-generator kilowatt output at a minimum frequency of once every fifteen minutes.

b. **Fuel Flow** – Each diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) shall be equipped with a device to continuously measure and record fuel consumption (in gallons) for each diesel engine gen-set. Fuel consumption from each diesel engine gen-set shall be recorded at a frequency interval of at least once every five minutes during all periods of operation.

Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the engines are operating.

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.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

5. **Monitoring Devices** – The engine gen-sets (Ref. Nos. G4 thru G6) shall be equipped with devices to continuously measure and record the SCR catalyst bed exhaust temperature and the urea injection rate. The information shall be recorded at a minimum frequency of once every fifteen minutes, and correlated to run date, engine load/kilowatt output, and engine operating hours.

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 the SCR is operating.
(9 VAC 5-80-1180 D)

6. **Monitoring Device Observation** – To ensure proper performance, the monitoring devices required in Condition 4 shall be observed by the permittee during each test firing and at a frequency of not less than once per day during days in which the diesel engine gen-sets are called into service. Observations shall be maintained on site in a permanent logbook. See Condition 27 to demonstrate compliance with this condition.
(9 VAC 5-80-1180 D)

OPERATING LIMITATIONS

7. **Emergency Power Generation** – The engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G6, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) shall only be operated in the following modes:

a. In situations that arise from sudden and reasonably unforeseeable events where the primary energy or power source is disrupted or disconnected due to conditions beyond the control of an owner or operator of a facility including:

i. A failure of the electrical grid;

ii. On-site disaster or equipment failure; or

iii. Public service emergencies such as flood, fire, natural disaster, or severe weather conditions.

b. For participation in an ISO-declared emergency, where an ISO emergency is:

i. An abnormal system condition requiring manual or automatic action to maintain system frequency, to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property;

ii. Capacity deficiency or capacity excess conditions;

iii. A fuel shortage requiring departure from normal operating procedures in order to minimize the use of such scarce fuel;

iv. Abnormal natural events or man-made threats that would require conservative operations to posture the system in a more reliable state; or

v. An abnormal event external to the ISO service territory that may require ISO action.

c. For unscheduled maintenance, testing, and operational training.

d. For scheduled maintenance checks and readiness testing (Scheduled MCRT).

e. For the integration operational period which is the period of time beginning with the first time the affected unit is started on-site and ending when the affected unit is fully integrated with the source's electrical system.

(9 VAC 5-80-1180)

8. **Temporary Engine Gen-Sets** – Any temporary engine gen-set(s) brought onsite shall be operated in a manner consistent with the following modes of operation only:

a. Emergency use: To maintain the required level of power redundancy at the facility when the repair of an engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) is anticipated to require more than two (2) hours to complete. The permittee shall notify the Regional Air Compliance Manager of the DEQ's NRO, in writing, of the emergency use of any temporary mobile engine gen-set within three (3) business days of the start of such use. Such notice shall provide the make, model, serial number and manufacturer's data sheet

providing emissions characteristics for the temporary mobile engine gen-set used. The notice shall also provide the actual start date and anticipated end date of the deployment of the temporary mobile engine gen-set. If the emergency use goes beyond the estimated end provided in the notice, the permittee shall re-notify the Regional Air Compliance Manager of the DEQ's NRO upon completion of the use of the temporary mobile engine gen-set.

The emission characteristics provided by the manufacturer of the temporary mobile engine gen-set, along with the actual run time (while on-site at the facility), shall be used to calculate the total annual emissions of the eighteen units (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) in accordance with Condition 23. These calculations will be included with the monthly and annual record keeping required under Condition 27. These records, including manufacturer's data sheets, shall be available for inspection by the DEQ and shall be current for the most recent five years.

b. Planned use: For temporary construction purposes, commissioning, and facility maintenance that is not covered by the eighteen units (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1). The permittee shall notify the Regional Air Compliance Manager of the DEQ's NRO, in writing (at the address referenced in Condition 27), of the planned use of any temporary mobile engine gen-set at least three (3) business days in advance of such use. Such notice shall provide the make, model, serial number and manufacturer's data sheet providing emissions characteristics for the temporary mobile engine gen-set(s) to be used. The notice shall also provide the actual start date and anticipated end-date of the deployment of the temporary engine gen-set(s). Any change in the end date(s) shall be reported to the Regional Air Compliance Manager of the DEQ's NRO, in writing, as soon as such change is known to the permittee.

The emission characteristics provided by the manufacturer, along with the actual run time recorded (at the facility), shall be used to calculate the total annual emissions of the eighteen units (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) in accordance with Condition 23. These calculations will be included with the monthly and annual record keeping required under Condition 27. These records, including manufacturer's data, shall be available for inspection by the DEQ and shall be current for the most recent five years.

c. All fuel used in any temporary mobile engine gen-set shall meet the Fuel Specification as stated in Condition 15. At no time shall total annual emissions from all types of operations listed above combined with the operation of the eighteen units (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) exceed the limits stated in Condition 22.

(9 VAC 5-80-1180 D and 9 VAC 5-50-260)

9. **Operation of the Engine Gen-Sets –** The permittee shall operate and maintain each emergency diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G6, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) and control devices 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.
(9 VAC 5-80-1180)

10. **Operating Limitations (Ozone Season)** – No diesel engine-generator set (Ref. Nos. G4 thru G6) shall be operated for scheduled maintenance checks and readiness testing (Scheduled MCRT), stack testing, or operational training (that involves fuel combustion) between the hours of 7 a.m. to 5 p.m. any day during the ozone season of May 1 through September 30. The permittee may petition the Regional Air Compliance Manager of DEQ's NRO for exceptions to this requirement, with approvals made on a case-by-case basis.
(9 VAC 5-80-1180)

11. **Operating Limitations (Ozone Season) – Integration Operational Period** – During the integration operational period of each diesel engine-generator set (Ref. Nos. G4 thru G6) any operation of the unit (that involves fuel combustion) between the hours of 7 a.m. to 5 p.m. any day during the ozone season of May 1 through September 30 shall only occur if the forecast Air Quality index (AQI) for ozone as published on the AirNow website (**https://airnow.gov**) for Northern Virginia for that day is less than or equal to 100. In the event that AirNow-EnviroFlash (**www.enviroflash.info**) issues an Air Alert for Northern Virginia for a day which the forecasted AQI for ozone was less than or equal to 100, operation of each unit (which involves fuel combustion) shall be minimized to the maximum extent practical.
(9 VAC 5-80-1180)

12. **Operating Hours –** In addition to the fuel throughput limitation specified in Conditions 17 and 18, each individual diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) shall not operate more than 100 hours per year for unscheduled maintenance, testing, operational training, and scheduled maintenance checks and readiness testing (as provided in Conditions 7.c and 7.d) and no more than 500 hours per year for all purposes (as provided in Condition 7) combined. The annual limits for hours of operation 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.
    (9 VAC 5-80-1180)

13. **Operating Hours** – Each individual emergency diesel engine gen-set (Ref. Nos. G4 thru G6) shall not operate more than 500 hours per year for all purposes (as provided in Condition 7) combined. Each individual emergency diesel engine gen-set (Ref. Nos. G4

thru G6) shall not operate more than 23 hours per year for scheduled maintenance checks and readiness testing (Scheduled MCRT, as provided in Condition 7.d).

The annual limits for hours of operation 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.
(9 VAC 5-80-1180)

14. **Fuel –** The approved fuel for the engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G6, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) is ultra-low sulfur diesel (ULSD) with a sulfur content at or below 0.0015% (15 ppm) by weight. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

15. **Fuel Specifications** – The diesel fuel oil shall comply with the specifications below:

    a. DIESEL FUEL which conforms to the ASTM D975 specifications for grade ultra-low sulfur No. 1-D or No. 2-D, or Grade No. 1-D S15 or 2-D S15, or

    b. DIESEL FUEL that:

        i. Has a minimum cetane number of forty, or has a maximum aromatic content of thirty-five percent by volume, and

        ii. Has a sulfur content per shipment not-to-exceed 0.0015%.

    (9 VAC 5-80-1180 and 9 VAC 5-50-260)

16. **Fuel Certification** – The permittee shall obtain a certification from the fuel supplier with each purchased shipment of diesel fuel oil. Each fuel supplier certification shall include the following:

    a. The name of the fuel supplier;

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

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

    d. A statement that the diesel fuel oil:

        i. Complies with the American Society for Testing and Materials (ASTM) specification, D975, specified in Condition 15, or

ii. Has a sulfur content per shipment not to exceed 0.0015% by weight (15 ppm) and either a minimum cetane number of forty (40) or maximum aromatic content of thirty-five percent (35%).

Alternatively, the permittee must obtain approval from the Regional Air Compliance Manager of the DEQ's NRO if other documentation will be used to certify the diesel fuel type.
(9 VAC 5-80-1180)

17. **Diesel Fuel Throughput Limit –** The seventeen (17) diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, and GER1), combined, shall consume no more than 350,000 gallons of diesel fuel per year, calculated monthly as the sum of each consecutive twelve-month period. Compliance for the consecutive twelve-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 eleven months.
(9 VAC 5-80-1180)

18. **Diesel Fuel Throughput Limit –** The emergency diesel engine gen-set (Ref. No. GEN1) shall consume no more than 60,000 gallons of diesel fuel per year, calculated monthly as the sum of each consecutive twelve-month period. Compliance for the consecutive twelve-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 eleven months.
(9 VAC 5-80-1180)

EMISSION LIMITS

19. **Emission Limits** – Emissions from the operation of each diesel engine gen-set shall not exceed the hourly limits specified below:

Pollutant	Ref. Nos. GM1, GM2, GMR, RPU11-RPU15, G2 and G3 (each unit)	Ref. Nos. G1, GE1 – GE5, and GER1 (each unit)
Nitrogen Oxides (NO_X as NO_2)	41.4 lbs/hr	44.7 lbs/hr
Carbon Monoxide (CO)	6.1 lbs/hr	6.1 lbs/hr
Volatile Organic Compounds (VOC)	0.9 lbs/hr	1.36 lbs/hr
Particulate Matter (PM_{10})	0.75 lbs/hr	0.8 lbs/hr
Particulate Matter ($PM_{2.5}$)	0.75 lbs/hr	0.8 lbs/hr

(9 VAC 5-80-1180 and 9 VAC 5-50-260)

20. **Emission Limits –** Emissions from the operation of the emergency diesel engine gen-set (Ref. No. GEN1) shall not exceed the limits specified below:

Pollutant	Caterpillar 3516C (Ref. No. GEN1)
Nitrogen Oxides (NO_X as NO_2)	38.85 lb/hr
Carbon Monoxide (CO)	3.95 lb/hr
Volatile Organic Compounds (VOC)	1.13 lb/hr
Particulate Matter (PM_{10})	0.62 lb/hr
Particulate Matter ($PM_{2.5}$)	0.62 lb/hr

Compliance with these pollutant limits shall be based on the proper operation and maintenance of the emergency diesel engine gen-set or by testing, if required.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

21. **Emission Limits (Hourly) –** Emissions from the operation of the emergency diesel engine gen-sets (Ref. Nos. G4 thru G6) shall not exceed the limits specified below:

Pollutant	Ref. Nos. G4 thru G6 (each unit)	
	Uncontrolled	Controlled with SCR
Nitrogen Oxides (NO_X as NO_2)	48.6 lb/hr	38.9 lb/hr
Carbon Monoxide (CO)	8.09 lb/hr	8.90 lb/hr
Volatile Organic Compounds (VOC)	4.10 lb/hr	
Particulate Matter (PM_{10})	0.96 lb/hr	
Particulate Matter ($PM_{2.5}$)	0.96 lb/hr	

Compliance with these emission limits shall be based on the proper operation and maintenance of the emergency diesel engine gen-sets or by testing, if required.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

22. **Annual Emission Limits** – Total emissions from the emergency diesel engine gen-sets shall not exceed the limits specified below:

Pollutant	Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, and GER1 (Combined)	Ref. No. GEN1	Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1 (Combined)	Ref. Nos. G4 thru G6 (Combined)
Nitrogen Oxides (NO_X as NO_2)	49.4 tpy	8.45 tpy	57.85 tpy	36.40 tpy
Carbon Monoxide (CO)	5.62 tpy	4.49 tpy	10.11 tpy	6.68 tpy
Volatile Organic Compounds (VOC)	3.74 tpy	1.11 tpy	4.85 tpy	3.07 tpy
Particulate Matter (PM_{10})	2.57 tpy	0.54 tpy	3.11 tpy	0.72 tpy
Particulate Matter ($PM_{2.5}$)	2.57 tpy	0.54 tpy	3.11 tpy	0.72 tpy

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 13, 17, 18, and 21.
(9 VAC 5-80-1180)

23. **Annual Emissions Calculations** – The total annual emissions of each regulated pollutant from the diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) shall be calculated monthly as the sum of each consecutive twelve-month period.

    Monthly emissions for each pollutant shall be determined using the following calculation method and the applicable emission factor as listed in the tables below:

    a. Emission Factor Tables:

    Table 1.A -

Reference Nos. RPU11 thru RPU15, G2, G3, GM1, GM2, and GMR	
Pollutant	**Emission Factor (EF) (lb/gal)**
Nitrogen Oxides (NO_X as NO_2)	2.82E-01
Carbon Monoxide (CO)	2.77E-02
Particulate Matter (PM_{10})	5.79E-03
Particulate Matter ($PM_{2.5}$)	5.79E-03
Volatile Organic Compounds (VOC)	7.51E-03

    Table 1.B –

Reference Nos. G1, GE1 thru GE5, and GER1	
Pollutant	**Emission Factor (EF) (lb/gal)**
Nitrogen Oxides NO_X as NO_2)	2.52E-01
Carbon Monoxide (CO)	3.21E-02
Particulate Matter (PM_{10})	5.40E-03
Particulate Matter ($PM_{2.5}$)	5.40E-03
Volatile Organic Compounds (VOC)	8.74E-03

    Table 1.C –

Reference No. GEN1	
Pollutant	**Emission Factor (EF) (lb/gal)**
Nitrogen Oxides NO_X as NO_2)	2.82E-01
Carbon Monoxide (CO)	1.50E-01
Particulate Matter (PM_{10})	1.81E-02
Particulate Matter ($PM_{2.5}$)	1.81E-02
Volatile Organic Compounds (VOC)	3.71E-02

b. Emissions Calculations:

NO_X, CO, PM_{10}, $PM_{2.5}$ and VOC = {[(Total fuel consumption (gallons) for RPU11 thru RPU15, G2, G3, GM1, GM2, and GMR x EF per Table 1.A) + (Total fuel consumption (gallons) for G1, GE1 thru GE5, and GER1 x EF per Table 1.B) + (Total fuel consumption (gallons) for GEN1 x EF per Table 1.C)]} ÷ 2000 lbs/ton

(9 VAC 5-80-1180)

24. **Visible Emission Limit** – Visible emissions from each diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G6, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) shall not exceed 5% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 10% opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

During start-ups and shutdowns, visible emissions from the diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G6, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) shall not exceed 10% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20% opacity.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

25. **Stack Test –** Initial performance tests shall be conducted on three (3) emergency diesel engine gen-sets (Ref. Nos. G4 thru G6) for NO_X (as NO_2) and CO using appropriate EPA reference methods as approved by the Regional Air Compliance Manager of DEQ's NRO to determine compliance with the emission limits contained in Condition 21.

a. Emissions testing of each pollutant for each selected emergency diesel engine gen-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 emergency diesel engine gen-set.

b. Testing shall be performed on the inlet and outlet of the SCR catalyst bed of the emergency diesel engine gen-sets to demonstrate compliance with the NO_X and CO emission limits specified in Condition 21. Testing shall be conducted with the emergency diesel engine gen-set operating at ≥ 90 percent of its rated capacity, unless multiple load band testing is approved by DEQ;

c. Recorded emergency diesel engine gen-set operational 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.

iii. Urea solution consumption.

iv. Catalyst bed exhaust temperature.

d. Perform testing to demonstrate compliance within 120 days after the integration operational period has commenced. The integration operational period is defined as: the period of time beginning with the first time the affected unit is started on-site and ending when the affected unit is fully integrated with the source electrical system. In no case shall the integration operational period exceed 30 days. If this deadline falls within the ozone season (May 1 through September 30) the facility shall perform testing to demonstrate compliance within 30 days after the end of the ozone season. Tests shall be conducted and reported and data reduced as set forth in 9VAC5-50-30;

e. The details of the tests are to be arranged with the Regional Air Compliance Manager of DEQ's NRO. The permittee shall submit the test protocol to the Regional Air Compliance Manager of DEQ's NRO, at least thirty days prior to testing to ensure adequate time for DEQ approval. If the test protocol is received by the DEQ with less than thirty days for review and acceptance, DEQ approval may not be issued in a timely manner to allow for testing to take place according to the permittee's schedule;

f. Should conditions occur which would require rescheduling the testing, the permittee shall notify the Regional Air Compliance Manager of DEQ's NRO, in writing, within seven days of the scheduled test date or as soon as the rescheduling is deemed necessary; and

g. Two copies, one paper copy and one on removable electronic media, of the test results shall be submitted to the Regional Air Compliance Manager of DEQ's NRO within 60 days after test completion and shall conform to the test report format enclosed with this permit.

(9 VAC5-50-30 and 9 VAC5-80-1200)

26. **Visible Emissions Evaluation** – Concurrent with the initial performance tests required in Condition 25, Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted by the permittee on the emergency diesel engine gen-sets selected for initial performance testing. The details of the tests are to be arranged with the Regional Air Compliance Manager of DEQ's NRO. The permittee shall submit a VEE protocol in conjunction with the initial stack test protocol required by Condition 25, at least 30 days prior to testing.

a. Should conditions prevent concurrent opacity observations, the Regional Air Compliance Manager of DEQ's NRO shall be notified in writing, within seven (7) days, and visible emissions testing shall be rescheduled within thirty-days. Rescheduled testing shall be conducted under the same operating conditions as the initial performance tests.

b. Two copies of the test result (one hard copy and one on electronic media) shall be submitted to the Regional Air Compliance Manager of DEQ's NRO within sixty (60) days after test completion and shall conform to the test report format enclosed with this permit (Attachment A).

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

RECORDS

27. **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 Regional Air Compliance Manager of the DEQ's NRO at the following address:

Regional Air Compliance Manager
Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, Virginia 22193

These records shall include, but are not limited to:

a. A log containing the date, time and reason operated (as defined in Condition 7) for each diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1).

b. Records of the reasons for operation for each emergency diesel engine gen-set (Ref. Nos. G4 thru G6), including, but not limited to, the date, cause of operation, cause of the emergency, the ISO-declared emergency notification, and the hours of operation.

c. A monthly summary table containing the following information for each diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1):

i. Hours of operation and

ii. Fuel consumption.

d. A log of monitoring device observations, per Conditions 4 and 6.

e. Operation and control device monitoring records for each engine-generator set equipped with a SCR (Ref. Nos. G4 thru G6) as required in Condition 5. This includes records of the SCR catalyst exhaust bed temperature and urea injection rate.

f. Monthly and annual hours of operation (all purposes) of each emergency diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G6, GE1 thru GE5, GM1, GM2,

GMR, GER1, and GEN1). The annual hours of operation shall be calculated monthly as the sum of each consecutive 12-month period.

g. Monthly and annual hours of operation of each emergency diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1), for purposes of unscheduled maintenance, testing, operational training, and scheduled maintenance checks and readiness testing. The annual hours of operation shall be calculated monthly as the sum of each consecutive 12-month period.

h. Monthly and annual hours of operation of each emergency diesel engine gen-set (Ref. Nos. G4 thru G6), for purposes of scheduled maintenance checks and readiness testing (Scheduled MCRT), calculated monthly as the sum of each consecutive 12-month period.

i. Monthly and annual fuel consumption of each emergency diesel engine gen-set (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, and GER1) and for all seventeen units combined. Annual fuel consumption shall be calculated monthly as the sum of each consecutive 12-month period.

j. Monthly and annual fuel consumption of the emergency diesel engine gen-set (Ref. No. GEN1), with the annual fuel consumption calculated monthly as the sum of each consecutive 12-month period.

k. Monthly and annual emissions calculations for each pollutant from the diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G3, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) using the calculation methods in Condition 23.

l. Monthly and annual emissions calculations for NO_X (as NO_2), CO, VOC, PM_{10}, and $PM_{2.5}$ from the emergency diesel engine gen-sets (Ref. Nos. G4 thru G6), with annual emissions calculated monthly as the sum of each consecutive 12-month period, to verify compliance with the annual emission limits in Condition 22.

m. All fuel supplier certifications.

n. All VEE and emission stack test reports.

o. Scheduled maintenance checks and readiness testing (Scheduled MCRT).

p. Unscheduled maintenance, testing, and operator training.

q. Documentation from the manufacturer that the emergency diesel engine gen-set (Ref. No. GEN1) is certified to meet the EPA Tier 2 emission standards.

r. Engine information including make, model, serial number, model year, maximum engine power (bhp), and engine displacement for each emergency diesel engine gen-set (Ref. Nos. G4 thru G6).

s. The manufacturer's written operating instructions or procedures developed by the owner/operator that are approved by the engine manufacturer for the emergency diesel engine gen-set (Ref. Nos. GEN1 and G4 thru G6).

t. Records of changes in settings that are permitted by the manufacturer of the engine gen-set (Ref. Nos. GEN1 and G4 thru G6).

u. Records, as necessary, to demonstrate compliance with the operating limitations of Condition 10; which includes but is not limited to: times, dates and reasons for operation of each diesel engine gen-set that was operating between May 1 and September 30.

v. To verify compliance with Condition 11, maintain records for the emergency diesel engine gen-sets (Ref. Nos. G4 thru G6) of:

    i. The forecasted AQI, as determined by the AirNow website for Northern Virginia, for ozone for the days that an emergency diesel engine gen-set operated during the integration operational period;

    ii. The measured AQI, as determined by the AirNow website for Northern Virginia, for ozone for the days that an emergency diesel engine gen-set operated during the integration operational period;

    iii. Documentation recording any Air Alerts issued for that operating day, as determined by Airnow-EnviroFlash; and

    iv. Details of commissioning activities, to include, but not limited to, clock hours, and duration.

w. A NO_X Urea Table (Urea Load Map) for each engine-generator set, (Ref. Nos. G4 thru G6), equipped with SCR to verify that the SCR is operating as specified by the manufacturer. Each NO_X Urea Table shall include the engine load, temperature after the catalyst, NO_X concentration before and after the catalyst, the urea consumption rate, and the catalyst efficiency.

Compliance for the consecutive 12-month period in the subsections above (as applicable) shall be demonstrated monthly by adding the total for the most recently completed month to the individual monthly totals for the preceding 11 months.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.
(9 VAC 5-80-1180 and 9 VAC 5-50-50)

CONTINUING COMPLIANCE DETERMINATION

28. **Emissions Testing** – The twenty-one (21) diesel engine gen-sets (Ref. Nos. RPU11 thru RPU15, G1 thru G6, GE1 thru GE5, GM1, GM2, GMR, GER1, and GEN1) 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. Stacks and emission sampling ports shall comply with the requirements of 40 CFR Part 60, Appendix A. Sampling ports shall be provided when requested and safe sampling platforms and access shall be provided.
(9 VAC 5-50-30 F and 9 VAC 5-80-1180)

29. **Stack Tests** – Upon request by the DEQ, the permittee shall conduct performance testing of the diesel engine gen-sets to demonstrate compliance with the emission limits contained in this permit. The details of the tests shall be arranged with the Regional Air Compliance Manager of DEQ's NRO.
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)

30. **Visible Emissions Evaluation (VEE)** – Upon request by the DEQ, the permittee shall conduct visible emission evaluations of the diesel engine gen-sets to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO.
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)

NOTIFICATIONS

31. **Initial Notifications** – The permittee shall furnish written notification of the items below to the Regional Air Compliance Manager of the DEQ's NRO at the following address:

    Regional Air Compliance Manager
    Department of Environmental Quality
    13901 Crown Court
    Woodbridge, VA 22193

    The permittee shall submit notification(s) for each building containing the information as described below:

    a. The actual date on which installation of the emergency diesel engine gen-sets (Ref. Nos. G4 thru G6) commenced in each building, within 30 days after such date. The notification must contain the following:

        i. Name and address of the permittee;

        ii. The building;

iii. Unit reference number of the initial unit installed; and

iv. The date installation commenced.

b. The start and end dates of the integration operational period for each emergency diesel engine gen-set (Ref. Nos. G4 thru G6) within 15 days after the last generator at each building completes its integration operational period. If a period of construction is paused or halted for ≥45 days, this notification shall be provided to the DEQ within 15 days after completion of the integration operational period for the most recently installed engine gen-set. The notification must contain the following:

i. Unit reference number;

ii. Engine information including make, model, engine family, serial number, model year, maximum engine power, engine displacement, fuel used;

iii. Installation date; and

iv. Integration operational period start and end dates.

For the purpose of this notification, the integration operational period is defined as the period of time beginning with the first time the affected unit is started on-site and ending when the affected unit is fully integrated with the source's electrical system.
(9 VAC 5-50-20)

GENERAL CONDITIONS

32. **Permit Invalidation** – This permit to construct the emergency diesel engine gen-set (Ref. Nos. G4 through G6) shall become invalid, unless an extension is granted by the DEQ, if:

a. A program of continuous construction is not commenced within 18 months from the date of this permit.

b. A program of construction is discontinued for a period of 18 months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of the phased construction of a new stationary source or project.

(9 VAC 5-80-1210)

33. **Permit Suspension/Revocation** – This permit may be suspended or revoked if the permittee:

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

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

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

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

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

(9 VAC 5-80-1210 G)

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

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

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

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

d. To sample or test at reasonable times.

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

35. **Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown, soot blowing, 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.

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

b. Maintain an inventory of spare parts.

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

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

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

36. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause), corrective action, preventive measures taken and name of person generating the record.
(9 VAC 5-20-180 J and 9 VAC 5-80-1180 D)

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

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

39. **Change of Ownership** – In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current minor NSR permit issued to the previous owner. The new owner shall notify the NRO of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-1240)

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

Attachment: Source Testing Report Format (1 page)

SOURCE TESTING REPORT FORMAT

Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No(s). 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 evaluations