Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

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

Travis A. Voyles
Secretary of Natural and Historic Resources

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

Richard C. Doucette, CPG
Regional Director

January 30, 2024

Mr. Zach Miller
Site Operations Manager
Wheeler Survey Company, LLC
24400 Howling Rooster Ln
Sterling, VA 20166

Location: Loudoun County
Registration No.: 74152

Dear Mr. Miller:

Attached is a minor new source review permit to construct and operate emergency diesel engine generator sets (gen-sets), a diesel engine-fired fire pump and cooling towers at Wheeler Survey Company, LLC's data center in accordance with the provisions of the Virginia State Air Pollution Control Board's Regulations for the Control and Abatement of Air Pollution. The permit document supersedes your permit document dated December 3, 2021.

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 January 8, 2024.

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

This permit to construct and operate shall not relieve Wheeler Survey Company, LLC of the responsibility to comply with all other local, state, and federal permit regulations.

The diesel engines may be subject to the requirements of 40 CFR Part 60, New Source Performance Standards (NSPS) Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (MACT) Subpart ZZZZ – *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.* 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 NSPS and MACT regulations to ensure compliance with applicable emission standards, operational limitations, and the monitoring, notification, reporting and recordkeeping requirements. Notifications shall 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/or 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 document 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:

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

If this permit document 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. Cameron Stewart, by phone at (571) 866-6093 or e-mail at cameron.stewart@deq.virginia.gov.

Sincerely,

Justin A. Wilkinson
Regional Air Permit Manager

JAW/CLS/74152 mNSR (2024-01-30)

Attachment: Permit

Commonwealth of Virginia

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Richard C. Doucette, CPG
Regional Director

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

This permit document supersedes your permit document dated December 3, 2021.

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

Wheeler Survey Company, LLC
1600 Amphitheatre Parkway
Mountain View, CA 94043
Registration No.: 74152

is authorized to construct and operate

emissions units at a data center

located at

24400 Howling Rooster Ln
Sterling, VA 20166
(Loudoun County)

in accordance with the Conditions of this permit.

Approved on January 30, 2024

Justin A. Wilkinson
Regional Air Permit Manager

Permit consists of 23 pages (w/o Attachment).
Permit Conditions 1 to 41.
Attachment A - Source Testing Report Format (1 page).

INTRODUCTION

This permit document is based on and combines permit terms and conditions in accordance with 9VAC5-80-1255 from the following permit approvals and the respective permit applications:

- Minor NSR Permit dated January 30, 2024 based on the permit application dated October 2, 2023, including supplemental information dated, November 14, 2023, and January 8, 2024; and

- Minor NSR Permit dated December 3, 2021 based on the permit application dated June 10, 2021, including supplemental information dated July 9, 2021, October 5, 2021, and November 30, 2021; the permit application dated October 20, 2020, including supplemental information dated December 4, 2020, February, 22, 2021, March 2, 2021, March 14, 2021, April 5, 2021, and April 6, 2021; and permit applications dated July 11, 2019 and February 21, 2018, including supplemental information dated March 27, 2018, April 20, 2018, August 22, 2018, September 7, 2018, September 10, 2018, and May 24, 2019.

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.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-80-1110 (definitions) and 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. The enabling permit program, or permit programs is provided below each permit condition in the regulatory authority parenthetical as follows: 9VAC5-80-850 for Article 5, 9VAC5-80-1180 for Article 6, 9VAC5-80-1985 for Article 8, and 9VAC5-80-2050 for Article 9. The most recent effective date for a condition is listed in brackets [ ] after each regulatory reference. When identical conditions on approval for one or more emission units are combined, the listed effective date does not alter the prior effective date(s) for any such conditions as issued in a previous permit action. In accordance with 9VAC5-80-1120F, any condition not marked as state-only enforceable (SOE) 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 subject to permit requirements of 9VAC5-80-1100 *et seq.* consists of:

Equipment to be Constructed:				
Reference No.	**Equipment Description**	**Standby Rated Capacity**	**Delegated Federal Requirements**	**Original Permit Date**
CT18 through CT23	Six (6) Cooling Towers Evaptech Counterflow	360,000 gph (each)	None	January 30, 2024

Previously Permitted Equipment:				
Reference No.	**Equipment Description**	**Standby Rated Capacity**	**Delegated Federal Requirements**	**Original Permit Date**
Group 1 EG1 through EG8 and EG10 through EG15	Fourteen (14) Diesel Engine Generator Sets MTU 20V4000G83L	4036 bhp 2750 ekW (each unit)	None	September 13, 2018
Group 2 EG16 through EG18	Three (3) Diesel Engine Generator Sets MTU 12V4000G83	2561 bhp 1750 ekW (each unit)	None	September 13, 2018
Group 3 EG19 through EG86	Sixty-eight (68) Caterpillar 3516E Diesel Engine Generator Sets	4043 bhp 2750 ekW (each unit)	None	May 4, 2021
Group 4 EG87 through EG106	Twenty (20) Caterpillar 3512C Diesel Engine Generator Sets	2584 bhp 1750 ekW (each unit)	None	May 4, 2021
EG107	One (1) TBD Tier 3 Diesel Engine Generator Set	500 bhp 250 ekW	None	May 4, 2021
CT1 through CT3	Three (3) Cooling Towers Evaptech Counterflow	309,600 gph (each)	None	May 4, 2021

CT4 through CT17	Fourteen (14) Cooling Towers Evaptech Counterflow	360,000 gph (each)	None	May 4, 2021
FWP1	One (1) Clarke Fire Pump Model JU6H-UFADN0 equipped with John Deere Diesel Engine Model 6068HFC28D	197 bhp 147 ekW	None	December 3, 2021

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

PROCESS REQUIREMENTS

1. **Emission Controls –**

   a. Nitrogen oxide (NO_X) emissions from the diesel engine-generator sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group1) and EG16 through EG18(Group 2)) shall be controlled by electronic fuel injection, turbocharged engine, aftercooler and low NO_X emission package.

   b. The permittee shall maintain documentation that demonstrates the control device/technology prescribed in 'a' above has been installed on the diesel engine-generator sets and the fire pump diesel engine.

   (9 VAC 5-80-1180 and 9 VAC 5-50-260) [1/30/2024]

2. **Emission Controls –** Visible emissions, particulate matter (PM, PM_{10} & $PM_{2.5}$) emissions, carbon monoxide (CO), and volatile organic compound (VOC) emissions from the diesel engine-generator sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1) and EG16 through EG18(Group 2)) shall be controlled by the use of good operating practices and performing appropriate maintenance in accordance with the manufacturer recommendations.
   (9 VAC 5-80-1180) [1/30/2024]

3. **Emission Controls –** Emissions from the emergency diesel engine-gen-sets and the fire pump diesel engine shall be controlled by the following:

   a. Nitrogen oxides (NO_x) emissions from each emergency diesel engine gen-set (Ref. Nos. EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) shall be controlled by engine design.

   b. Carbon monoxide (CO) emissions, particulate matter ($PM_{10}/PM_{2.5}$) emissions, volatile organic compounds (VOC) emissions, nitrogen oxide (NO_x) emissions (as NO_2), and visible emissions from the emergency diesel engine gen-sets (Ref. Nos. EG19 through

EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) 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 increase air emissions.

(9 VAC 5-80-1180 and 9 VAC 5-50-260) [1/30/2024]

4. **Emission Controls –** Particulate emissions from the twenty-three (23) cooling towers (Ref. Nos. CT1 through CT23) shall be controlled by drift eliminator designed for 0.0005% loss. The drift eliminator shall be provided with adequate access for inspection and shall be in operation when the cooling tower is operating.
(9 VAC 5-80-1180 and 9 VAC 5-50-260) [1/30/2024]

5. **Monitoring –**

a. Fuel Flow: Each emergency diesel engine gen-set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), and EG87 through EG106(Group 4)) shall be equipped with a device to continuously measure and record individual fuel consumption (in gallons) for each engine gen-set.

b. Engine Operating Hours: Each emergency diesel engine gen-set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) shall be equipped with a non-resettable hour meter which measures the duration of time that each engine gen-set is operated.

Each monitoring device (as required in a. and b. above) shall be observed by the permittee with a frequency of not less than once each day the emergency diesel engine gen-set is operated. The permittee shall keep a log of these observations.

Each monitoring device shall be installed, maintained, calibrated (as appropriate), and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The details of the monitoring device calibrations are to be arranged with the Regional Air Compliance Manager of the DEQ's Northern Regional Office (NRO).

Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the engine gen-sets are operating.
(9 VAC 5-80-1180 D) [1/30/2024]

OPERATING LIMITATIONS

6. **Operation of the Engine-Generator Sets –** The permittee shall operate and maintain each diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) 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) [1/30/2024]

7. **Emergency Power Generation –** The diesel engine-generator sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) 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 scheduled maintenance checks and readiness testing (Scheduled MCRT).

d. For unscheduled maintenance, testing and operational training.

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 sources electrical system.

(9 VAC 5-80-1180) [1/30/2024]

8. **Operating Limitations (Ozone Season) –** The engine-generator sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) shall not be operated for scheduled maintenance checks and readiness testing (Scheduled MCRT), 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 DEQ-NRO Air Compliance Manager, for exceptions to this requirement, with approvals made on a case-by-case basis. (9VAC 5-80-1180) [1/30/2024]

9. **Operating Limitations (Ozone Season) – Integration Operational Period –** During the integration operational period of each emergency diesel engine gen-set (Ref. Nos. EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) 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 Metropolitan Washington, D.C. 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) [1/30/2024]

10. **Emergency Power Generation –** The fire pump diesel engine (Ref. No. FWP1) shall only be operated to provide power to pump water for fire suppression or protection and for periodic maintenance, testing, and operational training.
(9 VAC 5-80-1180) [1/30/2024]

11. **Operating Hours –** The operating hours of the diesel engine-generator sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group1) and EG16 through EG18(Group 2)) and the fire pump diesel engine (Ref. No. FWP1) are limited to the following:

    Diesel engine-generator sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group1) and EG16 through EG18(Group 2)):

    a. No single unit shall operate more than 500 hours per year;

    b. No single unit shall operate more than 100 hours per year for scheduled maintenance checks and readiness testing (Scheduled MCRT), unscheduled maintenance, testing, and operational training (as provided in Condition 7.c and 7.d).

    Fire pump diesel engine (Ref. No. FWP1):

    a. The fire pump diesel engine (Ref. No. FWP1) shall not operate more than 500 hours per year.

    The annual limits for hours of operation shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for each 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) [1/30/2024]

12. **Operating Hours –** Each individual emergency diesel engine gen-set (Ref. Nos. EG19 through EG86(Group 3) and EG87 through EG106(Group 4)) shall not operate more than 20 hours per year for scheduled maintenance checks and readiness testing (Scheduled MCRT) (as provided in Condition 7.c).

    Each individual emergency diesel engine gen-set (Ref. Nos. EG19 through EG86(Group 3) and EG87 through EG106(Group 4)) shall not operate 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) [1/30/2024]

13. **Operating Hours –** Emergency diesel engine gen-set (Ref. No. EG107) shall not operate more than 20 hours per year for scheduled maintenance checks and readiness testing (Scheduled MCRT) (as provided in Condition 7.c).

    Emergency diesel engine gen-set (Ref. No. EG107) shall not operate more than 100 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 daily 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) [1/30/2024]

14. **Diesel Fuel Throughput Limit –** The emergency diesel engine gen-sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), and EG87 through EG106(Group 4)) shall only consume a combined quantity of diesel fuel oil (in gallons) each consecutive 365-day period (all uses), as demonstrated by using the following equation:

$$\frac{\text{Group 1 Fuel Consumption}}{727{,}969 \text{ gallons}} + \frac{\text{Group 2 Fuel Consumption}}{727{,}969 \text{ gallons}} + \frac{\text{Group 3 Fuel Consumption}}{693{,}431 \text{ gallons}} + \frac{\text{Group 4 Fuel Consumption}}{685{,}921 \text{ gallons}} \leq 1$$

Where:

Generator Set Group	Generator Ref. Nos. (Model)
Group 1	EG1 through EG8 and EG10 through EG15 (MTU 20V4000G83L)
Group 2	EG16 through EG18 (MTU 12V4000G83)
Group 3	EG19 through EG86 (Caterpillar 3516E)
Group 4	EG87 through EG106 (Caterpillar 3512C)

Compliance for the consecutive 365-day period shall be demonstrated daily by adding the total for the most recently completed calendar day to the individual daily totals for the preceding 364 days.
(9 VAC 5-80-1180) [1/30/2024]

15. **Fuel –** The approved fuel for the emergency diesel engine gen-sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) is diesel fuel. For the purposes of this permit document, diesel fuel is defined as ultra-low sulfur diesel fuel oil and hydrotreated vegetable oil (HVO), and shall meet the specifications below:

    a. Does not exceed the American Society for Testing and Materials (ASTM) specification, D975, for grade No. 1-D S15, for grade ultra-low sulfur 2-D or grade 2-D S15, or,

b. Has a maximum sulfur content not to exceed 0.0015% by weight (15 ppm), and either a minimum cetane number of 40 or maximum aromatic content of 35 volume percent.

Exceedance of these specifications may be considered credible evidence of an exceedance of emission limits. A change in the fuel type or the fuel sulfur content may require a permit to modify and operate.
(9 VAC 5-80-1180 and 9 VAC 5-50-260) [1/30/2024]

16. **Fuel Certification –** The permittee shall obtain a certification from the fuel supplier with each shipment of diesel fuel. 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; and

    d. A statement that the diesel fuel:

        i. Complies with the ASTM specifications for Grade No. 1-D S15 or Grade No. 2-D S15 (also known as ultra-low sulfur diesel (ULSD)); 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 or maximum aromatic content of thirty-five percent by volume.

    Alternatively, the permittee must obtain approval from DEQ-NRO's Regional Air Compliance Manager, if other documentation will be used to certify the diesel fuel type.

    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 15.
    (9 VAC 5-80-1180) [1/30/2024]

17. **Cooling Tower Limits –** The Total Dissolved Solid (TDS) concentration in the process water in each cooling tower (Ref. Nos. CT1 through CT23) shall not exceed 2,500 ppm TDS.
    (9 VAC 5-80-1180) [1/30/2024]

EMISSION LIMITS

18. **Emission Limits (Hourly) –** Emissions from the operation of each diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1) and EG16 through EG18(Group 2)) shall not exceed the limits specified below:

Pollutant	Group 1 (Ref. Nos. EG1 through EG8 and EG10 through EG15) (Each Unit)	Group 2 (Ref. Nos. EG16 through EG18) (Each Unit)
Nitrogen Oxides (NO_x as NO_2)	53.1 lbs/hr	33.7 lbs/hr
Carbon Monoxide (CO)	9.3 lbs/hr	6.3 lbs/hr
Volatile Organic Compounds (VOC)	3.4 lbs/hr	3.1 lbs/hr
Particulate Matter (PM_{10})	1.6 lbs/hr	2.0 lbs/hr
Particulate Matter ($PM_{2.5}$)	1.6 lbs/hr	2.0 lbs/hr

(9 VAC 5-80-1180) [1/30/2024]

19. **Emission Limits (Hourly) –** Emissions from the operation of the emergency diesel engine gen-sets (Ref. Nos. EG19 through EG86(Group 3) and EG87 through EG106(Group 4)) shall not exceed the limits specified below:

Pollutant	Group 3 (Ref. Nos. EG19 through EG86) (each unit)	Group 4 (Ref. Nos. EG87 through 106) (each unit)
Nitrogen Oxides (NO_x as NO_2)	52.91 lb/hr	34.18 lb/hr
Carbon Monoxide (CO)	10.22 lb/hr	5.88 lb/hr
Volatile Organic Compounds (VOC)	0.89 lb/hr	0.89 lb/hr
Particulate Matter (PM_{10})	0.85 lb/hr	0.54 lb/hr
Particulate Matter ($PM_{2.5}$)	0.85 lb/hr	0.54 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) [1/30/2024]

20. **Emission Limits (Hourly) –** Emissions from the operation of the emergency diesel engine gen-sets (Ref. Nos. EG107) shall not exceed the limits specified below:

Pollutant	(Ref. No. EG107)
Nitrogen Oxides (NO_x as NO_2)	6.61 lb/hr
Carbon Monoxide (CO)	6.21 lb/hr
Volatile Organic Compounds (VOC)	0.53 lb/hr
Particulate Matter (PM_{10})	0.38 lb/hr
Particulate Matter ($PM_{2.5}$)	0.38 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) [1/30/2024]

21. **Emission Limits (Hourly) – FWP1 –** Emissions from the operation of the fire pump diesel engine (Ref. No. FWP1) shall not exceed the limits specified below:

Pollutant	(Ref. No. FWP1)
Nitrogen Oxides (NO_x as NO_2)	1.08 lbs/hr
Carbon Monoxide (CO)	0.43 lbs/hr
Volatile Organic Compounds (VOC)	0.09 lbs/hr
Particulate Matter (PM_{10})	0.04 lbs/hr
Particulate Matter ($PM_{2.5}$)	0.04lbs/hr

(9 VAC 5-80-1180 and 9 VAC 5-50-260) [1/30/2024]

22. **Emission Limits (Annual) –** Emissions from the operation of the emergency diesel engine gen-sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), and EG87 through EG106(Group 4)) combined shall not exceed the limits specified below:

Pollutant	Group1 through Group 4 (Ref. Nos. EG1 through EG8 and EG10 through EG106) All Operations (105 Units Combined)
Nitrogen Oxides (NO_x as NO_2)	95.00 tpy
Carbon Monoxide (CO)	47.32 tpy
Volatile Organic Compounds (VOC)	23.11 tpy
Particulate Matter (PM_{10})	7.46 tpy
Particulate Matter ($PM_{2.5}$)	7.46 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 the annual emission limits may be determined as stated in Conditions 14 and 15.
(9 VAC 5-80-1180 and 9 VAC 5-50-260) [1/30/2024]

23. **Cooling Towers Emission Limits (Annual) –** Combined emissions from the operation of the cooling towers (Ref. Nos. CT1 through CT23) shall not exceed the limits specified below:

Pollutant	(Ref. Nos. CT1 through CT23)
Particulate Matter (PM_{10})	3.71 tpy
Particulate Matter ($PM_{2.5}$)	3.71 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 emissions limits shall be determined as stated in Conditions 17 and 27.
(9 VAC 5-80-1180 and 9 VAC 5-50-260) [1/30/2024]

24. **Visible Emission Limit –** Visible emissions from each diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), and EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) shall not exceed 5% opacity except during one 6-minute period in any one hour in which visible emissions shall not exceed 10% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup and shutdown.

During startup and shutdown, visible emissions from each diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) shall not exceed 10% 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).
(9VAC5-80-1180 and 9 VAC 5-50-260) [1/30/2024]

INITIAL COMPLIANCE DETERMINATION

25. **Stack Test –** Initial performance tests shall be conducted on six (6) of the emergency diesel engine gen-sets (Ref. Nos. EG19 through EG86(Group 3)), and two (2) of the emergency diesel engine gen-sets (Ref. Nos. EG87 through EG106(Group 4)) for NO_X (as NO_2) and CO using appropriate EPA reference methods as approved by the Regional Air Compliance Manager of the DEQ-NRO to determine compliance with the emission limits contained in Condition 19.

    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 exhaust stack of the emergency diesel engine gen-sets to demonstrate compliance with the NOx and CO emission limits specified in Condition 19. 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.

    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. 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-NRO. The permittee shall submit the test protocol to the Regional Air Compliance Manager of DEQ-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-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, DEQ-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) [1/30/2024]

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 the DEQ-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 the DEQ-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) [1/30/2024]

CONTINUING COMPLIANCE DETERMINATION

27. **Cooling Towers –** Once per calendar year, the permittee shall sample and analyze the process water from one cooling tower (Ref. Nos. CT1 through CT23) to demonstrate compliance with the TDS limit in Condition 17, utilizing EPA approved procedures or equivalent methods as determined by the Air Compliance Manager of DEQ-NRO. (9 VAC 5-80-1180) [1/30/2024]

28. **Facility Construction –** The emergency diesel engine gen-sets (Ref. Nos. EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) shall be constructed so as to allow for emissions testing upon reasonable notice at any times, using appropriate methods. This includes constructing the facility/equipment such that volumetric flow rates and pollutant emission rates can be determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. Sampling ports shall be provided when requested at the appropriate locations and safe sampling platforms and access shall be provided. (9 VAC 5-50-30 F and 9 VAC 5-80-1180) [1/30/2024]

29. **Facility Construction –** The diesel engine-generator sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1) and EG16 through EG18(Group 2)) and the fire pump diesel engine (Ref. No. FWP1) shall be constructed so as to allow for emissions testing upon reasonable notice, using appropriate methods. Sampling ports shall be provided when requested at the appropriate locations in accordance with EPA Reference Method 1 (reference 40 CFR Part 60, Appendix A). In addition, safe sampling platforms and access shall be provided.
(9VAC 5-50-30 F and 9VAC 5-80-1180) [1/30/2024]

30. **Stack Testing and Visible Emission Evaluations –** Upon request by the DEQ, the permittee shall conduct stack tests and/or visible emission evaluations of the diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) 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, DEQ-NRO.
(9VAC 5-50-30 G and 9VAC 5-80-1200) [1/30/2024]

RECORDS

31. **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, DEQ-NRO. These records shall include, but are not limited to:

    a. Documentation from the manufacturer that each diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1) is certified to meet applicable EPA emission standards.

    b. A monthly log of the monitoring device observations, as required by Condition 5.

    c. Monthly and annual hours of operation of each emergency diesel engine gen-set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group1) and EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) and the fire pump diesel engine (Ref. No. FWP1), for all purposes, with annual hours of operation calculated monthly as the sum of each consecutive 12-month period.

    d. Monthly and annual hours of operation of each emergency diesel engine gen-set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group1) and EG16 through EG18(Group 2)), for the purposes of scheduled maintenance checks and readiness testing (Scheduled MCRT), unscheduled maintenance, testing, and operational

training, with annual hours of operation calculated monthly as the sum of each consecutive 12-month period.

e. Monthly and annual hours of operation of each emergency diesel engine gen-set (Ref. Nos. EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) for the purposes of scheduled maintenance checks and readiness testing (Scheduled MCRT), with annual hours of operation calculated monthly as the sum of each consecutive 12-month period.

f. A monthly summary table for each diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), and EG87 through EG106(Group 4)) to include:

   i. Reasons for operating as defined in Condition 7;
   ii. Engine hours; and
   iii. Fuel consumption.

g. Daily and annual fuel consumption of each emergency diesel engine gen-set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), and EG87 through EG106(Group 4)), calculated daily as the sum of each consecutive 365-day period.

h. Daily and annual fuel consumption of each emergency diesel engine gen-set Group (Ref. Nos. Group 1, Group 2, Group 3, and Group 4) calculated daily as the sum of each consecutive 365-day period for the purposes of the compliance demonstration with the diesel fuel throughput limits of each Group contained in Condition 14.

i. Daily records of calculations to demonstrate compliance with the diesel fuel throughput limit equation in Condition 14.

j. Daily and annual emissions calculations for NOX (as NO2), CO, VOC, PM10, and PM2.5, from the emergency diesel engine gen-sets (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), and EG87 through EG106(Group 4)), combined for all operations with annual emissions calculated daily as the sum of each consecutive 365-day period to demonstrate compliance with the limits contained in Condition 22.

k. All fuel supplier certifications, as required per Condition 16.

l. Engine information including make, model, serial number, model year, maximum engine power (bhp), and engine displacement for each diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4) and EG107) and the fire pump diesel engine (Ref. No. FWP1).

m. The manufacturer's written operating instructions or procedures developed by the owner/operator that are approved by the engine manufacturer for each emergency diesel engine gen-set (Ref. Nos. EG19 through EG86(Group 3), EG87 through EG106(Group 4) and EG107).

n. Records of changes in settings that are permitted by the manufacturer of the emergency diesel engine gen-sets (Ref. Nos. EG19 through EG86(Group 3), EG87 through EG106(Group 4) and EG107).

o. Results of all stack tests and visible emission evaluations, and monitoring device certifications/calibrations.

p. Records of scheduled maintenance checks and readiness testing (Scheduled MCRT) as referenced in Condition 7.c.

q. Records of unscheduled maintenance, testing, and operational training as referenced in Condition 7.d.

r. Records of maintenance and operator training as referenced in Condition 36.

s. Documentation from the manufacturer that the cooling towers (Ref. Nos. CT1 through CT23) meet the design specifications required by Condition 4.

t. Records of TDS sampling and analytic results used to determine compliance with the cooling tower process water TDS limit as required by Condition 27.

u. Records of the reasons for operation for each emergency diesel engine gen-set (Ref. Nos. EG19 through EG86(Group 3), and EG87 through EG106(Group 4)), including, but not limited to, the date, cause of operation, cause of the emergency, the ISO-declared emergency notification, and the hours of operation.

v. Records, as necessary, to demonstrate compliance with the operating limitations of Condition 8, which includes, but is not limited to: times, dates and reasons for operation of each diesel engine-generator set (Ref. Nos. EG1 through EG8 and EG10 through EG15(Group 1), EG16 through EG18(Group 2), EG19 through EG86(Group 3), EG87 through EG106(Group 4) and EG107) that was operating between May 1 and September 30.

w. To verify compliance with Condition 9, maintain records for the emergency diesel engine gen-sets (Ref. Nos. EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) 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.

Compliance for the consecutive 12-month period (as applicable for the items above) 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.

Compliance for the consecutive 365-day period (as applicable for the items above) shall be demonstrated daily by adding the total for the most recently completed calendar day to the individual daily totals for the preceding 364 days.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years, unless otherwise noted.
(9VAC 5-80-1180 and 9VAC 5-50-50) [1/30/2024]

NOTIFICATIONS

32. **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. EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) commenced, 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. EG19 through EG86(Group 3), EG87 through EG106(Group 4), and EG107) 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) [1/30/2024]

GENERAL CONDITIONS

33. **Permit Invalidation** – This permit to construct the emergency diesel engine gen-sets (Ref. Nos. EG53 through EG86(Group 3), EG94 through EG106(Group 4), and EG107) and the cooling towers (CT11 through CT23) 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 or if,

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)

34. **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 & H)

35. **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)

36. **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; and

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)

37. **Record of Malfunctions –** The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shut-down 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 of malfunction), 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)

38. **Notification for Facility or Control Equipment Malfunction –** The permittee shall furnish notification to the Regional Air Compliance Manager, DEQ-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 as soon as practicable but 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 fourteen days of the occurrence. 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, DEQ-NRO.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

39. **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)

40. **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 Regional Air Compliance Manager, DEQ-NRO of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-1240)

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

SOURCE TESTING REPORT FORMAT

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

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

Copy of approved test protocol

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

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

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

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

* Not applicable to visible emission evaluations