



NRO-391-07

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN VIRGINIA REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193

(703) 583-3800 Fax (703) 583-3801

www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

~~Jeffrey S. Porter~~
Regional Director

November 7, 2007

Registration No.: 73567

Mr. Jeffrey S. Porter
Site Manager
Digital Reston, LLC
1807 Michael Faraday Court
Reston, VA 20190

Dear Mr. Porter:

Attached is a permit to construct and operate two emergency diesel engine-generator sets located at Digital Reston, LLC in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board's (Board) Regulations for the Control and Abatement of Air Pollution (Regulations).

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

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 September 28, 2007.

This permit approval to modify and operate shall not relieve Digital Reston, LLC of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provides that you may request a formal hearing from this case decision by filing a petition with the Board within thirty days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-200 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ

Mr. Jeffrey S. Porter
Digital Reston, LLC
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made the decision. 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 thirty days from the date you actually received this decision or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218

If the 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 additional 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 call the Northern Regional Office at (703) 583-3840.

Sincerely,



Terry H. Darton
Regional Air Permit Manager

TAF/THD/RDS/07391MNSR

Attachment: Permit
Source Testing Report Format

cc: Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)
Manager/Inspector, Air Compliance



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David K. Paylor
Director

~~Jeffrey A. Green~~
Regional Director

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

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

Digital Reston, LLC
1807 Michael Faraday Court
Reston, VA 20190

is authorized to construct and operate

two emergency diesel engine-generator sets

located at

1807 Michael Faraday Court
Reston, VA 20190

in accordance with the Conditions of this permit.

Approved on

November 7, 2007

A handwritten signature in black ink, appearing to read "T. A. Faha".

Thomas A. Faha
Regional Director

Permit consists of 12 pages.
Permit Conditions 1 to 27

INTRODUCTION

This permit approval is based on the permit application dated April 17, 2007, and additional information dated June 7, 2007 and September 28, 2007. 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's (Board) Regulations for the Control and Abatement of Air Pollution (Regulations). The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the Department of Environmental Quality (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.

PROCESS REQUIREMENTS

1. **Equipment List** - Equipment permitted at this facility consists of the following:

Equipment to be Operated			
Reference No.	Equipment Description	Rated Capacity	Federal Requirements
1	Caterpillar 3516B Diesel Engine Generator Set	2,190 BHP 2,000 kW	None
2	Caterpillar 3516B Diesel Engine Generator Set	2,190 BHP 2,000 kW	None

Specifications included in the permit under this Condition are for informational purposes only and do not form enforceable terms or conditions of the permit.
(9 VAC 80-1180 D 3)

2. **Emission Controls** – Emissions from the emergency diesel engine-generator sets (Unit Reference No's 1 & 2) shall be controlled by the following:
- a. Visible emissions from the emergency diesel engine-generator sets shall be controlled by good combustion practices.
 - b. 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 generators.
 - c. Sulfur Dioxide (SO₂) emissions from the emergency diesel engine-generator sets shall be controlled by the use of low sulfur diesel fuel with a sulfur content not to exceed 0.05% by weight.
 - d. Carbon Monoxide (CO) emissions from the diesel engine generator sets shall be controlled by good combustion practices.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

OPERATING LIMITATIONS

3. **Operating Hours** – The emergency diesel engine-generator sets (Unit Reference No's 1 & 2) shall not operate more than 500 hours per year each. The operating hours shall be 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)
4. **Operation of the Emergency diesel engine-generator Set** - The permittee must operate and maintain each emergency diesel engine-generator set (Unit Reference No's 1 & 2) according to the manufacturer's written instructions or according to 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 do not adversely impact air emissions.
(9 VAC 5-80-1180)
5. **Approved Fuels** – The approved fuel for the emergency diesel engine-generator sets (Unit Reference No's 1 & 2) is low sulfur diesel fuel. Upon receipt of this permit by the permittee, all shipments of diesel fuel for use in the emergency diesel engine-generator sets shall meet the specifications listed in Condition 6. Use of a fuel not meeting the fuel specifications in Condition 6 may require a permit to modify and operate.
(9 VAC 5-80-1180)

6. **Fuel Specification** – The diesel fuel oil used in the emergency diesel engine-generator sets shall conform to the American Society for Testing and Materials (ASTM) specification D975, with sulfur content per shipment not to exceed 0.05% by weight (500 ppm).
(9 VAC 5-80-1180)
7. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each 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 conforms to the American Society for Testing and Materials (ASTM) specification D975,
 - e. The sulfur content of the diesel fuel oil.

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 6. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.

(9 VAC 5-80-1180)

EMISSION LIMITS

8. **Emission Limit** – The total emissions of nitrogen oxides (NO_x), expressed as nitrogen dioxide (NO₂), from the operation of the facility shall not exceed 17.0 tons per year. The NO_x emissions shall be calculated using the following equation:

NO_x Emissions (tons per year) =

$$\left(\frac{\text{Hours of operation for engines} \times \left(\frac{34.0 \text{ lbs. of NO}_x}{\text{Hour}} \right)}{2000 \text{ lbs}} \right) \times \frac{1 \text{ ton}}{2000 \text{ lbs}}$$

The NO_x emissions shall be 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)

9. **Short Term Emission Limits** – Emissions from the operation of each emergency diesel engine-generator set (Unit Reference No's 1 & 2) shall not exceed the limits specified below:

Nitrogen Oxides (as NO ₂)	34.0 lbs/hr
Carbon Monoxide (CO) (9 VAC 5-80-1180)	4.7 lbs/hr

10. **Visible Emission Limit** – Visible emissions from the emergency diesel engine-generator sets (Unit Reference No's 1 & 2) shall not exceed five percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed ten percent 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-up and shut-down times, visible emissions from the emergency diesel engine-generator sets (Unit Reference #'s 1 & 2) shall not exceed ten percent except during one six-minute period in any one hour in which visible emissions shall not exceed twenty percent opacity as determined by the EPA Method 9 (reference 40 CFR Part 60, Appendix A).
(VAC 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-50-80)

INITIAL COMPLIANCE DETERMINATION

11. **Stack Test** – An initial performance test shall be conducted on one of the emergency diesel engine-generator sets (Unit Reference No's 1 & 2) for nitrogen oxides (as NO₂) using EPA Reference Method 7 or 7E to determine compliance with the emission limits contained in Conditions 8 and 9.
- a. Testing shall be performed on the exhaust stack of the engine while operating at 90% or greater of its rated capacity.
 - b. The initial performance test shall be performed, reported, and demonstrate compliance within ninety days after the effective date of this permit.
 - i. Should conditions occur which would require rescheduling the testing, the permittee shall notify the Regional Air Compliance Manager of the DEQ's Northern Regional Office (NRO) at the address listed in Condition 16 in writing, within seven days of the scheduled test date or as soon as the rescheduling is deemed necessary.
 - ii. The initial performance test shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30, and the test methods and procedures contained in each applicable section or subpart listed in 9 VAC 5-50-410.

- iii. The details of the initial performance test are to be arranged with the Regional Air Compliance Manager of the DEQ's NRO. The permittee shall submit one copy of the test protocol to the Regional Air Compliance Manager of the DEQ's NRO to the address listed in Condition 16 at least thirty days prior to testing. Two copies of the test results shall be submitted to the Regional Air Compliance Manager of the DEQ's NRO within sixty days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-50-30, 9 VAC 5-80-1200, and 9 VAC 5-50-410)

12. Initial Visible Emissions Evaluation - Visible Emission Evaluations (VEE) in accordance with EPA Method 9 (reference 40 CFR Part 60, Appendix A) shall be conducted by the permittee on the remaining emergency diesel engine-generator set (Unit Reference No's 1 & 2) not selected for initial stack testing in Condition 11.

- a. Initial VEE testing shall be performed on the exhaust stack of the engine while operating at 90% or greater of its rated capacity.
- b. Each VEE shall consist of three runs with a run being comprised of ten six-minute averages. Each six-minute average shall be made up of twenty four consecutive observations (at fifteen second intervals).
- c. The details of the VEE tests are to be arranged with the Regional Air Compliance Manager of the DEQ's NRO at the address listed in Condition 16.
- d. The permittee shall submit a VEE test protocol at least thirty days prior to testing.
- e. The VEE shall be performed within ninety days after the effective date of this permit.
- f. Should conditions occur which would require rescheduling the testing, the permittee shall notify the Regional Air Compliance Manager of the DEQ's NRO at the address listed in Condition 16 in writing, within seven days of the scheduled test date or as soon as the rescheduling is deemed necessary.
- g. Two copies of the test result shall be submitted to the Regional Air Compliance Manager of the DEQ's NRO at the address listed in Condition 16 within sixty days after test completion and shall conform to the test report format enclosed with this permit.

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

CONTINUING COMPLIANCE DETERMINATION

13. **Stack Tests** - Upon request by the DEQ, the permittee shall conduct additional performance testing of the emergency diesel engine-generator sets (Unit Reference No's 1 & 2) 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 the DEQ's NRO at the address referenced in Condition 16.
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)
14. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct additional VEE's of the emergency diesel engine-generator sets (Unit Reference No's 1 & 2) 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 at the address referenced in Condition 16.
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)
15. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested, at the appropriate locations or in accordance with the applicable performance specification.
(9 VAC 5-50-30 F and 9 VAC 5-80-1180)

RECORDS

16. All correspondence concerning this permit should be submitted to the following address:

Regional Air Compliance Manager
Department of Environmental Quality
NRO
13901 Crown Court
Woodbridge, VA 22193
(9 VAC 5-50-50)

17. **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 address referenced in Condition 16. These records shall include, but shall not be limited to:
- a. The annual hours of operation of each emergency diesel engine-generator set (Unit Reference No's 1 & 2), 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.

- b. All fuel supplier certifications referred to in Condition 7.
- c. Scheduled and unscheduled maintenance and operator training for each emergency diesel engine-generator set (Unit Reference No's 1 & 2) in accordance with Condition 21.
- d. Monthly emissions calculation for the emergency diesel engine-generator sets (Unit Reference No's 1 & 2) as provided in Condition 8. Any alternatives to the emissions calculation in Condition 8 shall be approved in advance by the Regional Air Compliance Manager of the DEQ's NRO.
- e. Records of the manufacturer's written operating and maintenance instructions or of procedures developed by the owner or operator that are authorized by the engine manufacturer.
- f. Records of changes in settings that are permitted by the manufacturer of the emergency diesel engine-generator sets (Unit Reference No's 1 & 2).

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)

NOTIFICATIONS

18. Initial Notifications – Within thirty days of the receipt of this permit, the permittee shall furnish written notification to the Regional Air Compliance Manager of the DEQ, NRO at the address referenced in Condition 16, of:

- a. The date on which construction of the emergency diesel engine-generator sets (Unit Reference No's 1 & 2) commenced.
- b. The actual start-up date of the emergency diesel engine-generator sets (Unit Reference No's 1 & 2).

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

GENERAL CONDITIONS

19. Certification of Documents:

- A. The following documents submitted to the Board shall be signed by a responsible official: (i) any emission statement, application, form, report, or compliance certification; (ii) any document required to be signed by any provision of the Regulations of the Board; or (iii) any other document containing emissions data

or compliance information the owner wishes the Board to consider in the administration of its air quality programs. A responsible official is defined as follows:

1. For a business entity, such as a corporation, association or cooperative, a responsible official is either:
 - a. The president, secretary, treasurer, or a vice president of the business entity in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the business entity; or
 - b. A duly authorized representative of such business entity if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars) or (ii) the authority to sign documents has been assigned or delegated to such representative in accordance with procedures of the business entity.
 2. For a partnership or sole proprietorship, a responsible official is a general partner or the proprietor, respectively.
 3. For a municipality, state, federal, or other public agency, a responsible official is either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of the principal geographic unit of the agency.
- B. Any person signing a document under subsection A above shall make the following certification:
- "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
- C. Subsection B shall be interpreted to mean that the signer must have some form of direction or supervision over the persons gathering the data and preparing the

document (the preparers), although the signer need not personally nor directly supervise these activities. The signer need not be in the same line of authority as the preparers, or do the persons gathering the form need to be employees (e.g., outside contractors can be used). It is sufficient that the signer has authority to assure that the necessary action is taken to prepare a complete and accurate document.

(9 VAC 5-20-230)

20. 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 an emissions unit, included in this permit;
- 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 emission limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.

(9 VAC 5-80-1210 F)

21. Right of Entry - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of appropriate 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)

- 22. 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, with respect to process equipment which affect such 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)

- 23. 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.
(9VAC 5-20-180 J and 9 VAC 5-80-1180 D)

- 24. Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Regional Air Compliance Manager of the DEQ's NRO at the address referenced in Condition 16 of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more

than one hour, by facsimile transmission, telephone or telegraph. 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 two weeks 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)

25. 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)

26. Change of Ownership - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Regional Air Compliance Manager of the DEQ's NRO at the address referenced in Condition 16 of the change of ownership within thirty days of the transfer. (9 VAC 5-80-1240)

27. 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)