



NRO-118-14

# COMMONWEALTH of VIRGINIA

Molly Joseph Ward  
Secretary of Natural Resources

## DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE  
13901 Crown Court, Woodbridge, Virginia 22193-1453  
(703) 583-3800 Fax (703) 583-3821  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

David K. Paylor  
Director

Thomas A. Faha  
Regional Director

July 31, 2014

Mr. Anthony Delsignore  
U.S. Customs and Border Protection  
8444 Terminal Road  
Lorton, VA 22079

Location: Springfield, VA  
Registration No.: 74060  
Plant ID No.: 059-01131

Dear Mr. Delsignore:

Attached is a permit to construct and operate three (3) 1,000 kW emergency diesel engine generators in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution.

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 May 12, 2014.

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 U.S. Customs and Border Protection of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the 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 made the decision. Please consult the relevant regulations for additional requirements for such requests.

Please note that diesel engine-generator sets manufactured after April 1, 2006, may be affected facilities under 40 CFR 60, New Source Performance Standard (NSPS) Subpart IIII (Stationary Compression Ignition Internal Combustion Engines) and that all stationary reciprocating internal combustion engines (RICE) are affected facilities under 40 CFR 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (MACT) Subpart ZZZZ. Each unit is required to comply with certain federal emission standards and operating limitations over the useful life of the unit. As the owner/operator of the unit(s), the DEQ advises you to review the NSPS and MACT to ensure compliance with applicable emission standards, operational limitations, and the monitoring, notification, reporting and recordkeeping requirements. Applicable notifications shall be sent to EPA, Region III. Both the NSPS and MACT can be found at [www.ecfr.gov](http://www.ecfr.gov).

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty 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 30-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 Jonathan Carney at (703) 583-3863.

Sincerely,

  
James B. LaFratta  
Regional Air Permit Manager

TAF/JBL/JWC/14118mNSR

Attachment: Permit

cc: Regional Air Compliance Manager (electronic file submission)  
File (Reg. No. 74060)



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David K. Paylor  
Director

Thomas A. Faha  
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,

U.S. Customs and Border Protection (CBP)  
8444 Terminal Road  
Lorton, VA 22079  
Registration No.: 74060

is authorized to construct and operate

diesel engine generator-sets at CBP's Data Center

located at

7681 Boston Blvd.,  
Springfield, VA 22153  
(Fairfax County)

in accordance with the Conditions of this permit.

Approved on

July 31, 2014

A handwritten signature in black ink, appearing to read "Thomas A. Faha", written over a horizontal line.

Thomas A. Faha  
Regional Director

Permit consists of 10 pages.  
Permit Conditions 1 to 24.

## **INTRODUCTION**

This permit approval is based on the permit application dated March 31, 2014 and supplemental information dated May 12, 2014. 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 5-80-1110 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.

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 Commonwealth of Virginia 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 at this facility consists of the following:

<b>Equipment Subject to Permitting:</b>				
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity (kW<sub>e</sub> and bhp)</b>	<b>Federal Requirements</b>	<b>Permit Date</b>
EG-2 through EG-4	Caterpillar Model C32 Manufactured February 9, 2007	1,000 eKW 1,502 hp each	9 VAC 5-50-410 and 9 VAC 5-60-100	July 31, 2014

<b>Equipment Exempt from Permitting:</b>				
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Exempt Citation</b>	<b>Exemption Date</b>
EG-1	Caterpillar Model C32 Manufactured January 28, 2013	1,000 eKW 1,474 bhp	9 VAC 5-80-1105.B.2.b	May 7, 2014
1	Caterpillar Model SR-4 diesel engine generator set, date of manufacture unknown (initial installation 1987)	900 eKW 1,332 bhp	9 VAC 5-80-1105.C.1	December 18, 2013

Equipment Exempt from Permitting (continued):				
Reference No.	Equipment Description	Rated Capacity	Exempt Citation	Exemption Date
2	Caterpillar Model SR-4 diesel engine generator set, date of manufacture unknown (initial installation 1987)	900 ekW 1,332 bhp	9 VAC 5-80-1105.C.1	December 18, 2013
3	Caterpillar Model SR-4 diesel engine generator set, date of manufacture unknown (installed 1989)	900 ekW 1,332 bhp	9 VAC 5-80-1105.B.2.b	December 18, 2013
4	Caterpillar Model SR-4 diesel engine generator set, date of manufacture unknown (installed 2000)	900 ekW 1,332 bhp	9 VAC 5-80-1105.B.2.b	December 18, 2013

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 5-80-1180 D 3)

**2. Emission Controls –**

- a. Nitrogen oxides (NO<sub>x</sub>) emissions from the engine-generator sets (Ref. Nos. EG-2, EG-3, and EG-4) shall be controlled by turbocharged engines and aftercoolers. The permittee shall maintain documentation that demonstrates that control devices have been installed on the engine-generator sets.
- b. Sulfur dioxide (SO<sub>2</sub>) emissions from the engine-generator sets (Ref. Nos. EG-2, EG-3, and EG-4) shall be controlled by the use of ultra low sulfur fuels.

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

3. **Emission Controls –** Carbon monoxide (CO), particulate matter (PM<sub>10</sub>/PM<sub>2.5</sub>), volatile organic compounds (VOCs), visible emissions and nitrogen oxide (NO<sub>x</sub>) emissions from the engine-generator sets (Ref. Nos. EG-2, EG-3, and EG-4) shall be controlled by the use of good operating practices and performing appropriate maintenance in accordance with the manufacturer recommendations. In addition, the permittee may only change those settings that are permitted by the manufacturer and do not degrade the air emissions from the engines.

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

4. **Monitoring Devices –** Each engine-generator set (Ref. Nos. EG-2, EG-3, and EG-4) shall be equipped with a non-resettable hour metering device to monitor the operating hours. The non-resettable hour meter used to continuously measure the hours of operation for each engine-generator set shall be observed by the owner with a frequency of not less than once each day the engine-generator set is operated. The owner 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. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the engine-generator sets are operating.  
(9 VAC 5-80-1180 D)

### **OPERATING LIMITATIONS**

5. **Operation of the Engine-Generator Sets** - The permittee shall operate and maintain each engine-generator set (Ref. Nos. EG-2, EG-3, and EG-4) and control device according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may only change those settings that are permitted by the manufacturer and does not increase air emissions.  
(9 VAC 5-80-1180)
6. **Emergency Power Generation** – The engine-generator sets (Ref. Nos. EG-2, EG-3, and EG-4) shall only be operated in the following modes:
  - a. In situations that arises 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 periodic maintenance, testing, and operational training.

Total emissions for any 12 month period, calculated as the sum of all emissions from operations under the scenarios above, shall not exceed the limits stated in Condition 10.  
(9 VAC 5-80-1180)

7. **Operating Hours** – Each engine-generator set (Ref. Nos. EG-2, EG-3, and EG-4) shall not operate more than 500 hours per year, calculated monthly as the sum of each consecutive 12 month period. Compliance for the consecutive 12 month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.  
(9 VAC 5-80-1180)

8. **Fuel** - The approved fuel for the engine-generator sets (Ref. Nos. EG-2, EG-3, and EG-4) is ultra low sulfur diesel fuel oil, and shall meet the specifications below:

**ULTRA LOW SULFUR DIESEL FUEL OIL:**

- a. Does not exceed the American Society for Testing and Materials (ASTM) specification, D975, for grade ultra low sulfur 2-D or grade 2-D S15, and,
- b. Has a maximum sulfur content not to exceed 0.0015% by weight (15 ppm).

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)

9. **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;
  - d. A statement that the diesel fuel conforms to the applicable fuel specification requirements of Condition 8; and
  - e. The sulfur content of the diesel fuel.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 8. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.

(9 VAC 5-80-1180)

## **EMISSION LIMITS**

10. **Short Term Emission Limits** - Emissions from the operation of each engine-generator set (Ref. Nos. EG-2, EG-3, and EG-4) shall not exceed the limits specified below:

Nitrogen Oxides (as NO <sub>2</sub> )	19.4	lbs/hr
Carbon Monoxide	2.8	lbs/hr

**Annual Emission Limits** – Annual emissions from the combined operation of engine-generator sets (Ref. Nos. EG-2, EG-3, and EG-4) shall not exceed the limits specified below:

Nitrogen Oxides (as NO <sub>2</sub> )	14.5	tpy
Carbon Monoxide	2.1	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 Condition(s) 7 and 8.  
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

11. **Visible Emission Limit** - Visible emissions from each engine-generator set (Ref. Nos. EG-2, EG-3, and EG-4) shall not exceed 5 percent opacity except during one 6-minute period in any one hour in which visible emissions shall not exceed 10 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.

During start-up and shut-down times, visible emissions from the engines shall not exceed 10 percent opacity except during one 6-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity.  
(9 VAC 5-80-1180)

## **CONTINUING COMPLIANCE DETERMINATION**

12. **Emissions Testing** - The facility/permitted emission units shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. 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)



13. **Stack Tests/Visible Emissions Evaluation** – Upon request by the DEQ, the permittee shall conduct stack tests and/or visible emission evaluations of the engine-generator sets (Ref. Nos. EG-2, EG-3, and EG-4) to demonstrate compliance with emission limits contained in this permit. The details of the tests shall be arranged with the Regional Air Compliance Manager of the DEQ's Northern Regional Office (NRO).  
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)

## **RECORDS**

14. **Correspondence** - All correspondence concerning this permit shall be submitted to the following address:

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

(9 VAC 5-50-50)

15. **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. These records shall include, but are not limited to:
- a. A monthly log of the monitoring device observations for the engine-generator sets (Ref. Nos. EG-2, EG-3, and EG-4) as required by Condition 4.
  - b. Annual hours of operation of each engine-generator set, 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.
  - c. All fuel supplier certifications.
  - d. Engine information including make, model, serial number, model year, maximum engine power (bhp), and engine displacement for each engine-generator set.
  - e. The manufacturer's written operating instructions or procedures developed by the owner/operator that are approved by the engine manufacturer for each engine-generator set.
  - f. Records of the reasons for operation for each engine-generator set (Ref. Nos. EG-2, EG-3, and EG-4), including, but not limited to, the date, cause of operation, cause of the emergency, and the hours of operation.
  - g. Results of all stack tests and visible emission evaluations.
  - h. Scheduled and unscheduled maintenance and operator training.

- i. Records of changes in settings that are permitted by the manufacturer of the engine-generator sets.

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**

16. The permittee shall furnish written notification to DEQ's NRO of the actual date(s) on which the emergency diesel engine driven generators, EG-2, EG-3, and EG-4, were installed. This notification shall be submitted within 30 days of the date of this permit.

### **GENERAL CONDITIONS**

17. **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)

18. **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)

- 19. 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 air pollution control equipment and 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)

- 20. 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)

- 21. Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to 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, 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 DEQ's NRO.  
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

- 22. 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)
- 23. 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 DEQ's NRO of the change of ownership within 30 days of the transfer.  
(9 VAC 5-80-1240)
- 24. 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)