



NRO-128-14

# COMMONWEALTH of VIRGINIA

## 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)

Molly Joseph Ward  
Secretary of Natural Resources

David K. Paylor  
Director

Thomas A. Faha  
Regional Director

August 8, 2014

Ms. Michelle Rubin  
Vice President  
I & G Mission Ridge, LLC  
200 East Randolph Drive  
Chicago, IL 60601

Location: Fairfax County  
Registration No.: 74051  
Plant ID No.: 51-059-01128

Dear Ms. Rubin:

Attached is a permit to construct and operate a diesel engine-generator set in accordance with the provisions of 9 VAC 5 Chapter 80, Part II Article 6 of the Commonwealth of Virginia State Air Pollution Control Board's (Board's) Regulations for the Control and Abatement of Air Pollution (Regulations).

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 July 28, 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 I & G Mission Ridge, LLC of the responsibility to comply with all other local, state, and federal permit regulations. It should be noted the engine-generator sets on site may be affected facilities under 40 CFR 60, New Source Performance Standard (NSPS) Subpart IIII and/or 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).

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code (VAC) 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 also 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.

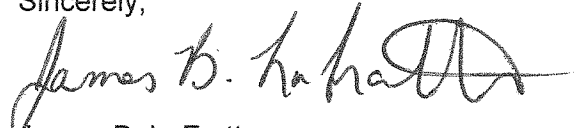
As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

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 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 Thomas Valentour at (703) 583-3931.

Sincerely,

A handwritten signature in dark ink, appearing to read "James B. LaFratta", with a stylized flourish at the end.

James B. LaFratta  
Regional Air Permit Manager

TAF/JBL/TMV/14128mNSR

Attachment: Permit

cc: Regional Air Compliance Manager (electronic file submission)  
File



NRO-128-14

# *COMMONWEALTH of VIRGINIA*

## *DEPARTMENT OF ENVIRONMENTAL QUALITY*

### NORTHERN REGIONAL OFFICE

Molly Joseph Ward  
Secretary of Natural Resources

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

### **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,

I & G Mission Ridge, LLC  
200 East Randolph Drive  
Chicago, IL 60601  
Registration No.: 74051  
Plant ID No.: 51-059-01128

is authorized to construct and operate

a diesel engine-generator set

located at

15030 Conference Center Drive,  
Chantilly, VA 20151  
(Fairfax County)

in accordance with the Conditions of this permit.

Approved on:

August 8, 2014

A handwritten signature in black ink, appearing to read "James B. La Faha", written over the printed name of Thomas A. Faha.

Thomas A. Faha,  
Regional Director

Permit consists of 11 pages.  
Permit Conditions 1 to 26.

## **INTRODUCTION**

This permit approval is based on the permit application dated April 14, 2014 and supplemental information received July 28, 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.

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 at this facility consists of the following:

<b>Equipment to be Constructed :</b>				
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Add-On Control Technology</b>	<b>Federal Requirements</b>
1	Caterpillar 3516C-HD Diesel fired engine-generator set	2,500 kW / 3,634 bhp	NA	9 VAC 5-50-410 and 9 VAC 5-60-100

<b>Equipment Exempt from permitting :</b>				
<b>Reference No.</b>	<b>Equipment Description</b>	<b>Rated Capacity</b>	<b>Federal Requirements</b>	<b>Installation Date</b>
NA	Two Generac Power Systems Diesel fired engine-generator set	250 kW / 384 bhp	9 VAC 5-50-410 and 9 VAC 5-60-100	2006

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 engine-generator set (Ref. No. 1) shall be controlled by the following:

- a. Nitrogen oxides (NO<sub>x</sub>) emissions from the engine-generator set (Ref. No. 1) shall be controlled by electronic fuel injection and a turbocharged engine. The permittee shall maintain documentation that demonstrates the control devices have been installed on the engine-generator set.
- b. Carbon monoxide (CO), volatile organic compounds (VOCs), and visible emissions from the engine-generator set (Ref. No. 1) shall be controlled by the use of good operating practices and performing maintenance in accordance with the manufacturer recommendations.
- c. Combustion and visible emissions from the diesel engine-generator set (Ref. No. 1) shall be controlled by the use of good operating practices and performing maintenance in accordance with the manufacturer recommendations.

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

3. **Monitoring – Engine Operating Hours** – The engine-generator set (Ref. No. 1) shall be equipped with a non-resettable hour meter which measures the duration of time that each engine is operated.

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

The monitoring device shall be provided with adequate access for inspection and shall be in operation when the engine is operating.

(9 VAC 5-80-1180 D, and 9 VAC 5-50-20 C)

4. **Monitoring Device Observation** - To ensure good performance, the monitoring device used to continuously measure operating hours shall be observed by the permittee at a minimum frequency of once per day during days in which the engine-generator set is called into service.

(9 VAC 5-80-1180)

**OPERATING LIMITATIONS**

5. **Operating Scenarios for Diesel Engine Generator Set** - The engine-generator set (Ref. No. 1) 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 periodic maintenance, testing, and operational training.
- (9 VAC 5-80-1180 D)
6. **Operating Hours** – The engine-generator set (Ref. No. 1) shall not operate more than 500 hours per year, calculated monthly as the sum of each consecutive 12 month period.  
(9 VAC 5-80-1180)
7. **Operation of the engine-generator Set** - The permittee shall operate and maintain the engine-generator set (Ref. No. 1) 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)
8. **Fuel Specification** - The approved fuel for the engine-generator set (Ref. No. 1) shall be diesel fuel oil that meets the specifications below:
- DIESEL FUEL OIL:
- a. Does not exceed the American Society for Testing and Materials (ASTM) specification, D975, for 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 forty or maximum aromatic content of thirty-five 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)

- 9. **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 requirements of Condition 8 - Fuel Specification; and
  - e. The sulfur content of the diesel fuel.

Alternatively, the permittee shall obtain approval from the Regional Air Compliance Manager of the DEQ's Northern Regional Office (NRO), if other documentation will be used to certify the diesel fuel oil type. Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by the DEQ, may be used to determine compliance with the fuel specifications stipulated in Condition 8.  
(9 VAC 5-80-1180)

### **EMISSION LIMITS**

- 10. **Emission Limits Engine-generator set** - Emissions from the engine-generator set (Ref. No. 1) shall not exceed the limits specified below:

Nitrogen Oxides (as NO <sub>2</sub> )	48.07 lbs/hr	12.1 tons/yr
Carbon Monoxide (CO)	6.01 lbs/hr	1.5 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits.  
(9 VAC 5-80-1180)

- 11. **Visible Emission Limit** - Visible emissions from the engine-generator set (Ref. No. 1) shall not exceed five percent (5%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed ten percent (10%) opacity as determined by the

EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

During start-up and shut-down times, visible emissions from the generator (Ref. No. 1) shall not exceed ten percent (10%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed twenty percent (20%) opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).  
(9 VAC 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-50-80)

### **CONTINUING COMPLIANCE DETERMINATION**

12. **Stack Tests** - Upon request by the DEQ, the permittee shall conduct performance testing of the engine-generator set (Ref. No. 1) 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.  
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)
13. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct visible emission evaluations of the engine-generator set (Ref. No. 1) to demonstrate compliance with the visible emission limits contained in this permit. The details of the VEE shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO.  
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)
14. **Testing/Monitoring Ports** - The facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports shall be provided when requested by the DEQ (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)

### **RECORDS**

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 DEQs NRO. These records shall include, but are not limited to:
  - a. A monthly log of the monitoring device observations required by Condition 4. A monthly log shall be maintained to provide dates, engine run times, and the reason for operation as defined in Condition 5.
  - b. Annual hours of operation for the engine-generator set (Ref. No. 1) calculated monthly as the sum of each consecutive 12-month period.
  - c. All fuel supplier certifications per Condition 9.
  - d. All VEE, emission stack test reports for the emergency generator set.



- e. A copy of the maintenance schedule and records of scheduled and unscheduled maintenance in accordance with Condition 20.
- f. Operator training in accordance with Condition 20.
- g. Records of manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer.
- h. Records of changes in settings that are permitted by the manufacturer of the engine-generator set.

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

### **NOTIFICATIONS**

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

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

- a. The actual date on which construction of the engine-generator set (Ref. No. 1) commenced within 30 days after such date. The notification must include the following:
  - i. Date the construction commenced;
  - ii. Name and address of the permittee;
  - iii. The address of the affected source;
  - iv. Engine information including make, model, engine family, serial number, model year, maximum engine power and engine displacement;
  - v. Emission control equipment; and
  - vi. Fuel used.
- b. The anticipated start-up date of the engine-generator set (Ref. No. 1), postmarked not more than 60 days nor less than 30 days prior to such date.
- c. The actual start-up date of the engine-generator set (Ref. No. 1) within 15 days after such date. The actual start-up date shall be the date on which each engine completes manufacturer's trials, but shall be no later than 30 days after start-up for manufacturer's trials.

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

**GENERAL CONDITIONS**

17. **Permit Invalidation** - This permit to construct the engine-generator set (Ref. No. 1) shall become invalid, unless an extension is granted by the DEQ, if:
- a. A program of continuous construction, reconstruction, or modification is not commenced within the latest of the following:
    - i. Eighteen months from the date of this permit;
    - ii. Nine months from the date that the last permit or other authorization was issued from any other governmental entity;
    - iii. Nine months from the date of the last resolution of any litigation concerning any such permits or authorization; or
  - b. A program of construction, reconstruction, or modification is discontinued for a period of eighteen months or more, or is not completed within a reasonable time, except for a DEQ approved period between phases of a phased construction project.

(9 VAC 5-80-1210)

18. **Permit Suspension/Revocation** - The Board may suspend or revoke any permit if the permittee:
- a. Knowingly makes material misstatements in the permit application or any amendments to it;
  - b. Fails to comply with the terms or conditions of this permit;
  - c. Fails to comply with any emission standards applicable to 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 fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the implementation plan in effect at the time that an application is submitted; or
  - e. Fails to comply with the applicable provisions of 9 VAC 5-80-1100 et seq.

(9 VAC 5-80-1210 F and 9 VAC 5-80-1210 G)

19. **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)

20. **Maintenance/Operating Procedures** - At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility, including associated air pollution control equipment, in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Regional Air Compliance Manager of the DEQ's NRO, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to (Ref. No. 1):

- 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)

21. **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. The records shall be maintained in a form suitable for inspection and maintained for at least two years (unless a longer period is specified in the applicable emission standard) following the date of occurrence. 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)

22. **Notification for Facility or Control Equipment Malfunction** - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Regional Air Compliance Manager of the DEQ's NRO by facsimile transmission, telephone, email, or telegraph of such failure or malfunction and shall within two weeks provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. When the Condition causing the failure or malfunction has been corrected and the facility or control equipment is again in operation, the owner shall notify the Regional Air Compliance Manager of the DEQ's NRO.  
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

23. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Regional Air Compliance Manager of the DEQ's NRO in case of shutdown or bypassing, or both, of air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour. The intent to shut down or bypass such equipment shall be reported to the Regional Air Compliance Manager of the DEQ's NRO and local air pollution control agency, if any, at least twenty-four hours prior to the planned shutdown. Such prior notice shall include, but is not limited to the following information:

- a. Identification of air pollution control equipment to be taken out of service, as well as its location and registration number;
- b. The expected length of time that the air pollution control equipment will be out of service;
- c. The nature and quantity of emissions of air pollution likely to occur during the shutdown period; and
- d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B)

24. **Violation of Ambient Air Quality Standard** - Regardless of any other provision of this permit, the permittee shall, upon request of the DEQ, reduce the level of operation of the facility if the DEQ determines that is necessary to prevent a violation of any primary ambient air quality standard. Under worst case conditions, the DEQ may order that the permittee shut down the facility, if there is no other method of operation to avoid a violation of the ambient air quality standard. The DEQ reserves the right to prescribe the method of determining if a facility will cause such a violation. In such cases, the facility shall not be returned to operation until it and the associated air pollution control equipment are able to operate without violation of any primary ambient air quality standard.  
(9 VAC 5-20-180 I)

25. **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 of the change of ownership within thirty days of the transfer.  
(9 VAC 5-80-1240 B)
26. **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)