



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE

Douglas W. Domenech
Secretary of Natural Resources

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David K. Paylor
Director

Amy Thatcher Owens
Regional Director

October 25, 2013

Mr. James J. Chambers, Jr.
General Manager
DBT-DATA Cyber Integrated Center
1175 North Main Street
Harrisonburg, Virginia 22802-4630

Location: City of Harrisonburg
Registration No.: 81609
Plant ID No.: 51-660-0169

Dear Mr. Chambers:

Attached is an administrative amendment to your new source review permit dated September 4, 2008 as amended June 18, 2010 and September 1, 2010 to construct and operate emergency generators for a data center facility in accordance with the provisions of the Virginia Regulations for the Control and Abatement of Air Pollution. The permit has been changed to reflect the change in name and ownership. There are no other changes to the permit. This amended permit replaces your permit dated September 4, 2008 as amended June 18, 2010 and September 1, 2010. The permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and civil penalty. Please read all permit conditions carefully.

The Department of Environmental Quality (DEQ) deemed the application complete on September 27, 2013 and has determined that the application meets the requirements of 9 VAC 5-80-1270 A for an administrative amendment to a new source review permit.

This approval to construct and operate shall not relieve DBT-DATA Cyber Integrated Center 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 30 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.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of the decision by filing a Notice of Appeal with:

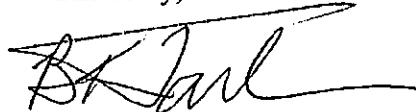
David K. Paylor, Director
Department of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218

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, at <http://www.courts.state.va.us/courts/scv/rules.html>, for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

Please be aware that the emergency generators are subject to 40 CFR 60, New Source Performance Standard (NSPS) Subpart IIII and 40 CFR 63, Maximum Achievable Control Technology (MACT) Subpart ZZZZ, therefore subject to owner/operator requirements of the NSPS and MACT. In summary, the units are required to comply with certain federal emission standards and operating limitations over its useful life. The DEQ advises you to review the attached NSPS and MACT to ensure compliance with the applicable emission and operational limitations. As the owner/operator you are responsible for monitoring, notification, reporting and recordkeeping requirements of the NSPS and MACT. Notifications shall be sent to EPA, Region III.

If you have any questions concerning this permit, please call Kelly Showalter at Kelly.Showalter@deq.virginia.gov or (540) 574-7843.

Sincerely,



B. Keith Fowler
Deputy Regional Director

Attachments: Permit
NSPS, Subpart IIII (via electronic file submission)
MACT, Subpart ZZZZ (via electronic file submission)

c: Glenn Diehl, Air Compliance Inspector Senior (via electronic file submission)



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

This permit replaces your permit dated September 4, 2008 as amended
June 18, 2010 and September 1, 2010

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

DBT-DATA Cyber Integrated Center
Registration No.: 81609
Plant ID No.: 51-660-0169

is authorized to construct and operate

emergency generators for a data center facility

located at

1175 North Main Street
Harrisonburg, Virginia

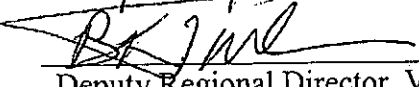
in accordance with the Conditions of this permit.

Approved on September 4, 2008

Amended on June 18, 2010

Amended on September 1, 2010

Amended on 10/24/13


Deputy Regional Director, Valley Region

Permit consists of 11 pages.
Permit Conditions 1 to 27.
Source Testing Report Format

INTRODUCTION

This permit approval is based on the permit application dated September 27, 2013, August 9, 2010, April 27, 2010 and April 1, 2008, including additional information dated April 10, 2008, amendment information dated May 13, 2008, and supplemental information dated July 23, 2008, July 24, 2008, and August 6, 2008. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action. In addition, this facility may be subject to additional applicable requirements not listed in this permit.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-20 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

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.

PROCESS REQUIREMENTS

1. **Equipment** – Equipment at this facility consists of the following:

Equipment to be Constructed		
Reference Nos.	Equipment Description	Rated Capacity
1 through 12	Caterpillar DM8266, Electric Power Generators	2500 kW each

(9 VAC 5-80-1180 D 3)

2. **Emissions Testing** – The permitted electric power generators (units 1 through 12) shall be installed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Sampling ports shall be provided when requested and safe sampling platforms and access shall be provided.

(9 VAC 5-50-30 F and 9 VAC 5-80-1180)

3. **Maintenance and Operation** – The permittee shall maintain and operate the electric power generators (units 1 through 12) according to the manufacturer's written instructions or procedures developed by the permittee that are approved by the manufacturer, over the entire life of the engine. In addition, the permittee may only change those settings that are approved by the manufacturer.
(9 VAC 5-80-1180)

OPERATING LIMITATIONS

4. **Emergency Generator Operation** – The operation of the electric power generators (units 1 through 12) is limited to emergency situations. Emergency situations include emergency generator use to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted. The electric power generators (units 1 through 12) may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The permittee may use the emergency generators (units 1 through 12) for additional hours to be used for maintenance checks and readiness testing, if the permittee maintains records indicating that Federal, State or local standards require maintenance and testing of the emergency generators (units 1 through 12) beyond 100 hours per year.
(9 VAC 5-80-1180)
5. **Monitoring Devices** – The permittee shall install a non-resettable hour meter on each electric power generator (units 1 through 12) prior to the startup of the generators. The hour meter shall be provided with adequate access for inspection.
(9 VAC 5-80-1180 D)
6. **Operating Hours** – Each electric power generator (units 1 through 12) shall be limited to 300 operational hours per year. Under no circumstance shall the combined operating total for all 12 generators (units 1 through 12) exceed 2680 hours per year.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
7. **Fuel** – The approved fuel for the electric power generators (units 1 through 12) is distillate oil. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
8. **Fuel Specifications** – The distillate oil to be burned in the electric power generators (units 1 through 12) shall meet the specifications below:

DISTILLATE OIL which meets ASTM D396, or a DEQ-approved equivalent method, for specifications for numbers 1 or 2 fuel oil:

Maximum sulfur content per shipment (prior to October 1, 2010): 0.05%
Maximum sulfur content per shipment (beginning October 1, 2010): 0.0015%

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

9. **Fuel Throughput** – The electric power generators (units 1 through 12) shall consume no more than the following quantity:

Approved Fuel Type	Quantity Allowed
Distillate Oil	464,444 gallons per year

Throughput of the fuel shall be calculated monthly as the sum of each consecutive 12-month period.

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

10. **Fuel Certification** – The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil to be burned in the generators (units 1 through 12). Each fuel supplier certification shall include the following:

- a. The name of the fuel supplier;
- b. The date on which the distillate oil was received;
- c. The quantity of distillate oil delivered in the shipment;
- d. A statement that the distillate oil complies with the American Society for Testing and Materials specifications (ASTM D396), or a DEQ-approved equivalent method, for numbers 1 or 2 fuel oil; and
- e. The sulfur content of the distillate oil, indicating compliance with Condition 8.

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

11. **Hourly Emission Limits** – Emissions from the operation of each of the 12 electric power generators (units 1 through 12) shall not exceed the limits specified below:

Nitrogen Oxides (as NO ₂)	48.11 lb/hr
Sulfur Dioxide	1.46 lb/hr
Carbon Monoxide	5.86 lb/hr
Volatile Organic Compounds	1.07 lb/hr

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

12. **Annual Emission Limits** – Total annual emissions from the operation of the 12 electric power generators (units 1 through 12) shall not exceed the limits specified below:

Particulate Matter (PM)	0.54 tons/yr
PM-10	0.54 tons/yr
Nitrogen Oxides (as NO ₂)	64.47 tons/yr
Sulfur Dioxide	1.95 tons/yr
Carbon Monoxide	7.85 tons/yr
Volatile Organic Compounds	1.43 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. Compliance with these emission limits may be determined as stated in Conditions 8 and 9.

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

13. **Emission Standard** – Emissions from the operation of each of the electric power generators (units 1 through 12) shall not exceed the limits specified below:

Emission Standard

Particulate Matter (PM)	0.54 g/kW-hr
Hydrocarbons (HC)	1.3 g/kW-hr

Nitrogen Oxides (NOx)	9.2 g/kW-hr
Carbon Monoxide (CO)	11.4 g/kW-hr

Compliance with these emission limits may be determined by ensuring the engine is installed and configured according to the manufacturer specifications.

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

14. **Visible Emission Limit** - Visible emissions from the 12 electric power generators (units 1 through 12) shall not exceed 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 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.
(9 VAC 5-80-1180 and 9 VAC 5-50-80)

INITIAL COMPLIANCE DETERMINATIONS

15. **Visible Emissions Evaluation** - Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted on one of the 12 electric power generators (units 1 through 12). Each test shall consist of 10 sets of 24 consecutive observations (at 15-second intervals) to yield a six-minute average. The details of the tests are to be arranged with the DEQ. The evaluation shall be performed and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. One copy of the test results shall be submitted to the DEQ, within 60 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

16. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations on each electric power generator to demonstrate compliance with the visible emission limit contained in this permit. The details of the tests shall be arranged with the DEQ.
(9 VAC 5-50-30 G)

RECORDS AND REPORTING

17. **On Site Records** - The permittee shall maintain records on 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 DEQ. These records shall include, but are not limited to:

- a. Annual throughput of distillate oil, in gallons, for the 12 electric power generators (units 1 through 12) 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 to verify compliance with the annual throughput limitations specified in Condition 9.
- b. Annual emissions calculations for the 12 electric power generators (units 1 through 12) using calculation methods approved by the DEQ. 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 to verify compliance with the annual emission limitations specified in Condition 12.
- c. Annual hours of operation of the 12 electric power generators (units 1 through 12) for emergency purposes, calculated for each individual generator and for the aggregate hours of the group. 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 total for the preceding 11 months.
- d. Annual hours of operation for each of the 12 electric power generators (units 1 through 12) for maintenance checks and readiness testing. 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 total for the preceding 11 months.
- e. Engine manufacturer data indicating compliance with the engine emission standards as specified in Condition 13.
- f. All fuel supplier certifications.
- g. Written operating procedures, scheduled and unscheduled maintenance and operator training, as required by Condition 22.
- h. Results of all visible emissions evaluations.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.

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

NOTIFICATIONS

18. **Initial Notifications** - The permittee shall furnish written notification to the DEQ of:

- a. The actual date on which construction of the data center facility's electric power generators commenced within 30 days after such date.
- b. The anticipated start-up date of the data center facility's electric power generators postmarked not more than 60 days nor less than 30 days prior to such date.
- c. The actual start-up date of the data center facility's electric power generators within 15 days after such date.
- d. The anticipated date of visible emissions evaluation of the electric power generators (units 1 through 12) postmarked at least 30 days prior to such date.

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

GENERAL CONDITIONS

19. **Permit Invalidation** – This permit to construct a data center facility's electric power generators (units 1 through 12) shall become invalid, unless an extension is granted by the DEQ, if:

- a. A program of continuous construction, is not commenced within the latest of the following:
 - i. March 4, 2010;
 - 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 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 a phased construction project.

(9 VAC 5-80-1210)

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 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 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 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 the electric power generators (units 1 through 12):

- 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.
(9 VAC 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 DEQ 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.
(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 DEQ of the change of ownership within 30 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)