NRO-095-09

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

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

April 28, 2009

Mr. Detlev Geuss
Director, Facility Operations
Equinix
21711 Filigree Court
Ashburn, Virginia 20147

Registration No.: 73199

Dear Mr. Geuss:

Attached is a permit to modify and operate seven diesel engine-driven generator sets in Building DC3, located at 44470 Chilum Place, Ashburn, Loudoun County, in accordance with the provisions of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution (Regulations). The permit modification allows the equipment to be used for alternate power generation (peak shaving) as well as for emergency power generation. Other permit changes reflect the facility name and ownership change and that only seven of the 31 diesel engine-driven generators in the previous permit were installed. Also, the federal New Source Performance Standards (NSPS), subpart Kb has been modified and is no longer applicable to your diesel fuel storage tanks. This amended permit supersedes your permit dated June 29, 2001.

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.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on January 19, 2009.

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

Event	Date	Initials
Code: Pmgr	4/28/2009	AK
Scanned		
QC		

The Board's Regulations 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 the regional office at 703.583.3800.

Sincerely,

Terry H. Darton
Regional Air Permit Manager

TAF/THD/AK/09095mnsr.doc

Attachments: Permit
Appendix A – (example Tables 1 and 2)
Source Testing Report Format

cc: Director, OAPP (electronic file submission)
Regional Air Compliance Manager (electronic file submission)

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L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

This permit supersedes your permit dated June 29, 2001.

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

Equinix
21711 Filigree Court
Ashburn, Virginia 20147

Registration No.: 73199

is authorized to modify and operate

Seven diesel engine-driven generators
(engine-generator sets)

located at

Equinix, Building DC3
44470 Chilum Place
Ashburn (Loudoun County), Virginia 20147

in accordance with the Conditions of this permit.

Approved on: April 28, 2009.

Thomas A. Faha,
Regional Director

Permit consists of 16 pages.
Permit Conditions 1 to 29.

INTRODUCTION

This permit approval is based on the permit application dated December 22, 2008, with the signed document certification form submitted on January 13, 2009. 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:

Equipment Constructed				
Reference No.	**Equipment Description**	**Rated Capacity**	**Add-On Control Technology**	**Federal Requirements**
GEN B1-A	Caterpillar model 3516B engine, SR-4B generator	2000 kilowatts (kW), and 2876 brake horsepower (bhp)	Closed Loop SCR	-

GEN B1-B	Caterpillar model 3516B engine, SR-4B generator	2000 kW, and 2876 bhp	Closed Loop SCR	-
GEN B1-C	Caterpillar model 3516B engine, SR-4B generator	2000 kW, and 2876 bhp	Closed Loop SCR	-
GEN B1-R	Caterpillar model 3516B engine, SR-4B generator	2000 kW, and 2876 bhp	Closed Loop SCR	-
GEN B1-D	Caterpillar model 3516B engine, SR-4B generator	2000 kW, and 2876 bhp	Closed Loop SCR	-
GEN B1-E	Caterpillar model 3516B engine, SR-4B generator	2000 kW, and 2876 bhp	Closed Loop SCR	-
GEN B1-L	Caterpillar model 3516B engine, SR-4B generator	2000 kW, and 2876 bhp	Closed Loop SCR	-

Equipment Exempt from Air Permitting

Reference No.	Equipment Description	Rated Capacity	Exemption Citation	Exemption Date
TANK1	Diesel fuel storage tank	25,000 gallons	9 VAC 5-80-1320 B.8; and 40 CFR 60.110b (b)	NSPS amended on 10/15/2003
TANK2	Diesel fuel storage tank	25,000 gallons	9 VAC 5-80-1320 B.8; and 40 CFR 60.110b (b)	NSPS amended on 10/15/2003

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

2. **Emission Controls** - Emissions from the engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) shall be controlled by the following:

   a. Nitrogen oxides (as NO_2) emissions from each engine-generator set shall be controlled by closed loop Selective Catalytic Reduction (SCR). Engine exhaust gas shall be treated with urea solution when the engine is operating at or above twenty percent load and the catalyst bed exhaust temperature of 570°F is achieved, except for periods of start-up, shutdown, or malfunction. In the event that engine exhaust gas temperature exceeds 896°F, urea solution injection shall be discontinued and any operations above that level will be considered a malfunction.

b. Sulfur Dioxide (SO_2) emissions from the engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) shall be controlled by the use of low sulfur diesel fuel oil with a sulfur content not to exceed 0.05% by weight.

c. Combustion and visible emissions from the diesel engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) shall be controlled by the use of good operating practices and performing maintenance in accordance with the manufacturer recommendations. In addition, the permittee may only change those settings that are permitted by the manufacturer and do not degrade the air emissions from the engines.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

3. **Monitoring** –

a. Engine Operating Hours: Each engine-generator set shall be equipped with a non-resettable hour meter which measures the duration of time that each engine is operated.

b. SCR Catalyst Bed Exhaust Temperature: The SCR system on each engine-generator set shall be equipped with a device to monitor and record the SCR catalyst bed exhaust temperature. Catalyst bed exhaust temperature shall be recorded at least once every fifteen minutes while the engine is operating.

c. NOx Concentration Level: The SCR system shall be equipped with a device to continuously measure and record the nitrogen oxides (NOx) concentration level (in ppm) measured after the SCR catalyst. The NOx concentration level shall be recorded at least once every fifteen minutes while the engine is operating. The concentration level shall be used by the facility as a SCR operating parameter, not as a means to demonstrate compliance.

d. Generator Load: Each generator shall be equipped with a device to monitor and record the generator kilowatt output, at least once every fifteen minutes during engine-generator set operation.

Each 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.

Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the engines are operating.
(9 VAC 5-80-1180 D, 9 VAC 5-50-20 C, and 9 VAC 5-50-260)

4. **Monitoring Device Observation** - To ensure good performance, the monitoring devices, used to continuously measure the information required in Condition 3, shall

be observed by the permittee before and after engine operation, during each test firing, and at a minimum frequency of once per day in which the engine-generator set is called into service.
(9 VAC 5-80-1180)

OPERATING LIMITATIONS

5. **Operating Scenarios for Diesel Engine Generator Sets -**

   a. Emergency / Critical Power Generation:

      i. Emergency: The engine-generator sets may be operated in situations where immediate action on the part of the facility is needed due to a failure or loss of electrical power service resulting from a failure of the primary power provider and the failure or loss of power service is beyond the reasonable control of the facility. Operation under these circumstances shall be allowed for the period of time the primary electrical power provider service is unavailable. Once primary electrical power provider service is available the engine-generator set(s) may be operated in accordance with Critical Power Generation as defined below.

      ii. Critical Power Generation: The engine-generator sets may be operated in situations where immediate action on the part of the facility is needed due to a loss or anticipated loss of acceptable electrical power service from the primary provider and the loss or anticipated loss of power service is beyond the reasonable control of the facility. Operation under these circumstances shall be allowed until such time as acceptable power provider service is restored or the loss of acceptable power provider service is no longer reasonably anticipated.

   b. Alternate Power Generation: Except as specified in subsection 5.c below, an engine-generator set may be operated voluntarily for the purposes of peak-shaving, demand response, or as part of an interruptible power supply arrangement with a power provider, other market participant, or system operator if the engine is equipped with a selective catalytic reduction system (SCR) that achieves the manufacturer's guaranteed maximum emission reductions based on fuel type. Operations, as outlined in this subsection, shall be allowed when the engine-generator set is operating at a load level necessary to sustain urea injection.

   c. The engine-generator sets may be operated for periodic maintenance, testing, and operational training.

Total emissions for any twelve month period, calculated as the sum of all emissions from operations under scenarios 5.a. through 5.c above, shall not exceed the limits stated in Condition 10.
(9 VAC 5-80-1180 D and 9 VAC 5-50-260)

6. **Operation of the engine-generator Set** - The permittee must operate and maintain each engine-generator set 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 do not degrade on air emissions.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

7. **Fuel Specification** - The approved fuel for the engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) is diesel fuel oil and shall meet the specifications below:

   DIESEL FUEL OIL:

   a. Does not exceed the American Society for Testing and Materials (ASTM) specification, D975, for grade low sulfur 2-D or grade 2-D S500; or,

   b. Has a maximum sulfur content not to exceed 0.05% by weight (500 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 the exceedance of emission limits. A change in the fuel type or the fuel sulfur content may require a permit to modify and operate.
   (9 VAC 5-80-1180 and 9 VAC 5-50-260)

8. **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; and

   b. The date on which the diesel fuel oil was received; and

   c. The quantity of diesel fuel oil delivered in the shipment; and

   d. A statement that the diesel fuel oil conforms to the requirements of the Condition 7 - Fuel Specification; or

   e. Alternatively, the permittee shall obtain approval from the Regional Air Compliance Manager of the DEQ's Northern Regional Office (NRO), at the address in Condition 18, 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 7. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
(9 VAC 5-80-1180)

EMISSION LIMITS

9. **Emission Limits: Engine-generator sets** - Hourly emissions from the operation of each engine-generator set (Ref. # GEN B1-A, B, C, R, D, E, L) shall not exceed the limits specified below:

Nitrogen Oxides (as NO_2)	41.16 lbs/hr	[without SCR operational]
	1.70lbs/hr	[with SCR operational]
Carbon Monoxide (CO)	4.01 lbs/hr	
Volatile Organic Compounds (VOC)	1.10 lbs/hr	
Sulfur Dioxide (SO_2)	1.16 lbs/hr	
Particulate Matter (PM_{10})	0.91 lbs/hr	

The hourly NOx emissions are derived from manufacturer's data (without SCR) and stack test data (with SCR) approved by DEQ, at maximum design capacity of the diesel engines. Compliance with the hourly emission limits may be based on testing, if required by DEQ.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

10. **Annual Engine-Generator Emission Limits** - Total emissions from all engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) shall not exceed the limits specified below:

Nitrogen Oxides (as NO_2)	14.62 tons/yr
Carbon Monoxide (CO)	8.42 tons/yr
Volatile Organic Compounds (VOC)	2.31 tons/yr
Sulfur Dioxide (SO_2)	1.91 tons/yr
Particulate Matter (PM10)	2.44 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Compliance with these emission limits shall be determined by calculation methods as stated in Condition 11 or other means acceptable to DEQ. (9 VAC 5-80-1180 and 9 VAC 5-50-260)

11. **Annual Emissions Calculations** – The total annual emissions of each regulated pollutant from the diesel engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) 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.

    a. Emissions Calculations: Monthly emissions for each pollutant shall be calculated using the following equation and the appropriate emission factors listed below:

    NOx = [(Total monthly hours of operation of the engine-generator sets without SCR x 41.16 lb/hr) + (Total monthly hours of operation of the engine-generator sets with SCR x 1.70 lb/hr)] ÷ 2000

    CO = (Total monthly hours of operation of the engine-generator sets x 4.01 lb/hr) ÷ 2000

    SO_2 = (Total monthly hours of operation of the engine-generator sets x 1.16 lb/hr) ÷ 2000

    VOC = (Total monthly hours of operation of the engine-generator sets x 1.10 lb/hr) ÷ 2000

    PM10 = (Total monthly hours of operation of the engine-generator sets x 0.91 lb/hr) ÷ 2000

    b. Emission Factors:

    Engine-generator emission factors:

NOx (as NO_2)	41.16 lbs/hr	without SCR
	1.70 lbs/hr	with SCR
CO	4.01 lbs/hr	
VOC	1.10 lbs/hr	
SO_2	1.16 lbs/hr	
PM_{10}	0.91 lbs/hr	

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

12. **Visible Emission Limit** - Visible emissions from the engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) 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.
(VAC 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-50-80)

CONTINUING COMPLIANCE DETERMINATION

13. **Continuing SCR Monitoring System Assessment** - Annually, the closed loop SCR monitoring system for each engine-generator set employed to monitor NOx (as NO_2) emissions shall be calibrated in accordance with the manufacturer's recommended procedures, using EPA Protocol 1 calibration gases.

    a. Calibrations shall be accurate to within five parts per million (ppm) of the sample gas.

    b. The permittee shall maintain on-site records of annual calibration testing, calibration gas certifications, and any corrective action that may have been taken.

    (9 VAC 5-80-1180)

14. **Continuing Compliance Demonstration: SCR** – The permittee shall contact the Regional Air Compliance Manager and the Regional Air Permit Manager of the DEQ's NRO (at the addressed listed in Condition 18) within thirty days following each change or regeneration of a catalyst in any SCR unit, to discuss the requirements of any supplemental compliance demonstration.
(9 VAC 5-50-30 and 9 VAC 5-80-1200)

15. **Stack Tests** - Upon request by the DEQ , the permittee shall conduct additional performance testing of the engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) 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 listed in Condition 18.
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)

16. **Visible Emissions Evaluation** - Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations of the engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) 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 at the address listed in Condition 18.
(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)

17. **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) in accordance with the requirements of EPA Reference Method 1 (ref. 40 CFR Part 60, Appendix A). In addition, safe sampling platforms and access shall be provided.
(9 VAC 5-50-30 F and 9 VAC 5-80-1180)

RECORDS AND NOTIFICATIONS

18. All correspondence concerning this permit should be submitted to the following address -

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

(9 VAC 5-50-50)

19. **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 listed in Condition 18.

These records shall include, but are not limited to:

a. A monthly log of the monitoring device data required by Condition 3. Data may be recorded as shown in Appendix A - Table 1 Monitoring Data, or other format as approved by DEQ.

b. Monthly Summary Table for each engine-generator set (Ref. # GEN B1-A, B, C, R, D, E, L) to include:

1. Month
2. Engine run hours without SCR operating.
3. Engine run hours with SCR operating.
4. Maximum, minimum, and average engine-generator load (kW).
5. Maximum, minimum, and average SCR catalyst exhaust bed temperature.
6. Maximum, minimum, and average NOx concentration level (in ppm), as measured by SCR continuous monitoring device.
7. Reasons for operation as defined in Condition 5.

Information may be recorded as shown in Appendix A – Table 2, or other format as approved by DEQ.

c. Monthly and annual emissions calculations for NO_X (as NO_2), CO, SO2, VOC, and PM10 from the engine-generator sets (Ref. # GEN B1-A, B, C, R, D, E, L) using the calculation methods in Condition 11 to verify compliance with the ton/yr emissions limitations in Condition 10.

d. Copies of Continuing Compliance Verification documentation for each engine-generator set, as required in Conditions 13 and 14.

e. All fuel supplier certifications per Condition 8.

f. All VEE, emission stack test reports for each engine-generator set that has been tested.

g. A copy of the maintenance schedule and records of scheduled and unscheduled maintenance in accordance with Condition 23.

h. Operator training in accordance with Condition 23.

i. 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. 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 the occurrence.

j. Records of the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer and the air pollution control device manufacturer.

k. Records of changes in settings that are permitted by the manufacturer of the engine-generator sets and the air pollution control device manufacturer.

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)

GENERAL CONDITIONS

20. **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:

i. 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.

ii. For a partnership or sole proprietorship, a responsible official is a general partner or the proprietor, respectively.

iii. 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, nor do the persons gathering the data and preparing 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 actions are taken to prepare a complete and accurate document.

d. Any person who fails to submit any relevant facts or who has submitted incorrect information in a document shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

(9 VAC 5-20-230)

21. **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)

22. **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)

23. **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 at the address listed in Condition 18, 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 air pollution control equipment, monitoring devices, 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)

24. **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)

25. **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 at the address listed in Condition 18 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 at the address listed in Condition 18.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

26. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Regional Air Compliance Manager of the DEQ's NRO (at the address listed in Condition 18) 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)

27. **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)

28. **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 listed in Condition 18 of the change of ownership within thirty days of the transfer.
(9 VAC 5-80-1240 B)

29. **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)

APPENDIX A TABLE 1 MONITORING DATA

Facility:
Registration No.
Date:

MONITORING DATA

Unit Ref # **Engine Run Time**

Date & Time	Run Time with SCR (minutes)	Run Time without SCR (minutes)	SCR Catalyst Bed Temperature (Degrees F)	DOC Catalyst Bed Temperature (Degrees F)	Engine Generator Load/Electrical Output (kW)	NOx Emission Rate (Expressed as NO2, lbs/hr)	Reason for Opera
1/1/2008 0:00							
1/1/2008 0:15							
1/1/2008 0:30							
1/1/2008 0:45							
1/1/2008 1:00							
1/1/2008 1:15							
1/1/2008 1:30							
1/1/2008 1:45							
1/1/2008 2:00							
1/1/2008 2:15							
1/1/2008 2:30							
1/1/2008 2:45							
ETC							

These are the Excel Worksheet Functions that allow the cell values to be transferred to the Monthly Summary Table. Cell ranges will require expansion

Total	=SUM(B3:B14)
Max	=MAX(B3:B14)
Min	=MIN(B4:B14)
Avg	=AVERAGE(B5:B14)

APPENDIX A TABLE 2 MONTHLY SUMMARY TABLE

This EXCEL spreadsheet may be obtained from DEQ.

Facility:
Registration No.
Date:

MONTHLY SUMMARY TABLE

2008 MONTHLY SUMMARY TABLE	January	February	March	April	May	June	July	August	ETC	Total
EG-1										
Engine Run Hours										
Engine Run Hours with SCR										
Engine Run Hours without SCR										
Total Engine Run Hours										
Rolling 12-month totals										
SCR Catalyst Bed Temperature (Degrees F)										
Minimum Catalyst Temperature										
Maximum Catalyst Temperature										
Average Catalyst Temperature										
DOC Catalyst Bed Temperature (Degrees F)										
Minimum Catalyst Temperature										
Maximum Catalyst Temperature										
Average Catalyst Temperature										
Engine Generator Electrical Output (kW)										
Minimum Load (>0)										
Maximum Load										
Average Load										
[NOx Emission Rate (Expressed as NO2, lbs/hr)] OR [Urea Injection Rate]										
Minimum Emission Rate										
Maximum Emission Rate										
Average Emission Rate										
Reason for Operation										

SOURCE TESTING REPORT FORMAT

Report Cover

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

Certification

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

Copy of approved test protocol

Summary

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

Source Operation

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

Test Results

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

Appendix

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

* Not applicable to visible emission evaluations