



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard, Virginia Beach, Virginia 23462
(757) 518-2000 Fax (757) 518-2009
www.deq.virginia.gov

David K. Paylor
Director

Maria R. Nold
Regional Director

Doug Domenech
Secretary of Natural Resources

January 31, 2013

Mr. Gregg W. Frostrom
Facilities Supervisor
NOAA Wallops CDA Station
35663 Chincoteague Road
Wallops Island, Virginia 23337

Location: Accomack County
Registration No.: 61610
AFS Id. No.: 51-001-00047

Dear Mr. Frostrom:

Attached is a new source review (NSR) permit to construct and operate four Caterpillar C-32 emergency generators in accordance with the provisions of the Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution.

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 December 14, 2012.

This permit approval to operate shall not relieve NOAA Wallops CDA Station 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 this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
PO Box 1105
Richmond, Virginia 23218-1105

If this permit was delivered to you by mail, three (3) 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.

It has been determined that the diesel engines used to power the emergency generators are affected units under 40 CFR 60, New Source Performance Standards (NSPS), Subpart IIII and 40 CFR 63, Maximum Achievable Control Technology (MACT), Subpart ZZZZ, and therefore are subject to the owner/operator requirements of the NSPS and the MACT. In summary, each unit is required to comply with certain federal emission standards and operating limitations over its useful life. The Department of Environmental Quality (DEQ) advises you and your staff to review both the NSPS and MACT to ensure compliance with applicable emission and operational limitations. As the owner/operator you are also responsible for monitoring, notification, reporting, performance testing, and recordkeeping requirements of the NSPS and the MACT. Notifications and results of the performance tests shall be sent to:

Associate Director
Office of Air Enforcement and Compliance Assistance (3AP20)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

If you have any questions concerning this permit, please contact the Tidewater Regional Office of the DEQ at (757) 518-2006.

Sincerely,



Troy D. Breathwaite
Regional Air Permits Manager

TBD/NDM/61610_002_13_NSRnew_NOAA Wallops CDA Station.docx

Attachments: Permit
NSPS, Subpart IIII
MACT, Subpart ZZZZ

Link for NSPS and MACT Regulations: MACT, Subpart ZZZZ

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=27d0dad4dd3d4c1969aad205b798e315&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl

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



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

5636 Southern Boulevard, Virginia Beach, Virginia 23462

(757) 518-2000 Fax (757) 518-2009

www.deq.virginia.gov

David K. Paylor
Director

Maria R. Nold
Regional Director

Doug Domenech
Secretary of Natural Resources

STATIONARY SOURCE PERMIT TO OPERATE
This permit includes designated equipment subject to
New Source Performance Standards (NSPS) and
National Emission Standards for Hazardous Air Pollutants
for Source Categories (MACT).

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

NOAA Wallops CDA Station
35663 Chincoteague Road
Wallops Island, Virginia 23337
Registration No.: 61610
AFS Id. No.: 51-001-00047

is authorized to operate

four stationary emergency generators

located at

35663 Chincoteague Road
Wallops Island, Virginia

in accordance with the Conditions of this permit.

Approved on: January 21, 2013

Maria R. Nold
Maria R. Nold

January 31, 2013
Signature Date

Permit consists of 8 pages.
Permit Conditions 1 to 23.

INTRODUCTION

1. This permit approval is based on the permit application dated October 26, 2012. 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 5-10-10 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

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

Equipment to be Constructed			
Reference No.	Equipment Description	Rated Capacity	Federal Requirements
GEN1	One (1) - Caterpillar C32 ATAAC Diesel Engine emergency generator, Manufacture date: 2012	1000 kW (1,474 BHP Diesel engine)	40 CFR Part 60, Subpart IIII 40 CFR Part 63, Subpart ZZZZ
GEN2	One (1) - Caterpillar C32 ATAAC Diesel Engine emergency generator, Manufacture date: 2012	1000 kW (1,474 BHP Diesel engine)	40 CFR Part 60, Subpart IIII 40 CFR Part 63, Subpart ZZZZ
GEN3	One (1) - Caterpillar C32 ATAAC Diesel Engine emergency generator, Manufacture date: 2012	1000 kW (1,474 BHP Diesel engine)	40 CFR Part 60, Subpart IIII 40 CFR Part 63, Subpart ZZZZ
GEN4	One (1) - Caterpillar C32 ATAAC Diesel Engine emergency generator, Manufacture date: 2012	1000 kW (1,474 BHP Diesel engine)	40 CFR Part 60, Subpart IIII 40 CFR Part 63, Subpart ZZZZ

Equipment to be Removed			
Reference No.	Equipment Description	Rated Capacity	Federal Requirements
	Three (3) - 2001 Caterpillar emergency generators	500 kW Diesel engine	40 CFR Part 63, Subpart ZZZZ

Equipment Exempted from Permit			
Reference No.	Equipment Description	Rated Capacity	Exemption Citation
NOOA Day Tank	One (1) - Day tank for diesel fuel oil storage	275 gallons	9 VAC 5-80-1320B
Boiler 1	One (1) - Burnham Boiler, V1110	2.3 MMBTU/HR	9 VAC 5-80-1320B
NOAA-1 NOAA-2	Two (2) Diesel UST Fuel Storage tanks	6,000 gallons each	9 VAC 5-80-1320B
NOAA-3 NOAA-4	Two (2) Con-Vault split tanks	250 gallons of gasoline and 250 gallons of diesel	9 VAC 5-80-1320B
NOAA-BT1 NOAA-BT2 NOAA-BT3 NOAA-BT4	Four (4) Diesel Fuel Storage tanks	7,200 gallons each	9 VAC 5-80-1320B

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)

- Emission Controls** – Visible emissions and nitrogen oxide (NO_x) emissions 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 does not increase air emissions.
 (9 VAC 5-80-1180 and 9 VAC 5-50-260)
- Monitoring Devices** – Each engine-generator set shall be equipped with a non-resettable hour meter to monitor the operating hours. The non-resettable hour meter used to continuously measure the hours of operation for each engine-generator 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/EMISSION LIMITATIONS

- Operation of the Engine-Generator Set** - The permittee shall operate and maintain each engine-generator set 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 (GEN1 – GEN4) shall only be operated in the following modes:
- a. 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.
 - b. For participation in an Independent System Operator's (ISO) Emergency Load Response Program (ELRP) during times of an ISO-declared emergency, as defined in the ISO's emergency operations manual. The permittee shall submit notification to the Regional Air Permit Manager of the DEQ's Tidewater Regional Office within thirty days of signing a contract to participate in the ELRP.
 - c. For periodic maintenance, testing, and operational training.

When changing from Emergency Power Generation to Non-Emergency (Alternate) Power Generation, the permittee shall submit appropriate documentation to the Department of Environmental Quality (DEQ), and receive DEQ approval for the change in the method of operation of the engine-generator set to ensure that the facility remains in compliance with the appropriate permitting requirements. 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 9.

(9 VAC 5-80-1180)

7. **Operating Hours** – Each engine-generator set (GEN1 – GEN4) 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 use in the engine-generator sets (GEN1 - GEN4) is diesel fuel oil. The diesel fuel shall meet the ASTM D975 specification for S15 diesel fuel oil with a maximum sulfur content per shipment of 0.0015%. A change in the fuel 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 was received;
 - c. The quantity of diesel fuel delivered in the shipment;
 - d. A statement that the diesel fuel oil complies with the American Society for Testing and Materials specification ASTM D975 for S15 diesel fuel oil; and
 - e. The sulfur content (in weight percentage) of the diesel fuel oil delivered in the shipment.

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

10. **Emergency Generator Emission Limits** - Emissions from the operation of the four engine-generator sets (GEN1 – GEN4) shall not exceed the limits specified below:

Particulate Matter (PM)	1.8 lbs/hr	0.4 tons/yr
PM-10	1.8 lbs/hr	0.4 tons/yr
Sulfur Dioxide	3.0 lbs/hr	0.8 tons/yr
Nitrogen Oxides (as NO ₂)	56.6 lbs/hr	14.2 tons/yr
Carbon Monoxide	30.7 lbs/hr	7.7 tons/yr
Volatile Organic Compounds	14.6 lbs/hr	3.6 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 6, 7, and 8.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

11. **Visible Emission Limit** - Visible emissions from the exhaust stack of each engine-generator set (GEN1 - GEN4) shall not exceed 10 percent (10%) opacity except during one (6-minute period in any one hour in which visible emissions shall not exceed 20 percent (20%) opacity as determined by the EPA Method 9 (Reference 40 CFR 60, Appendix A). This condition applies at all times except during start-up, shutdown, and malfunction of the equipment.
(9 VAC 5-80-1180)

INITIAL COMPLIANCE DETERMINATION

12. **Emission Testing** - The engine-generator sets (GEN1 - GEN4) shall be installed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes installation of the equipment such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing a stack or duct that is free from cyclonic flow. 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)

RECORDS

- 13. 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 DEQ Tidewater Regional Office. These records shall include, but are not limited to:
- a. Annual hours of operation for each engine-generator set (GEN1 - GEN4), 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.
 - b. All fuel supplier certifications.
 - c. Engine information including make, model, serial number, model year, maximum engine power (bhp), and engine displacement for each engine-generator set.
 - d. 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.
 - e. Records of the reasons for operation for each engine-generator set (GEN1 - GEN4), including, but not limited to, the date, cause of operation, cause of the emergency, the ISO-declared emergency notification, and the hours of operation.

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

- 14. Initial Notifications** - The permittee shall furnish written notification to the DEQ Tidewater Regional Office of:
- a. The actual date on which installation of the engine-generator sets (GEN1 - GEN4) commenced within 30 calendar days after such date.
 - b. The anticipated start-up date of the engine-generator sets (GEN1 - GEN4) postmarked not more than 60 calendar days nor less than 30 calendar days prior to such date.
 - c. The actual start-up date of the engine-generator sets (GEN1 - GEN4) within 15 calendar 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 thirty days after the initial start up for manufacturer's trials.

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

GENERAL CONDITIONS

15. **Permit Invalidation** – This permit to install and operate the engine-generator set (GEN1 - GEN4), 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 (18) months from the date of this permit;
 - ii. Nine (9) months from the date that the last permit or other authorization was issued from any other governmental entity;
 - iii. Nine (9) 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 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)
16. **Permit Suspension/Revocation** - This permit may be revoked 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 a permitted emissions unit;
 - d. Causes emissions from this stationary emission source which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
 - e. Fails to operate this stationary emission source in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time that an application for this permit is submitted; or
 - f. Fails to comply with the applicable provisions of Articles 6, 8, and 9 of 9 VAC 5 Chapter 80.
(9 VAC 5-80-1210 F)
17. **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 engine-generator sets are 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)

18. **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 stationary emission source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.
(9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)
19. **Record of Malfunctions** - The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown, or failure of the engine-generator sets equipment that results in excess emissions for more than one (1) 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)
20. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the DEQ Tidewater Regional Office of malfunctions of the engine-generator sets equipment that may cause excess emissions for more than one (1) hour, by facsimile transmission, telephone, or electronic mail (e-mail). Such notification shall be made as soon as practicable but no later than four (4) 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 (2) calendar 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 Tidewater Regional Office in writing of such.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)
21. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a stationary emission source, 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)
22. **Change of Ownership** - In the case of a transfer of ownership of a stationary emission source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the DEQ Tidewater Regional Office (Air Permits Manager) of the change of ownership within 30 calendar days of the transfer.
(9 VAC 5-80-1240)
23. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which the engine-generator sets operate.
(9 VAC 5-80-1180)