COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Warrenton Training Center, Station B
Warrenton, Virginia
Permit No. NRO - 40902

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Warrenton Training Center, Station B has applied for a Title V Operating Permit for its Warrenton facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: April 6, 2016
Jonathan Carney
(703) 583-3863

Air Permit Manager: _____ Date: 4/8/2016
James B. LaFratta

Regional Director: _____ Date: 4-11-16
Thomas A. Faha

FACILITY INFORMATION

Permittee
U.S. Army/U.S. Department of Defense
Warrenton Training Center-Station B
P.O. Box 700
Warrenton, VA 20186

Facility
Warrenton Training Center, Station B
7471 Bear Wallow Rd
Warrenton, VA 20186
(Fauquier County)

County-Plant Identification Number: 51- 061-00072

SOURCE DESCRIPTION

NAICS Code: 928110 – Military training

Warrenton Training Center – Station B is a military communications training center. The center operates fuel burning equipment such as emergency and non-emergency diesel engine generators, fuel oil fired boilers and various insignificant emissions units. Nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide, and particulate matter (PM) are emitted from the fuel burning equipment.

The facility is a Title V major source for NO_x (as NO_2) emissions. This source is located in Fauquier County, an attainment area for all criteria pollutants, and is a PSD minor source. A limited number of the emission units were permitted as part of a State Operating Permit issued June 25, 2002. The majority of the equipment has been permitted as separate projects from 2007 through 2015. The permit requirements of all the affected emission units have been combined with the permit approval of the facility's most recent project with permit document issued October 5, 2015, which is provided as Attachment A.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was most recently conducted on August 29, 2012. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following :

Fuel Burning Equipment							
Emission Unit ID (Year of Manufacture)	**Stack ID**	**Emission Unit Description**	**Size/Rated Capacity***	**Pollution Control Device (PCD) Description**	**PCD ID**	**Pollutant Controlled**	**Applicable Permit Date**
EG-POD1 (2013)	EU01	Caterpillar 3516C diesel engine generator set	2,000 ekW (2,937 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-POD2 (2013)	EU02	Caterpillar 3516C diesel engine generator set	2,000 ekW (2,937 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-POD3 (2015)	EU03	Caterpillar 3516C diesel engine generator set	2,000 ekW (2,937 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-POD4 (2013)	EU04	Caterpillar 3516C diesel engine generator set	2,500 ekW (3,634 hp) Output	--	--	--	10/5/2015 NSR Permit
EG-POD5 2015	EU40	Caterpillar 3516C diesel engine generator set	2,000 ekW (2,937 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-10 (2010)	EU05	Cummins 12GSAA-6707C propane engine generator set	12 ekW (14 bhp) Output	--	--	--	10/5/2015 NSR Permit

Fuel Burning Equipment							
Emission Unit ID (Year of Manufacture)	**Stack ID**	**Emission Unit Description**	**Size/Rated Capacity***	**Pollution Control Device (PCD) Description**	**PCD ID**	**Pollutant Controlled**	**Applicable Permit Date**
EG-11F (2010)	EU06	Caterpillar 3516C diesel engine generator set	2,000 ekW (2,937 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-25 (2004)	EU07	John Deere 6068TF250F/258 diesel engine generator set	105 ekW (190 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-36A (2007)	EU08	Cummins 4BTA3.9-G5 diesel engine generator set	35 ekW (99 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-36B (2008)	EU09	Caterpillar D40-3054C diesel engine generator set	40 ekW (72 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-36C (2004)	EU10	Cummins B3/3G1 diesel engine generator set	42 ekW (56 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-42 (2004)	EU11	Volvo D250 9.6A60 diesel engine generator set	260 ekW (394 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-47A (1978)	EU12	Detroit Diesel 10337005 diesel engine generator set	50 ekW (67 bhp) Output	--	--	--	10/5/2015 NSR Permit

Fuel Burning Equipment							
Emission Unit ID (Year of Manufacture)	**Stack ID**	**Emission Unit Description**	**Size/Rated Capacity***	**Pollution Control Device (PCD) Description**	**PCD ID**	**Pollutant Controlled**	**Applicable Permit Date**
EG-47B (2013)	EU13	**KOMATSU SA6D170AE-1 diesel engine generator set	598ekW (799 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-51A (2007)	EU14	Kubota D1703 diesel engine generator set	15 ekW (27 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-51B (2003)	EU15	Volvo D250 9.6A60 diesel engine generator set	260 ekW (394 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-52A (1987)	EU16	Cummins 6BT-5.9diesel engine generator set	80 ekW (134 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-52B (2005)	EU17	Cummins QSX150G9 diesel engine generator set	400 ekW (755 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-52C (2014)	EU18	Cummins QSX150G9 diesel engine generator set	450 ekW (755 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-52D (2014)	EU19	Cummins QSX150G9 diesel engine generator set	450 ekW (755 bhp) Output	--	--	--	10/5/2015 NSR Permit

Fuel Burning Equipment							
Emission Unit ID (Year of Manufacture)	**Stack ID**	**Emission Unit Description**	**Size/Rated Capacity***	**Pollution Control Device (PCD) Description**	**PCD ID**	**Pollutant Controlled**	**Applicable Permit Date**
EG-52E (2014)	EU20	Cummins QSX150G9 diesel engine **generator set**	450 ekW (755 bhp) **Output**	--	--	--	10/5/2015 NSR Permit
EG-53 (1998)	**EU21**	Perkins YB 50495*U705505 D diesel engine generator set	90 ekW (121 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-60 (pre-2006)	**EU22**	**Detroit Diesel** 10337005 diesel engine generator set	**50 kW** (109 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-1 (2005)	EU23	**Caterpillar** 3516B diesel engine generator set	1,825 ekW (2,636 bhp) **Output**	--	--	--	10/5/2015 NSR Permit
Gen-2 (2005)	**EU24**	Caterpillar 3516B diesel engine generator set	1,825 ekW (2,636 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-3 (2005)	**EU25**	**Caterpillar** 3516B diesel engine generator set	**1,825 ekW** (2,636 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-4 (2005)	EU26	Caterpillar 3516B diesel engine generator set	1,825 ekW (2,636 bhp) **Output**	--	--	--	10/5/2015 NSR Permit

Fuel Burning Equipment							
Emission Unit ID (Year of Manufacture)	**Stack ID**	**Emission Unit Description**	**Size/Rated Capacity***	**Pollution Control Device (PCD) Description**	**PCD ID**	**Pollutant Controlled**	**Applicable Permit Date**
Gen-5 (2005)	EU27	Caterpillar 3516B diesel engine generator set	1,825 ekW (2,636 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-6 (2005)	EU28	Caterpillar 3516B diesel engine generator set	1,825 ekW (2,636 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-7 (2010)	EU29	Caterpillar 3516C diesel engine generator set	1,825 ekW (2,690 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-8 (2010)	EU30	Caterpillar 3516C diesel engine generator set	1,825 ekW (2,690 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-9 (2010)	EU31	Caterpillar 3516C diesel engine generator set	1,825 ekW (2,690 bhp) Output	--	--	--	10/5/2015 NSR Permit
Gen-10 (2010)	EU32	Caterpillar 3516C diesel engine generator set	1,825 ekW (2,690 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-70K (2005)	EU33	Caterpillar 3406 diesel engine generator set	350 ekW (519 bhp) Output	--	--	--	10/5/2015 NSR Permit

Fuel Burning Equipment							
Emission Unit ID (Year of Manufacture)	**Stack ID**	**Emission Unit Description**	**Size/Rated Capacity***	**Pollution Control Device (PCD) Description**	**PCD ID**	**Pollutant Controlled**	**Applicable Permit Date**
EG-80 (Aug. 2006)	EU34	John Deere 4045HF275H diesel engine generator set	100 ekW (157 bhp) Output	--	--	--	10/5/2015 NSR Permit
EG-89 (2010)	EU35	Caterpillar C4.4 diesel engine generator set	72 ekW (90 bhp) Output	--	--	--	10/5/2015 NSR Permit
BOIL-1		Burnham boiler fuel oil fired	1.010 MMBtu/hr (input)	--	--	--	None
BOIL-9		Burnham boiler fuel oil fired	0.808 MMBtu/hr (input)	--	--	--	None
BOIL-11		Bunham boiler fuel oil fired	0.505 MMBtu/hr (input)	--	--	--	None
BOIL-25A		Hydrotherm boiler fuel oil fired	0.231 MMBtu/hr (input)	--	--	--	None
BOIL-25B		Hydrotherm boiler fuel oil fired	0.231 MMBtu/hr (input)	--	--	--	None
BOIL-25C		Hydrotherm boiler fuel oil fired	0.231 MMBtu/hr (input)	--	--	--	None

Fuel Burning Equipment							
Emission Unit ID (Year of Manufacture)	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
BOIL-25D		Hydrotherm boiler fuel oil fired	0.231 MMBtu/hr (input)	--	--	--	None
BOIL-25E		Hydrotherm boiler fuel oil fired	0.231 MMBtu/hr (input)	--	--	--	None
BOIL-25F		Hydrotherm boiler fuel oil fired	0.231 MMBtu/hr (input)	--	--	--	None
BOIL-35A (2009)	EU36	Burnham V1108 #2 fuel oil fired hot water heater	1.820 MMBtu/hr (input)	--	--	--	None
BOIL-40		Weil-Mclain boiler fuel oil fired	0.115 MMBtu/hr (input)	--	--	--	None
BOIL-46A		Burnham boiler fuel oil fired.	0.770 MMBtur/hr (input)	--	--	--	None
BOIL-51A		Triad boiler fuel oil fired	0.700 MMBtu/hr (input)	--	--	--	None
BOIL-51B		Triad boiler fuel oil fired	0.700 MMBtu/hr (input)	--	--	--	None

Fuel Burning Equipment							
Emission Unit ID (Year of Manufacture)	**Stack ID**	**Emission Unit Description**	**Size/Rated Capacity***	**Pollution Control Device (PCD) Description**	**PCD ID**	**Pollutant Controlled**	**Applicable Permit Date**
BOIL-52A		Triad boiler fuel oil fired	0.700 MMBtu/hr (input)	--	--	--	None
BOIL-52B		Triad boiler fuel oil fired	0.700 MMBtu/hr (input)	--	--	--	None
BOIL-63A		Burnham boiler fuel oil fired	1.063 MMBtu/hr (input)	--	--	--	None
BOIL-63B		Burnham boiler fuel oil fired	1.063 MMBtu/hr (input)	--	--	--	None
BOIL-64		Burnham boiler fuel oil fired	0.871 MMBtu/hr (input)	--	--	--	None

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

**EG-47B is listed as a Volvo in the NSR permit. This needs to be changed to the KOMATSU description whenever a change to the NSR is requested in the future.

EMISSIONS INVENTORY

A copy of the 2014 annual emission update is provided as Attachment B. Emissions are summarized in the following tables.

2014 Criteria Pollutant Emission

	2014 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM_{10}	NO_x
EG-89	0.005	0.014	0.004	0.005	0.065
Gen-36A	0.001	0.001	0.000	0.000	0.007
Gen-36B	0.001	0.002	0.001	0.001	0.008
Gen-36C	0.001	0.002	0.000	0.001	0.008
EG-42	0.000	0.000	0.000	0.000	0.000
EG-47B	0.005	0.013	0.004	0.004	0.062
EG-51A	0.000	0.001	0.000	0.000	0.004
EG-51B	0.028	0.076	0.023	0.025	0.351
EG-52B	0.017	0.045	0.014	0.015	0.207
EG-80	0.008	0.022	0.007	0.007	0.104
EG-25	0.008	0.021	0.007	0.007	0.099
EG-47A	0.001	0.002	0.001	0.001	0.011
EG-52A	0.003	0.007	0.002	0.002	0.032
EG-53	0.008	0.022	0.007	0.007	0.100
EG-60	0.003	0.009	0.003	0.003	0.043
EG-70K	0.006	0.016	0.005	0.005	0.072
EG-10	0.000	0.000	0.000	0.000	0.000
Boilers/HWH /Furnaces	0.028	0.409	0.017	0.270	1.635

	2014 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM_{10}	NO_x
Gen1-Gen10	1.026	2.736	0.021	0.410	22.982
EG-11F	0.022	0.058	0.000	0.009	0.564
EG-POD4	0.000	0.000	0.000	0.000	0.000
EG-POD1 through EG-POD3	0.038	0.148	0.038	0.013	1.647
EG-52C through EG-52E	0.080	0.027	0.000	0.006	0.164
Total	1.29	3.63	0.117	.791	28.17

EMISSION UNIT APPLICABLE REQUIREMENTS – [EG-POD 1 through EG-POD5, EG-10, EG-11F, EG-25, Gen-36A, Gen-36B, Gen-36C, EG-42, EG-47A, EG47B, EG-51A, EG-51B, EG-52A through EG-52E, EG-53, EG-60, Gen 1 through Gen10, EG-70K, EG-80, EG-89, BOIL-35A]

Limitations

The basis for the following requirements are the minor NSR permit issued October 5, 2015 and 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ, and 40 CFR 63 Subpart JJJJJJ.

Title V
Condition #

1. Visible emissions and criteria pollutant emission from all engine-generators are to be controlled by good operating practices and maintenance.

   c. Gen 7 through Gen 10 are to be equipped with fuel injection, a turbocharger, and aftercooler.

   d-f. EG-POD5 is equipped with an SCR Retrofit emission control unit. This unit includes closed loop Selective Catalytic Reduction (SCR), direct oxidation catalyst (DOC), and diesel particulate filter (DPF). Conditions 1.d-f include the operating parameters for these devices.

2. Engine generator operation and maintenance requirements. (9 VAC 5-80-1180 D, 40 CFR §60.4211(a)(1)(2), 40 CFR §63.6625, 40 CFR §63.6640(a) and Condition 3 of May 13, 2015 NSR permit)

3. This is the fuel requirement for all of the diesel engine generators. This requirement covers

the fuel requirements in 40 CFR 60 Subpart IIII and 40 CFR 63 Subpart ZZZZ. The ASTM requirement (Condition 8 a. of the May 13, 2015 NSR permit) was removed since the aforementioned subparts specifically identify the requirements in part b. of Condition 8 of the May 13, 2015 NSR permit.

4. Documentation requirement necessary to prove that fuel meets the requirements in Condition 9.

5. This condition includes various operational hour limits as have been proposed by the permittee.

6. Emergency EGs listed may only be operated in the modes described in this condition. Streamlined into Condition 6 is 40 CFR §60.4211(f). Condition 5 of the NSR permit is more stringent than 40 CFR §60.4211(f) in that Condition 5 of the NSR Permit does not allow operation of the engine generators for 50 hours of non-emergency use.

7. Non-emergency EG (Ref. Nos. Gen 1 through Gen 10) shall be operated in the modes described in this condition which included emergency modes and non-emergency, storm avoidance, modes.

8. Short term hourly emission limits for the diesel engine generators based on manufacturer emission data.

9. Annual emission limits in this condition are based on the maximum hourly emission rates and the allowable operating hours.

10. This condition includes the equation that is required to be used to calculate the annual emissions of NO_x, CO, VOC, PM_{10}, $PM_{2.5}$ and SO_2.

11. This condition establishes visible emissions limitations for specified engine generators in accordance with BACT.

12. This condition establishes visible emissions limitations for specified engine generators in accordance with BACT.

13. EG-10 is a spark ignition propane fueled engine generator. As such, certain requirements of 40 CFR 60 Subpart JJJJ apply to EG-10 as in Condition 13. Condition 13 requires EG-10 to be in compliance with emission standards in 40 CFR §60.4231(a) of Subpart JJJJ.

14. Defines how long EG-10 must meet the emission standards in Condition 13.

15. Emissions certification, operation, and maintenance requirements for EG-10.

16. Limitations in 40 CFR 60 Subpart IIII that apply to EG-80. Table 1 of 40 CFR 60.4205 applies because EG-80 has a displacement of less than 10 liters per cylinder.

17. 40 CFR 60 Subpart IIII requirements that apply to EG-80.

18. Methods by which compliance with 40 CFR 60 Subpart IIII requirements, as they apply to

EG-80, can be demonstrated. (Note: The engine-generator EG-80 was manufactured in a month and year that was a transition period from engines that are not subject to 40 CFR 60 Subpart IIII to engines that are subject to 40 CFR 60 Subpart IIII. This is why EG-80 has some additional Subpart IIII requirements.)

19. Gen-36C is a non-emergency engine generator and is subject to 40 CFR 63 Subpart ZZZZ. Condition 27 of this permit lists operation and maintenance requirements for Gen-36C in accordance with 40 CFR 63 Subpart ZZZZ.

    NOTE: Gen 1 thru Gen 6 may be defined as emergency generators in accordance with 40 CFR 63 Subpart ZZZZ given that they are limited to 50 hours of non-emergency use for storm avoidance. Subpart ZZZZ shall be applicable to Gen 1 through Gen 6 on the basis that these six (6) generators are emergency generators as defined in 40 CFR 63 Subpart ZZZZ.

20. Condition 20 requires certain scheduled maintenance procedures.

21. Requirement to minimize time that Gen 1 through Gen 6 spend at idle during start-up from 40 CFR 63 Subpart ZZZZ.

22. Emissions standards from 40 CFR 60 Subpart IIII as applicable to non-emergency engine generators Gen-7 through Gen-10, Gen-36A, and Gen-36B.

23. Emissions standards from 40 CFR 60 Subpart IIII as applicable to emergency engine generators EG-POD1, EG-POD2, EG-POD3, EG-POD4, EG-POD5, EG-11F, EG-52C, EG-52D, EG-52E, EG-47B, EG-51A, and EG-89.

24. From 40 CFR 60 Subpart IIII, Condition 24 defines how long the emission standards in Conditions 22 and 23 must be met.

25. 40 CFR 60 Subpart IIII compliance requirements as applicable to Gen-7 through Gen-10, EG-POD 1 through EG-POD5, EG-11F, Gen-36A, Gen-36B, EG-47B, EG-51A, EG-52C through EG-52E, and EG-89.

26. Performance tune-up and notification requirement from 40 CFR 63 Subpart JJJJJJ as applicable to boiler BOIL-35A.

27. Requirement from 40 CFR 63 Subpart JJJJJJ to conduct a performance tune-up of BOIL-35A every 5 years.

28. Tune-up requirements from 40 CFR 63 Subpart JJJJJJ for BOIL-35A.

Monitoring

Reasonable assurance of compliance with visible emission limits for the engine-generators is achieved through operation and maintenance procedures that are performed according to manufacturer recommendations. Demonstration of such compliance is accomplished through the keeping of operator training records and maintenance records.

Reasonable assurance of compliance with SO_2 emission limits for the engine-generators is achieved through the use of ultra low sulfur diesel fuel. Demonstration of such compliance is accomplished through recordkeeping of fuel certification records that show concentration of sulfur in the fuel used in the engine-generators.

Reasonable assurance of compliance with annual emission limits of the engine-generators is achieved through tracking of operational hours in a log book for engine-generators not equipped with a non-resettable hour meter or from readings of non-resettable hour meters for engine-generators that are equipped with non-resettable hour meters. Demonstration of such compliance is accomplished through recordkeeping of operating hours.

Reasonable assurance of compliance with the controlled limits of EG-POD5 are achieved through the monitoring and recordkeeping of the NO_x inlet and outlet concentrations of the SCR, the catalyst bed temperatures of the SCR and DOC, and the backpressure of the DPF. Additional assurance of compliance is achieved by initial performance testing requirements.

Title V
Condition #

29. Engine-generators, Ref. Nos. EG-POD 1 through EG-POD 5, EG-11F, EG-52 C through EG-52 E, Gen1 through Gen10, EG-70K, EG-80, Gen-36A, Gen-36B, EG-47B, EG-51A, EG-89 are to be equipped with non-resettable hour meters. This requirement meets the requirements of 40 CFR §60.4209(a) and §63.6625(f).

30. Monitoring device installation, calibration and maintenance requirements.

31. Monitoring requirements for engine generators not equipped with hour meters.

32. Monitoring requirements for EG-POD 5 SCR.

33. Monitoring requirements for EG-POD 5 DOC.

34. Monitoring requirements for EG-POD 5 DPF.

35. Initial performance testing requirements for EG-POD 5 operating with SCR retrofit system.

36. Visible emission evaluation requirements for EG-POD 5.

Testing

Title V
Condition #

37. Testing/monitoring ports requirements.

38. Performance testing and/or visible emission evaluations can be required by DEQ upon request.

Recordkeeping

Title V
Condition #

39. 40 CFR 60 Subpart IIII special recordkeeping requirements.

40. All engine generator sets recordkeeping requirements. This includes requirements for specific engine generator sets (e.g. EG-10) from specific subparts of the air regulations such as 40 CFR 63 Subpart ZZZZ.

41. BOIL-35A recordkeeping requirements.

Reporting

Title V
Condition #

42. Reporting requirements from 40 CFR 63 Subpart ZZZZ as applicable to Gen 1 through Gen 6.

43. Engine-generator sets annual reporting requirements.

44. Boiler 5-year compliance report requirement.

45. General provisions in 40 CFR 60 Subpart JJJJ that apply to EG-10.

46. General Provision in 40 CFR 60 Subpart IIII that apply to EG-80.

47. General requirements from 40 CFR 63 Subpart ZZZZ.

48. General Provisions from 40 CFR 63 Subpart ZZZZ as applicable to Gen-36C.

49. 40 CFR 60 Subpart IIII general provisions.

50. General Provisions from 40 CFR 63 Subpart JJJJJJ as applicable to BOIL-35A.

51. General Provisions from 40 CFR 63 Subpart JJJJJJ Table 8 as applicable to BOIL-35A.

NOTE:The boiler list in the application was changed during the review process. By telephone and follow-up e-mail from the source's consultant, the boiler identifications and fuel types were changed.

After these changes, it appears that 40 CFR 63 Subpart JJJJJJ applies to BOIL-35A. This boiler is fuel oil fired and has a heat input capacity of 1.827 MMBtu/hr.

All other fuel oil fired boilers at the facility have heat inputs less than 1.6 MMBtu/hr and are

therefore considered hot water heaters by definition and are therefore not subject to 40 CFR 63 Subpart JJJJJJ.

BOIL-41A, BOIL-41B, and BOIL-35B are exempt from JJJJJJ. BOIL-41A and BOIL-41B are propane gas fired boilers and BOIL-35B is powered by electricity.

Facility Wide Conditions

Title V
Condition #

52. Correspondence address.

53. Maintenance and operating procedures that include operator training.

54. Record of malfunction requirement.

55. Notification of malfunction requirement.

56. DEQ may request a facility to reduce its level of operation or shut down to avoid violating any primary ambient air quality standard.

57. Insignificant emissions units are units that are not included in the permit application, are insignificant due to emission levels, or are insignificant due to size or production rate.

Permit Shield & Inapplicable Requirements

58. Permit shield deems compliance with all of the permit conditions to be compliance with all applicable requirements in effect as of the permit issuance date.

    40 CFR 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units – This subpart applies to each steam generating unit that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr. The maximum design heat input capacity of each of the boilers located at Warrenton Training Center is less than 10 MMBtu/hr and therefore 40 CFR 60 Subpart Dc does not apply.

    40 CFR 64 Compliance Assurance Monitoring (CAM) – CAM is not applicable to the facility. The facility does not have any emissions units that meet all three of the CAM applicability criteria. None of the emission units have a potential to emit any regulated pollutant that exceeds major source thresholds.

General Conditions

Title V
Condition #

59. **Federal Enforceability -** The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upset conditions, within one business day.

60. **Permit Expiration -** This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 2-09".

    This general condition cite(s) the Article(s) that follow(s):
    Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

    This general condition cites the sections that follow:
    9 VAC 5-80-80. Application
    9 VAC 5-80-140. Permit Shield
    9 VAC 5-80-150. Action on Permit Applications

61. **Recordkeeping and Reporting** – general recordkeeping requirements

62. **Annual Compliance Certification** – annual calendar year compliance certification reporting requirements.

63. **Permit Deviation Reporting** – requirements to report to the Air Compliance Manager any deviation from permit requirements which may cause excess emissions for more than one hour.

64. **Failure/Malfunction Reporting –** Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

    This general condition cites the sections that follow:

    9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
    9 VAC 5-40-50. Notification, Records and Reporting
    9 VAC 5-50-50. Notification, Records and Reporting

    This general condition contains a citation from the Code of Federal Regulations as follows:
    40 CFR 60.13 (h). Monitoring Requirements.

65. **Severability** – This conditions explains that if any portion of the permit is held invalid or inapplicable that the invalidity or inapplicability does not affect the remaining portions of the permit.

68. **Permit Modification** – This general condition cites the sections that follow:
9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

70. **Duty to Submit Information** – The permittee is required to provide at the Board's request information to determine if the cause exists for permitting action and/or compliance determination. Records required to be kept by the permit

71. **Duty to Pay Permit Fees** – The permittee is required to pay fees as required by this condition.

72. **Fugitive Dust Emission Standards** – Requirement to control fugitive dust emissions.

79. **Malfunction as an Affirmative Defense** – The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition 79 and General Condition 64. For further explanation see the comments on general condition 64.

[This general condition cites the sections that follow:
9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-110. Permit Content]

83. **Asbestos Requirements** – The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

[This general condition contains a citation from the Code of Federal Regulations that follow:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart **M.** National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart **M.** National Emissions Standards for Asbestos as it applies to waste disposal.]

[This general condition cites the regulatory sections that follow:
9 VAC 5-60-70. Designated Emissions Standards
9 VAC 5-80-110. Permit Content]

Streamlined Requirements

Condition 2 streamlines maintenance requirements from 40 CFR 63 Subpart ZZZZ and the New Source Review permit.

Condition 3 streamlines the fuel requirements from 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ and the New Source Review permit for all of the engine generators.

Condition 29 streamlines the hour meter requirement of 40 CFR 60 Subpart IIII, 40 CFR 63 Subpart ZZZZ and the New Source Review permit for all of the engine generators.

57. **Insignificant Emission Units –** are listed for informational purposes to show that these units were given consideration in the permitting process but were found to be insignificant contributors to air pollution. The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

    Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant(s) Emitted (9 VAC 5-80-720B)	Rated Capacity (MMBtu/hr) (9 VAC 5-80-720C)
BOIL-41#1	Viessmann Vitocrossal 200 Propane fired hot water heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	2.576

Emission Unit No.	Emission Unit **Description**	Citation[1] (9 VAC_)	Pollutant(s) Emitted **(9 VAC 5-80-720B)**	**Rated Capacity (MMBtu/hr)** (9 VAC 5-80-720C)
BOIL-41#2 (2014)	Fulton ICS_10 Propane fired hot water heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.420
H-9A	Fuel oil fired AAON rooftop space heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.194
H-9B	Fuel oil fired AAON rooftop space heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.194
F-36	Fuel oil fired Armstrong furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.350
H-46A	Fuel oil fired PVi hot water heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.199
H-46B	Fuel oil fired PVi hot water heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.199
F-48A	Fuel oil fired Carrier furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.085
F-48B	Fuel oil fired Carrier furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.085
F-48C	Fuel oil fired Reznor furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.315
F-53A	Propane fired Carrier outdoor furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.090
F-53B	Propane fired Carrier outdoor furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.090
F-56A	Propane fired Dayton furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.100

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant(s) Emitted (9 VAC 5-80-720B)	Rated Capacity (MMBtu/hr) (9 VAC 5-80-720C)
F-56B	Propane fired Dayton furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.100
F-68A	Propane fired Carrier outdoor furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.060
F-68B	Propane fired Carrier outdoor furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.060
F-68C	Propane Trane indoor furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.113
F-68D	Propane Trane indoor furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.113
H-72A	Propane fired Bard heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.075
H-72B	Propane fired Bard heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.075
F-80	Propane fired Carrier furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.040
H-90A	Propane fired Master outdoor heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.375
H-90B	Propane fired Master outdoor heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.375
H-90C	Propane fired Carrier outdoor heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.150
F-96A	Propane fired Carrier furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.115

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant(s) Emitted (9 VAC 5-80-720B)	Rated Capacity (MMBtu/hr) (9 VAC 5-80-720C)
F-96B	Propane fired Carrier furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.115
F-96C	Propane fired Carrier furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.115
F-96D	Propane fired Carrier furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.115
F-96E	Propane fired Carrier furnace	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.115
H-113B	Propane fired Trane rooftop space heater	5-80-720 C	NO_x, VOC, PM, SO_2, CO	0.200

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit was placed on public notice in the Fauquier Times from January 29, 2016 to February 29, 2016 .

No comments were submitted by the public.

The final permit is different from the published draft. Conditions 1 and 35 included requirements for efficiency, PM, PM_{10} and $PM_{2.5}$. These requirements were found, following a site visit, to be unenforceable due to design constraints of the emission unit. These requirements were removed from the permit.

EPA provided comments. These comments were addressed by DEQ and approved by EPA. The changes mentioned in the previous paragraph were discussed with EPA. EPA approved of the changes provided the changes were made to underlying permit prior to the issuance of the Title V permit.

Attachment A

April 6, 2016
New Source Review Permit

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

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

STATIONARY SOURCE PERMIT TO CONSTRUCT AND OPERATE

This permit document supersedes your permit document dated October 5, 2015.

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

Department of the Army
Warrenton Training Center – Station B
Warrenton, VA 20186
Registration No.: 40902

is authorized to construct and operate

emission units at a military training center

located at:

7471 Bear Wallow Road
Warrenton, VA 20186
(Fauquier County)

in accordance with the Conditions of this permit.

Approved on: October 5, 2015
Revised: April 6, 2016

for James B. LaFratta
Thomas A. Faha
Regional Director

Permit consists of 17 pages.
Permit Conditions 1 to 28.
Appendix A

INTRODUCTION

This permit approval is based on the permit applications dated February 15, 2002, July 28, 2006, June 22, 2010, April 30, 2012, April 9, 2013, May 31, 2013, May 21, 2014, October 23, 2014, March 17, 2015, July 27, 2015 and additional information received March 21, 2003, February 7, 2007, June 26, 2012, April 18, 2013, October 1, 2013, October 7, 2013, October 11, 2013, May 29, 2014, June 20, 2014, February 9, 2015, March 2, 2015, April 3, 2015, August 12, 2015, and August 27, 2015. 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 modification 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.

Equipment List - Equipment at this facility consists of the following:

Equipment to be Constructed:						
Ref. No.	**Equipment Description**	**Bldg. No.**	**Rated Capacity**	**Add-On Control Technology**	**Delegated Federal Requirements**	**Original Permit Date**
EG-POD 5	Caterpillar Model 3516 C diesel emergency engine-generator, date of manufacture 2015		2,000 ekW (2,937hp)	Caterpillar Retrofit SCR System*	--	October 5, 2015

Equipment permitted prior to the date of this permit:						
Ref. No.	**Equipment Description**	**Bldg. No.**	**Rated Capacity**	**Add-On Control Technology**	**Delegated Federal Requirements**	**Original Permit Date**
EG-10	Unknown Model 12GSAA-6707 C propane fired emergency engine-generator, date of manufacture 2010	B-10	12 kW (14 bhp)	--	--	June 12, 2013
EG-11F	Caterpillar Model 3516 C diesel emergency engine-generator, date of manufacture 2010	B-11	2,000 kW (2,937 bhp)	--	--	June 12, 2013
EG-25	John Deere Model 6068TF250F/258 diesel emergency engine-generator, date of manufacture 2004	B-25	105 kW (190 bhp)	--	--	June 12, 2013
EG-42	Volvo D250 9.6A60 diesel emergency engine-generator, date of manufacture 2004	B-42	260 kW (394 bhp)	--	--	June 12, 2013
EG-47A	Detroit Diesel Model 10337005 diesel emergency engine-generator, date of manufacture 1978	B-47	50 kW (67 bhp)	--	--	June 25, 2002
EG47B	Volvo Model TAD1642GE diesel emergency engine-generator, date of manufacture 2013	B-47	480 kW (810 bhp)	--	--	June 12, 2013
EG-51A	Kubota Model D1703 diesel emergency engine-generator, date of manufacture 2007	B-51	15 kW (27 bhp)	--	--	June 12, 2013
EG-51B	Volvo Model D2509.6A60 diesel emergency engine-generator, date of manufacture 2003	B-51	260 kW (394 bhp)	--	--	June 12, 2013
EG-52A	Cummins Model 6BT-5.9 diesel emergency engine-generator, date of manufacture 1987	B-52	80 kW (134 bhp)	--	--	June 12, 2013
EG-52B	Cummins QSX15-G9 diesel emergency engine-generator, date of manufacture 2005	B-52	400 kW (755 bhp)	--	--	June 25, 2002
EG-52 C through EG-52 E	Three (3) Cummins QSX15-G9 diesel emergency engine-generators, date of manufacture 2014	B-52	450 ekW (755 bhp) each	--	--	June 27, 2014

Equipment permitted prior to the date of this permit (continued):						
Ref. No.	**Equipment Description**	**Bldg. No.**	**Rated Capacity**	**Add-On Control Technology**	**Delegated Federal Requirements**	**Original Permit Date**
EG-53	Perkins Model YB50495*U705505D diesel emergency engine-generator, date of manufacture 1998	B-53	90 kW (121 bhp)	--	--	June 25, 2002
EG-60	Detroit Diesel Model 10337005 diesel emergency engine-generator, date of manufacture pre-2006	B-60	50 kW (109 bhp)	--	--	June 12, 2013
EG-70K	Caterpillar Model 3406 diesel emergency engine-generator, date of manufacture 2005	B-70	350 kW (519 bhp)	--	--	April 4, 2007
EG-80	John Deere Model 4045HF275H diesel emergency engine-generator, date of manufacture 2006	B-80	100 kW (157 bhp)	--	--	June 12, 2013
EG-89	Caterpillar Model C4.4 diesel emergency engine-generator, date of manufacture 2010	B-89	72 kW (90 bhp)	--	--	June 12, 2013
EG-POD 1 and EG-POD 2	Two (2) Caterpillar Model 3516 C diesel emergency engine-generators, date of manufacture 2013		2,000 ekW (2,937 hp) each	--	--	October 29, 2013
EG-POD 3	Caterpillar Model 3516 C diesel emergency engine-generators, date of manufacture 2015		2,000 ekW (2,937 hp) each	--	--	October 29, 2013
EG-POD 4	Caterpillar Model 3516 C diesel emergency engine-generator, date of manufacture 2013		2,500 ekW (3,634 hp)	--	--	October 29, 2013
Gen1 through Gen6	Six (6) Caterpillar Model 3516 B diesel non-emergency engine-generators, date of manufacture 2005	B-70	1,825 kW (2,636 bhp) each	--	--	April 4, 2007
Gen7 through Gen10	Four (4) Caterpillar Model 3516 C diesel non-emergency engine-generators, date of manufacture 2010	B-70	1,825 kW (2,690 bhp) each	--	--	June 12, 2013
Gen-36A	Cummins Model 4B3.9-G5 diesel engine-generator, date of manufacture 2007	B-36	35 kW (99 bhp)	--	--	June 12, 2013

Equipment permitted prior to the date of this permit (continued):						
Ref. No.	**Equipment Description**	**Bldg. No.**	**Rated Capacity**	**Add-On Control Technology**	**Delegated Federal Requirements**	**Original Permit Date**
Gen-36B	Caterpillar Model 3054C diesel engine-generator, date of manufacture 2008	B-36	40 kW (72 bhp)	--	--	June 12, 2013
Gen-36C	Cummins Model B3/3-G1 diesel engine-generator, date of manufacture 2004	B-36	42 kW (56 bhp)	--	--	June 12, 2013

* The Caterpillar Retrofit Selective Catalytic Reduction (SCR) System includes an SCR with closed loop dosing to control NO_x, a Direct Oxidation Catalyst (DOC) to control CO, and diesel particulate filter (DPF) to control PM.

Specifications included in the permit in the emissions unit list are for informational purposes only and do not form enforceable terms or conditions of the permit.
(9 VAC 5-80-1180 D 3)

PROCESS REQUIREMENTS

1. **Emission Controls** - All permitted diesel engine-generators identified in the equipment list of this permit shall control emissions as follows:

   a. Visible emissions, particulate emissions (PM), carbon monoxide (CO) emissions, volatile organic compound (VOC) 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 do not increase air emissions.

   b. Sulfur dioxide (SO_2) emissions from the engine-generators shall be controlled by the use of ultra low sulfur fuel with a sulfur content not to exceed 0.0015% by weight (15 ppm).

   c. Engine generators Gen 7 through Gen 10 shall be equipped with electronic fuel injection, a turbocharger, and aftercooler.

   d. Nitrogen oxides (NO_x) emissions from the diesel engine generator set, EG-POD 5 shall be controlled by closed loop selective catalytic reduction (SCR). The SCR system shall be equipped with a temperature probe to monitor the catalyst bed exhaust temperature at all times when EG-POD 5 is operating. The DEF dosing enabling temperature shall be 572°F (catalyst bed exhaust temperature). The EG-POD 5 engine exhaust gas shall be treated with DEF when the engine is operating at or above 572°F but below 1022°F except for periods of start-up, shutdown, or malfunction. The SCR shall be considered fully operational for emission calculation purposes when DEF dosing is occurring.

   e. Carbon monoxide (CO) from the diesel engine-generator set, EG-POD5, shall be controlled by a direct oxidation catalyst (DOC). The DOC shall be operated and maintained in accordance with manufacturer requirements. The DOC shall be provided with adequate access for inspection and shall be in operation when EG-POD5 is

operating. The DOC shall be considered fully operational, for emission calculation purposes, when the average hourly catalyst bed temperature is between 536°F and 1,292°F.

f. Particulate matter ($PM_{10}/PM_{2.5}$) from the diesel engine-generator set, EG-POD5, shall be controlled by a diesel particulate filter (DPF). The DPF shall be operated in accordance with manufacturer requirements. The DPF must be installed with a backpressure monitor that notifies the operator when the high backpressure limit of the engine is approached. The DPF shall be provided with adequate access for inspection and shall be in operation when EG-POD5 is operating. The DPF shall be considered fully operational for emission calculation purposes when the inlet temperature to the DPF greater than or equal to 464°F.

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

2. **Monitoring Devices**

a. Each engine-generator (Ref. Nos. EG-POD 1 through EG-POD 5, EG-52 C through EG-52 E, Gen1 through Gen10, EG-11F, and EG-70K) shall be equipped with a non-resettable hour metering device to monitor the operating hours. The non-resettable hour meter used to continuously measure the hours of operation for each engine-generator shall be observed by the owner with a frequency of not less than once each day the engine is operated.

b. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the engines are operating.

c. 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.

d. The closed loop SCR system on engine generator set, EG-POD 5, shall be equipped with a device to measure and record the NO_x emissions (expressed in ppm), measured before and after the catalyst, and catalyst bed exhaust temperature at least once every fifteen minutes. The information shall be correlated to run date, engine load/kilowatt output, and engine operating hours. Total operating time and load shall be recorded for all periods when engine generator set EG-POD 5 is operating.

e. The DOC on engine generator set, EG-POD 5, shall be equipped with a device to measure and record the temperature of the catalyst bed. The information shall be correlated to run date and engine operating hours.

f. The DPF on engine generator set, EG-POD5, shall be equipped with a device to measure and record backpressure and exhaust inlet temperature to the DPF. The information shall be correlated to run date and engine operating hours.

For engine-generators not equipped with an hour meter (Ref. Nos. EG-10, EG-25, EG-89, Gen-36A, Gen-36B, Gen-36C, EG-42, EG-47A, EG-47B, EG-51A, EG-51B, EG-52A, EG-52B, EG-53, EG-60, and EG-80) the permittee shall maintain a log book that includes, at a

minimum, the reference number of the engine, date of the run, engine start time, engine end time, total run time for the each engine, and the reason for operation.
(9 VAC 5-80-1180 D)

OPERATING LIMITATIONS

3. **Operation of the Engine-Generator Sets** - The permittee shall operate and maintain each engine-generator identified in the equipment list of this permit 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)

4. **Emergency Power Generation** - The emergency engine-generators (Ref. Nos. EG-POD 1 through EG-POD 5, EG-52 C through EG-52 E, EG-10, EG-11F, EG-25, EG-89, EG-42, EG-47B, EG-51A, EG-51B, EG-52A, EG-60, EG-70K, EG-80, EG47A, EG-52B, and EG-53) 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 5-80-1110 and 9 VAC 5-80-1180)

5. **Alternate Power Generation** - The engine-generators (Ref. Nos. Gen 1 through Gen 10) 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; and

   d. For Storm Avoidance purposes. The diesel engine-generators may be operated under loaded conditions for the following reasons related to severe weather:

      i. The National Weather Service issues a Severe Storm Warning for Fauquier County, Virginia; or

      ii. Lightning is detected within a 20-mile radius of the building in which the engine-generators are housed; or

iii. There are sustained wind speeds exceeding 30 miles per hour.

(9 VAC 5-80-1180)

6. **Operating Hours** -

   a. Each engine-generator listed in the permit equipment list except Ref. Nos. EG-POD 1 through EG-POD 5, EG-52 C through EG-52 E, and Gen 7 through Gen 10 of this permit shall not operate more than 325 hours per year, calculated monthly as the sum of each consecutive 12 month period.

   b. Each engine-generator (Ref. Nos. EG-POD 1 through EG-POD 5, EG-52 C through EG-52 E) shall not operate more than 500 hours per year, calculated monthly as the sum of each consecutive 12 month period.

   c. Each engine-generator (Ref. Nos. Gen1 through Gen 6) shall not operate more than 50 hours per year for storm avoidance purposes, calculated monthly as the sum of each consecutive 12 month period. Operation for storm avoidance purposes is included in the 325 hours per year of operation for each engine-generator (Ref. Nos. Gen 1 through Gen6).

   d. Each engine-generator (Ref. Nos. Gen 7 through Gen 10) shall not operate more than 470 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 5-80-180)

7. **Fuel** - After June 12, 2013, the approved fuel to be purchased for the diesel engine-generators listed in the equipment list of this permit is diesel fuel oil that:

   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 40 or maximum aromatic content of 35 volume percent.

   (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. Each fuel supplier certification shall include the following:
   a. The name of the fuel supplier;

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

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

d. A statement that the diesel fuel conforms to the applicable fuel specification requirements of Condition 7; and

e. The sulfur content of the diesel fuel.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 7. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.
(9 VAC 5-80-1180)

EMISSION LIMITS

9. **Short Term Emission Limits** - Emissions from the operation of each engine-generator shall not exceed the limits specified below:

Unit	NOx (as NO_2) (lbs/hr)	CO (lbs/hr)	VOC (lbs/hr)	$PM_{10/2.5}$ (lbs/hr)
Gen 1 through Gen 10	33.6	4.0	1.5	0.6
EG- 70K	16.1	3.5	1.3	1.1
EG-11F	38.9*	4.0	1.5	0.6
EG-POD 1 through EG-POD 3	38.9*	3.5	0.9	0.3
EG-POD 4	48.1*	6.2	1.1	0.4
EG-POD 5 with SCR, DOC, and/or DPF	6.3	0.35	0.17	0.048
EG-POD 5 without SCR, DOC, and/or DPF	42.26	2.33	0.85	0.19
EG-52C through EG-52E	5.5*	0.9	2.7	0.2

*Upon satisfactory completion of DEQ verified compliance testing the facility has the option of using a lower NOx (as NO_2) emission rate, by undergoing a permit amendment to incorporate the new rates.
(9 VAC 5-50-260 and 9 VAC 5-80-1180)

10. **Annual Emission Limits** - The annual emissions from the facility (i.e., engine-generators) shall not exceed the limits specified below:

Pollutant	Emissions (tons per year)
NOx (as NO_2)	137.5
CO	17.41
VOC	5.58
$PM_{10/2.5}$	3.02
SO_2	1.44

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. **Annual Emission Calculations** - The total annual emissions of NOx (as NO_2), CO, VOC, PM_{10}, $PM_{2.5}$ and SO_2 from the engine-generator sets shall be calculated monthly as the sum of each consecutive twelve-month period. Monthly emissions (tons) for each pollutant shall be calculated using the equation below and using the emission factors for the engine-generators from Appendix A (enclosed with this permit):

    Pollutant (tpy) = (Σ(Emissions Factor (lbs/hr) of each engine-generator from Appendix A * monthly hours of operation of each unit)) ÷ 2000

    Note: For EG-POD5, the controlled emissions and uncontrolled emissions need to be calculated separately. The emissions need to be calculated using the factors for each controlled pollutant for each hour that that particular pollutant's control device is fully operational. The emissions need to be calculated using the factors for each uncontrolled pollutant for each hour that that particular pollutant's control device is not fully operational. (See Appendix A footnotes for additional explanation)

    (9 VAC 5-80-1180)

12. **Visible Emission Limit** - Visible emissions from each engine-generator (Ref. Nos. EG-POD 1 through EG-POD 5, EG-52 C through EG-52 E, Gen1 through Gen10, EG-10, EG-11F, EG-89, Gen-36A, Gen-36B, EG-47B, EG-51A, EG-60, EG-70K, and EG-80) shall not exceed 5 percent opacity except during one 6-minute period in any one hour in which visible emissions shall not exceed 10 percent opacity as determined by 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 engines shall not exceed 10 percent opacity except during one 6-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity.
    (9 VAC 5-80-1180 and 9 VAC 5-50-260)

13. **Visible Emission Limit** - Visible emissions from the emergency engine-generators (EG-47A, EG-52B, EG-25, Gen-36C, EG-42, EG-51B, EG-52A, and EG-53) shall not exceed 10 percent opacity except during one 6-minute period in any one hour in which visible

emissions shall not exceed 20 percent opacity 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.
(9 VAC 5-80-1180, and 9 VAC 5-50-80)

Initial Compliance Determination

14. **Stack Test** - Initial performance tests shall be conducted on the engine-generator set Ref. No. EG-POD5 for NO_x and CO to determine compliance with the emission limits contained in Conditions 1 and 9. The tests shall be performed, reported, 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. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Air Compliance Manager of DEQ's Northern Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test results shall be submitted to the DEQ's Northern Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.

    a. Emissions testing of each pollutant for the engine-generator set shall consist of three one-hour test runs under load. The average of the three runs shall be reported as the short-term emission rate for that engine-generator.

    b. Testing shall be conducted with the engine operating at greater than 90% electrical capacity, unless multiple load band testing is approved by DEQ.

    c. Recorded information shall include, but not be limited to:

        i. Generator load/kilowatt output.

        ii. Fuel consumption and fuel sulfur content of the diesel fuel oil.

        iii. Diesel Exhaust Fluid consumed by the SCR.

        iv. Catalyst bed exhaust temperature for the SCR.

        v. Catalyst bed exhaust temperature for the DOC.

        vi. Exhaust inlet temperature and backpressure for the DPF.

    (9 VAC 5-50-30 and 9 VAC 5-80-1200)

15. **Visible Emissions Evaluation** – Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall be conducted by the permittee on the engine-generator set Ref. No. EG-POD5. The evaluation shall be performed, reported, 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. Should conditions prevent concurrent opacity observations, the DEQ's

Northern Regional Office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. The details of the tests are to be arranged with the Air Compliance Manager of the Northern Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. One copy of the test result shall be submitted to the DEQ's Northern Regional Office within 45 days after test completion and shall conform to the test report format enclosed with this permit.

a. Each test shall consist of 30 sets of 24 consecutive observations (at 15 second intervals) to yield a six minute average.

b. Testing shall be conducted with the engine operating at greater than 90% electrical capacity, unless multiple load band testing is approved by DEQ.

(9 VAC 5-50-30 and 9 VAC 5-80-1200)

CONTINUING COMPLIANCE DETERMINATION

16. **Testing/Monitoring Ports** - The facility/permitted emission units shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriated methods. Sampling ports shall be provided at the appropriate locations and safe sampling platforms and access shall be provided when requested.
(9 VAC 5-50-30 F and 9 VAC 5-80-1180)

17. **Emission Testing/Visible Emission Evaluation** - Upon request by the DEQ, the permittee shall conduct performance testing and/or visible emission evaluations of the engine-generators (Ref. Nos. EG-POD 1 through EG-POD 5, EG-52 C through EG-52 E, Gen1 through Gen10, and EG-11F) 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)

RECORDS

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

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

(9 VAC 5-50-50)

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. These records shall include, but are not limited to:

    a. Hourly average of NO_x concentration (in ppm) measured at the input and output of the SCR exhaust catalyst of EG-POD5 for each hour that EG-POD5 is operated with SCR fully operational.

    b. Hourly average SCR catalyst bed exhaust temperature of EG-POD5 for each hour that EG-POD5 is operated.

    c. Hourly average DOC catalyst bed exhaust temperature of EG-POD5 for each hour that EG-POD5 is operated.

    d. Hourly average DPF inlet temperature and exhaust backpressure of EG-POD5 for each hour that EG-POD5 is operated.

    e. Hours of operation that EG-POD5 was operated with the SCR fully operational.

    f. Hours of operation that EG-POD5 was operated with the DOC fully operational.

    g. Hours of operation that EG-POD5 was operated with the DPF fully operational.

    h. Monthly logs of the hour meter monitoring device observations as required by Condition 2.

    i. Monthly Summary Table for each engine-generator set to include:

        i. Operating hours;
        ii. Total engine hours on a rolling twelve month basis;
        iii. Reasons for operation; and
        iv. Startup (date and time), shutdown (date and time) and reasons for which engine generators (Ref. Nos. Gen1 through Gen10) have been operated for storm avoidance purposes per Condition 5.

    j. Annual emission calculations for NOx (as NO_2), CO, VOC, PM_{10}, $PM_{2.5}$ and SO_2 from the facility, calculated monthly as the sum of each consecutive 12-month period and using the calculation methodology as listed in Condition 11, to verify compliance with the ton/yr emissions limitations in Condition 10.

    k. Annual hours of operation of each engine-generator, calculated monthly as the sum of each consecutive 12-month period, to verify compliance with the operating limitations in permit Condition 6.

    l. Annual hours of storm avoidance operation for each engine-generator (Ref. Nos. Gen1 through Gen 6), calculated monthly as the sum of each consecutive 12-month period, to verify compliance with the operating limitations in permit Condition 6.

m. All fuel supplier certifications or the results of fuel sampling in accordance with permit Condition 8.

n. The manufacturer's written operating instructions or procedures developed by the owner/operator that are approved by the engine manufacturer for the engine-generators listed in the Equipment List of this permit.

o. Results of all stack tests and visible emission evaluations.

p. Scheduled and unscheduled maintenance and operator training in accordance with permit Condition 21.

q. Records of changes in settings that are permitted by the manufacturer of the engine-generators listed in the Equipment List of this permit.

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.

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

GENERAL CONDITIONS

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 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

    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 G)

21. **Permit Invalidation** - This permit to construct engine-generator sets (Ref. No. EG-POD 5) shall become invalid, unless an extension is granted by the DEQ, if:

a. A program of continuous construction is not commenced within 18 months from the date of the "Original Permit Date" specified in the Equipment List.

b. A program of construction is discontinued for a period of eighteen months or more, or is not completed within a reasonable time.

(9 VAC 5-80-1210)

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 start-up, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, in a manner consistent with good air pollution control practices for minimizing emissions.

The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

b. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

c. 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, 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)

25. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Regional Air Compliance Manager of the DEQ's NRO, of malfunctions of the affected facility 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 Regional Air Compliance Manager of the DEQ's NRO.
(9 VAC 5-20-180 C and 9 VAC 5-80-1180)

26. **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)

27. **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 (30) days of the transfer.
(9 VAC 5-80-1240)

28. **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

Warrenton Training Center 40902 (October 5, 2015)
Engine-Generators Emission Factors

Unit	Engine Rating (hp)	NO_x (as NO_2) Emissions (lbs/hr)	CO Emissions (lbs/hr)	VOC Emissions (lbs/hr)	$PM_{10}/PM_{2.5}$ Emissions (lbs/hr)	SO_2 Emissions (lbs/hr)
EG-89	90	2.79	0.60	0.23	0.20	0.18
Gen-36A	99	3.07	0.66	0.25	0.22	0.20
Gen-36B	72	2.23	0.48	0.18	0.16	0.15
Gen-36C	56	1.74	0.37	0.14	0.12	0.11
EG-42	394	12.21	2.63	0.99	0.87	0.81
EG-47B	810	25.11	5.41	2.04	1.78	1.66
EG-51A	27	0.84	0.18	0.07	0.06	0.06
EG-51B	394	12.21	2.63	0.99	0.87	0.81
EG-52B	755	23.41	5.04	1.90	1.66	1.55
EG-80	157	4.87	1.05	0.39	0.35	0.32
EG-25	190	5.89	1.27	0.48	0.42	0.39
EG-47A	67	2.08	0.45	0.17	0.15	0.14
EG-52A	134	4.15	0.90	0.34	0.29	0.27
EG-53	121	3.75	0.81	0.30	0.27	0.25
EG-60	109	3.38	0.73	0.27	0.24	0.22
EG-70K	519	16.1	3.5	1.3	1.1	1.06
Gen-1 through Gen-6	2636	33.6	4.0	1.5	0.6	0.03
Gen-7 through Gen-10	2690	33.6	4.0	1.5	0.6	0.03
EG-11F	2937	38.9	4.0	1.5	0.6	0.03
EG-10	14	0.33	0.31	0.2	0.01	0.01
EG-POD 1 and EG-POD 2	2937	38.9	3.5	0.9	0.3	3.56E-02
EG-POD 3	2937	38.9	3.5	0.9	0.3	3.56E-02
EG-POD 4	3634	48.1	6.2	1.1	0.4	4.41E-02
EG-POD 5*	2937	6.3	0.35	0.17	0.048	0.036
EG-POD 5**	2937	42.26	2.33	0.85	0.19	0.036
EG-52 C through EG52 E	755	5.5	0.9	2.7	0.2	9.16E-03

*EG-POD5 is equipped with a Selective Catalytic Reduction (SCR) System that includes SCR with closed loop dosing to control NO_x, a Direct Oxidation Catalyst (DOC) to control CO, and diesel particulate filter (DPF) to control PM. The NO_x emission factor applies when the SCR System is operating within the diesel exhaust fluid (DEF) dosing temperature range (572°F – 1022°F) and DEF dosing is occurring in accordance with manufacturer specifications. The CO emission factor applies when the DOC catalyst bed temperature is within the effective temperature range (536°F – 1292°F) specified by the manufacturer. The $PM_{10}/PM_{2.5}$ emission factor applies when the DPF is fully operational and the exhaust backpressure has not exceeded the maximum backpressure recommended by the engine manufacturer.

**The NO_x emission factor applies when the SCR System is not operating within the DEF dosing temperature range or when there is no DEF dosing. The CO emission factor applies when the DOC catalyst bed temperature is not within the effective temperature range specified by the manufacturer. The $PM_{10}/PM_{2.5}$ emission factor applies when the DPF is not fully operational and the exhaust backpressure exceeds the maximum backpressure recommended by the engine manufacturer.

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

Attachment B

2014 Annual Emission Update

4/6/2016, 2:14 PM

Commonwealth of Virginia
Department of Environmental Quality
Annual Update Report for Calendar Year: 2015

Registration No.	40902	Office:	Northern Regional Office
Site Name:	Warrenton Training Station B	County / City:	Fauquier County 061
Physical Location:	7471 Bearwallow Rd, Warrenton, VA 20186	NAICS:	National Security 928110
Mailing Address:	PO Box 700	Employees:	200
	Warrenton, VA 20188	Inspector:	Tadric Page Phone: (703) 583-3929
Annual Update Report Contact:	Sara Heald Phone: (540) 428-7452 Email:sara.l.heald.civ@mail.mil	Classification:	Major/Potential Major
Billing Contact:	Sara Heald Phone: (540) 428-7452 Email:sara.l.heald.civ@mail.mil		

Process Data

CEDS ID (RelPt-Unit-Process)	Process Description	Annual Throughput *Annual Throughput by Season (%)*					Fuel Data: Sulfur (Wt%)		Ash (Wt%)		Heat Content (MMBtu/unit)	
		CY 2014	CY 2015	Units			CY 2014	CY 2015	CY 2014	CY 2015	CY 2014	CY 2015
1-1-1	**Diesel Genset (Ref. No. EG-89)**	**57.9**		**Hours of Operation**			0.0015				137	
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*							
		25	*25*	*25*	25	CY 2014						
	Unit Ref ID: 1					CY 2015						
1-1-2	**Diesel Genset (Ref. No. Gen-36A)**	**8.2**		**Hours of Operation**			0.0015					
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*							
		25	*25*	*25*	25	CY 2014						
	Unit Ref ID: 1					CY 2015						
1-1-3	**Diesel Genset (Ref. No. Gen-36B)**	**5.8**		**Hours of Operation**			0.0015					
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*							
		25	*25*	*25*	25	CY 2014						
	Unit Ref ID: 1					CY 2015						
1-1-4	**Diesel Genset (Ref. No. Gen-36C)**	**4.2**		**Hours of Operation**			0.0015					
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*							
		25	*25*	*25*	25	CY 2014						
	Unit Ref ID: 1					CY 2015						
1-1-5	**Diesel Genset (Ref. No. EG-42)**	**29.2**		**Hours of Operation**			0.0015					
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*							
		25	*25*	*25*	25	CY 2014						
	Unit Ref ID: 1					CY 2015						

1-1-6	**Diesel Genset (Ref. No. EG-47B)**	**6.1**		**Hours of Operation**			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-7	**Diesel Genset (Ref. No. EG-51A)**	**3**		**Hours of Operation**			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-8	**Diesel Genset (Ref. No. EG-51B)**	**39.8**		**Hours of Operation**			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-9	**Diesel Genset (Ref. No. EG-52B)**	**31.3**		**Hours of Operation**			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-10	**Diesel Genset (Ref. No. EG-80)**	**288.7**		**Hours of Operation**			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-11	**Diesel Genset (Ref. No. EG-25)**	**17.8**		**Hours of Operation**			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-12	**Diesel Genset (Ref. No. EG-47A)**	**77.1**		**Hours of Operation**			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-13	**Diesel Genset (Ref. No. EG-52A)**	**30.6**		**Hours of Operation**			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					

1-1-14	**Diesel Genset (Ref. No. EG-53)**	296		Hours of Operation			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-15	**Diesel Genset (Ref. No. EG-60)**	45.2		Hours of Operation			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-16	**Diesel Genset (Ref. No. EG-70K)**	8.8		Hours of Operation			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
1-1-17	Diesel Genset (Ref. No. EG-10)	0.2		Hours of Operation			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 1					CY 2015					
2-2-2	**Blrs/H2O Htrs/Furnaces**	133.12		1000 Gallons Burned			0.002				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		35	*15*	*15*	35	CY 2014					
	Unit Ref ID: 2					CY 2015					
3-3-1	**Ten (10) Caterpillar Model 3516B diesel emergency generators (Ref. No. Gen1 - Gen10)**	0		1000 Gallons Burned			0.0015			140	
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 3					CY 2015					
3-3-2	**Ten (10) Caterpillar Model 3516B diesel emergency generators (Ref. No. Gen1 - Gen10) - HOURS OPERATED (Units Combined)**	860.9		Hours of Operation							
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 3					CY 2015					
4-11.15-1	**Diesel Engine Generator Set EG-11 F**	0		1000 Gallons Burned			0.0015				
		Dec-Feb	*Mar-May*	*Jun-Aug*	*Sep-Nov*						
		25	*25*	*25*	25	CY 2014					
	Unit Ref ID: 11F					CY 2015					

4-11.15-2	Diesel Engine Generator Set EG-11 F	38.6		Hours of Operation			0.0015					
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov							
		25	25	25	25	CY 2014						
	Unit Ref ID: 11F					CY 2015						
5-381436-1	EG-POD 4, Caterpillar Model 3516 C emergency engine-generator, date of manufacture 2013	3.7		Hours of Operation			0.0015					
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov							
		25	25	25	25	CY 2014						
	Unit Ref ID: 381436					CY 2015						
5-381436-2	EG-POD 1 through EG-POD 3, Three (3) Caterpillar Model 3516 C emergency engine-generators, date of manufacture 2013	22.3		Hours of Operation			0.0015					
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov							
		25	25	25	25	CY 2014						
	Unit Ref ID: 381436					CY 2015						
5-381436-3	EG-52 C through EG-52 E, Three (3) Caterpillar C15 emergency engine-generators, date of manufacture 2013-2014 - HOURS OPERATED	303.4		Hours of Operation			0.0015					
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov							
		25	25	25	25	CY 2014						
	Unit Ref ID: 381436					CY 2015						
5-381436-4	EG-POD 5, Caterpillar Model 3516C w/controls operational	0		Hours of Operation			0.0015					
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov							
		25	25	25	25	CY 2014						
	Unit Ref ID: 381436					CY 2015						
5-381436-5	EG-POD 5, Caterpillar Model 3516 C w/o controls	0		Hours of Operation			0.0015					
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov							
		25	25	25	25	CY 2014						
	Unit Ref ID: 381436					CY 2015						

During the reporting period, have changes or corrections occurred? ○ Yes ○ No

If yes, briefly explain.

Based on the data you are reporting, are you aware of any potential air permit violations? ○ Yes ○ No

If yes, briefly explain:

Document 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 manage 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.

Name of Responsible Official (Print)_____

Title _____

Signature_____ Date _____

Must be signed by a Responsible Official as defined in 9 VAC 5-20-230 of the Regulations for the Control and Abatement of Air Pollution, available at: http://www.deq.virginia.gov/