



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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James S. Gilmore, III
Governor

John Paul Woodley, Jr.
Secretary of Natural Resources

Dennis H. Treacy
Director

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COMMONWEALTH OF VIRGINIA OPERATING PERMIT

STATIONARY SOURCE PERMIT TO OPERATE

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

U.S. Army Garrison, Fort Belvoir
Fort Belvoir, Virginia 22060-5130
Registration No. 70550
County-Plant No. 059-0018

is authorized to operate

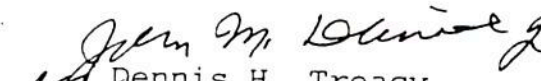
a military installation

located at

Fort Belvoir, Fairfax County, Virginia

in accordance with the Conditions of this permit and all other applicable permits and regulations of the State Air Pollution Control Board.

Approved on May 16, 2000.


Dennis H. Treacy
Director

Permit consists of 10 pages.
Permit Conditions 1 to 12.

PERMIT CONDITIONS - the regulatory reference and authority for the condition is listed in parentheses () after each condition.

1. This permit establishes source-specific emission standards and/or other requirements to implement reasonably available control technology (RACT) as required by 9 VAC 5-40-310 and 9 VAC 5-40-311 of the State Air Pollution Control Board's Regulations.
(9 VAC 5-80-800 C.2.b of State Regulations)
2. Equipment subject to 9 VAC 5 Chapter 40, Article 4 and RACT requirements pursuant to Section 182 of the federal Clean Air Act consists of: (Note: Codes in parentheses represent the "Unit Reference Number" in the Title V permit application dated March, 1998.)
 - three No.6 fuel oil-fired Keeler NB 2657, NSB 2062 boilers (B-1, B-2, B-3) rated at 46.0×10^6 Btu/hr heat input each, located at Bldg. 1422;
 - two natural gas or No.2 fuel oil-fired Erie City Iron Works boilers (B-4, B-5) rated at 32.2×10^6 Btu/hr heat input each, located at Bldg. 332;
 - two natural gas or No.2 fuel oil-fired Trane PBAL 3F-5 boilers (B-6, B-7) rated at 11.0×10^6 Btu/hr heat input each, located at Bldg. 2117;
 - one No.2 fuel oil-fired American Standard A-709-WO boiler (B-14) rated at 2.05×10^6 Btu/hr heat input, located at Bldg. 203;
 - three No.2 fuel oil-fired Weil McLain BL 586 WF boilers (B-22, B-23, B-24) rated at 1.16×10^6 Btu/hr heat input each, located at Bldgs. 211, 212 and 213;
 - two No.2 fuel oil-fired Weil McLain boilers (B-27, B-28) rated at 3.60×10^6 Btu/hr heat input each, located at Bldg. 219;
 - one No.2 fuel oil-fired H. B. Smith L02857 boiler (B-34) rated at 1.90×10^6 Btu/hr heat input, located at Bldg. 240;
 - one No.2 fuel oil-fired Weil McLain BL 586 SF boiler (B-40) rated at 1.16×10^6 Btu/hr heat input, located at Bldg. 337;
 - one No.2 fuel oil-fired Weil McLain BL 686 SF boiler (B-41) rated at 1.43×10^6 Btu/hr heat input, located at Bldg. 342;
 - one No.2 fuel oil-fired Cliff Steel SN 3860 boiler (B-43) rated at 1.46×10^6 Btu/hr heat input, located at Bldg. 361;
 - one No.2 fuel oil-fired Burnham PF510 boiler (B-43A) rated at 1.97×10^6 Btu/hr heat input, located at Bldg. 361;

- two No.2 fuel oil-fired Weil McLain P-86 boilers (B-44, B-45) rated at 3.65×10^6 Btu/hr heat input each, located at Bldg. 367;
- two No.2 fuel oil-fired Peerless 705 DF boilers (B-46, B-47) rated at 1.50×10^6 Btu/hr heat input each, located at Bldg. 367;
- one No.2 fuel oil-fired Weil McLain BL 786 SF boiler (B-55) rated at 1.70×10^6 Btu/hr heat input, located at Bldg. 773;
- one natural gas or No.2 fuel oil-fired Weil McLain BL 588 boiler (B-56) rated at 1.36×10^6 Btu/hr heat input, located at Bldg. 805;
- one No.2 fuel oil-fired Weil McLain 688 boiler (B-59) rated at 1.57×10^6 Btu/hr heat input, located at Bldg. 1114;
- one No.2 fuel oil-fired Weil McLain 988 boiler (B-61) rated at 2.63×10^6 Btu/hr heat input, located at Bldg. 1116;
- one No.2 fuel oil-fired Cleaver Brooks NB 64265 L83545 boiler (B-65) rated at 2.90×10^6 Btu/hr heat input, located at Bldg. 3233;
- one No.2 fuel oil-fired Cleaver Brooks NB 64261 L83544 boiler (B-66) rated at 2.90×10^6 Btu/hr heat input, located at Bldg. 3233;
- two natural gas or No.2 fuel oil-fired Cleaver Brooks CBW 200-150--150 boilers (B-67, B-68) rated at 2.90×10^6 Btu/hr heat input each, located at Bldg. 3138;
- one No.2 fuel oil-fired Iron Fireman 360-50W boiler (B-71) rated at 2.41×10^6 Btu/hr heat input, located at Bldg. 2470;
- one No.2 fuel oil-fired Weil McLain BL 886 SF boiler (B-83) rated at 1.97×10^6 Btu/hr heat input, located at Bldg. 1809;
- one No.2 fuel oil-fired Weil McLain BL 1186 SF boiler (B-84) rated at 3.39×10^6 Btu/hr heat input, located at Bldg. 1810;
- two natural gas or No.2 fuel oil-fired Pacific National DA-5830-5 boilers (B-86, B-87) rated at 7.20×10^6 Btu/hr heat input each, located at Bldg. 1822;
- one No.2 fuel oil-fired Weil McLain boiler (B-88) rated at 1.08×10^6 Btu/hr heat input, located at Bldg. 1950;
- one No.2 fuel oil-fired Weil McLain BL 886 WF boiler (B-89) rated at 1.96×10^6 Btu/hr heat input, located at Bldg. 5034;
- one No.2 fuel oil-fired Weil McLain BL 586 WF boiler (B-90) rated at 1.14×10^6 Btu/hr heat input, located at Bldg. 5073;
- one No.2 fuel oil-fired Peerless 0708 FS SU boiler (B-91) rated at 1.11×10^5 Btu/hr heat input, located at Bldg. 5089;
- one No.2 fuel oil-fired Bryan CL-180-W-FD (B-95) rated at 1.80×10^6 Btu/hr heat input, located at Bldg. 2857;
- two No.2 fuel oil-fired Cleaver Brooks M4S-4500 boilers (B-96, B-97) rated at 4.50×10^7 Btu/hr heat input each, located at Bldg. 2800;

- one No.2 fuel oil-fired Cleaver Brooks M4W-1500 boiler (B-98) rated at 1.50×10^6 Btu/hr heat input, located at Bldg. 2800;
- one No.2 fuel oil-fired PBI Industries 2000-261500 ATPO boiler (B-99) rated at 1.60×10^6 Btu/hr heat input, located at Bldg. 2800;
- two No.2 fuel oil-fired Cleaver Brooks M4S-100-6000 boilers (B-100, B-101) rated at 6.00×10^6 Btu/hr heat input each, located at Bldg. 2802;
- two natural gas and No.2 fuel oil-fired Cleaver Brooks Water Tube FLE-200 (B-103, B-104) rated at 4.00×10^6 Btu/hr heat input each, located at Bldg. 2592;
- one natural gas and No.2 fuel oil-fired Cleaver Brooks CB-600-125 boiler (B-105) rated at 5.23×10^6 Btu/hr heat input, located at Bldg. 2593;
- one natural gas and No.2 fuel oil-fired Weil McLain P688W boiler (B-109) rated at 1.70×10^6 Btu/hr heat input, located at Bldg. 2582;
- one natural gas and No.2 fuel oil-fired Cleaver Brooks CB-800-40 boiler (B-111) rated at 1.68×10^6 Btu/hr heat input, located at Bldg. 2593;
- two natural gas and No.2 fuel oil-fired Peerless 0-707-FDA-WUP (B-112, B-113) rated at 1.07×10^6 Btu/hr heat input each, located at Bldg. 2594;
- one natural gas and No.2 fuel oil-fired Burnham 4F311-50-60-GP boiler (B-115) rated at 2.60×10^6 Btu/hr heat input, located at Bldg. 2584;
- four No.2 fuel oil or diesel-fired EMD MP-36A electrical generators (G-51, G-52, G-52, G-54) rated at 1500 KW output (14.80×10^6 Btu/hr heat input) each, located at Bldg. 1132 - for emergency use during power disruptions, only;
- two No.2 fuel oil or diesel-fired Cummins MEP-208 electrical generators (G-55, G-56) rated at 750 KW output (7.40×10^6 Btu/hr heat input) each, located at Bldg. 1132 - for emergency use during power disruptions, only;
- three No.2 fuel oil or diesel-fired Cummins MEP-012A electrical generators (G-57, G-58, G-59) rated at 750 KW output (7.40×10^6 Btu/hr heat input) each, located at Bldg. 1132 - for emergency use during power disruptions, only;
- one No.2 fuel oil or diesel-fired EMD S6660 electrical generator (G-60) rated at 750 KW output (7.40×10^6 Btu/hr heat input), located at Bldg. 1132 - for emergency use during power disruptions, only;
- one Shenandoah P25-2GT incinerator with a maximum charging capacity of 120 lbs/hr
- one Consumat C-325-ATC incinerator with a maximum charging capacity of 1050 lbs/hr

3. For the following units, NO_x RACT shall be the performance of an evaluation and adjustment of the combustion process at least semi-annually as to appropriately minimize the formation of NO_x emissions:

- the three No.6 fuel oil-fired Keeler NB 2657, NSB 2062 boilers (B-1, B-2, B-3) rated at 46.0×10^6 Btu/hr heat input each, located at Bldg. 1422;
- the two natural gas or No.2 fuel oil-fired Erie City Iron Works boilers (B-4, B-5) rated at 32.2×10^6 Btu/hr heat input each, located at Bldg. 332;

The evaluation and adjustment shall utilize a combustion analyzer and include, at a minimum, the following:

- a. Development of a plan providing the schedule and procedure for the semi-annual evaluation and adjustment. The plan shall be approved by DEQ and updated as necessary.
- b. Check condition of stack, clean, and perform minor repairs as necessary.
- c. Inspect, clean, and adjust each oil burner nozzle assembly and conduct operational test of boiler. Check automatic combustion control devices for proper operation. Perform adjustments and minor repairs as necessary to ensure efficient operation while minimizing all types of emissions to the air. For each unit, compliance with applicable portions of 9 VAC 5 Chapter 40, Article 8 (Emission Standards for Fuel Burning Equipment) and consistent CO and NO_x concentrations among the semi-annual (or more frequent) evaluations shall be considered sufficient to demonstrate compliance with the portion of this condition requiring minimizing all types of emissions to the air, unless credible evidence to the contrary is presented.
- d. Documentation of each evaluation and adjustment conducted on the combustion process. This documentation shall include, at a minimum: (a) the date of the evaluation and adjustment; (b) identity of service company and technicians; and, (c) final NO_x, CO, and excess oxygen emission rates and the type of combustion analyzer used to determine these emissions.

4. For each emission unit subject to Condition 3., the unit shall be operated and maintained in accordance with the manufacturer's specifications and good air pollution control practices. A copy of all relevant operation, maintenance, and specification documentation as provided by the manufacturer for each unit and device shall be maintained on the premises of the facility. Each unit shall be operated and maintained in adherence with this documentation to the degree appropriate and practicable with the intention of minimizing NO_x emissions.
(9 VAC 5-80-850 of State Regulations)
5. For each emission unit subject to Condition 3., a record of each fuel shipment, including certified fuel type, quantity and nitrogen content as provided by the supplier shall be maintained. For natural gas-fired units, a monthly record of fuel usage shall be maintained. These records shall be available on site for inspection by the DEQ and shall be current for the most recent three years.
(9 VAC 5-80-900 of State Regulations)
6. For the following units, NO_x RACT shall be the operation and maintenance of the unit in accordance with manufacturer's specifications and good air pollution control practices:
 - the two natural gas or No.2 fuel oil-fired Trane PBAL 3F-5 boilers (B-6, B-7) rated at 11.0×10^6 Btu/hr heat input each, located at Bldg. 2117;
 - the one No.2 fuel oil-fired American Standard A-709-WO boiler (B-14) rated at 2.05×10^6 Btu/hr heat input, located at Bldg. 203;
 - the three No.2 fuel oil-fired Weil McLain BL 586 WF boilers (B-22, B-23, B-24) rated at 1.16×10^6 Btu/hr heat input each, located at Bldgs. 211, 212 and 213;
 - the two No.2 fuel oil-fired Weil McLain boilers (B-27, B-28) rated at 3.60×10^6 Btu/hr heat input each, located at Bldg. 219;
 - the one No.2 fuel oil-fired H. B. Smith L02857 boiler (B-34) rated at 1.90×10^6 Btu/hr heat input, located at Bldg. 240;
 - the one No.2 fuel oil-fired Weil McLain BL 586 SF boiler (B-40) rated at 1.16×10^6 Btu/hr heat input, located at Bldg. 337;
 - the one No.2 fuel oil-fired Weil McLain BL 686 SF boiler (B-41) rated at 1.43×10^6 Btu/hr heat input, located at Bldg. 342;
 - the one No.2 fuel oil-fired Cliff Steel SN 3860 boiler (B-43) rated at 1.46×10^7 Btu/hr heat input, located at Bldg. 361;

- the one No.2 fuel oil-fired Burnham PF510 boiler (B-43A) rated at 1.97×10^6 Btu/hr heat input, located at Bldg. 361;
- the two No.2 fuel oil-fired Weil McLain P-86 boilers (B-44, B-45) rated at 3.65×10^6 Btu/hr heat input each, located at Bldg. 367;
- the two No.2 fuel oil-fired Peerless 705 DF boilers (B-46, B-47) rated at 1.50×10^6 Btu/hr heat input each, located at Bldg. 367;
- the one No.2 fuel oil-fired Weil McLain BL 786 SF boiler (B-55) rated at 1.70×10^6 Btu/hr heat input, located at Bldg. 773;
- the one natural gas or No.2 fuel oil-fired Weil McLain BL 588 boiler (B-56) rated at 1.36×10^6 Btu/hr heat input, located at Bldg. 805;
- the one No.2 fuel oil-fired Weil McLain 688 boiler (B-59) rated at 1.57×10^6 Btu/hr heat input, located at Bldg. 1114;
- the one No.2 fuel oil-fired Weil McLain 988 boiler (B-61) rated at 2.63×10^6 Btu/hr heat input, located at Bldg. 1116;
- the one No.2 fuel oil-fired Cleaver Brooks NB 64265 L83545 boiler (B-65) rated at 2.90×10^6 Btu/hr heat input, located at Bldg. 3233;
- the one No.2 fuel oil-fired Cleaver Brooks NB 64261 L83544 boiler (B-66) rated at 2.90×10^6 Btu/hr heat input, located at Bldg. 3233;
- the two natural gas or No.2 fuel oil-fired Cleaver Brooks CBW 200-150-150 boilers (B-67, B-68) rated at 2.90×10^6 Btu/hr heat input each, located at Bldg. 3138;
- the one No.2 fuel oil-fired Iron Fireman 360-50W boiler (B-71) rated at 2.41×10^6 Btu/hr heat input, located at Bldg. 2470;
- the one No.2 fuel oil-fired Weil McLain BL 886 SF boiler (B-83) rated at 1.97×10^6 Btu/hr heat input, located at Bldg. 1809;
- the one No.2 fuel oil-fired Weil McLain BL 1186 SF boiler (B-84) rated at 3.39×10^6 Btu/hr heat input, located at Bldg. 1810;
- two natural gas or No.2 fuel oil-fired Pacific National DA-5830-5 boilers (B-86, B-87) rated at 7.20×10^6 Btu/hr heat input each, located at Bldg. 1822;
- the one No.2 fuel oil-fired Weil McLain boiler (B-88) rated at 1.08×10^6 Btu/hr heat input, located at Bldg. 1950;
- the one No.2 fuel oil-fired Weil McLain BL 886 WF boiler (B-89) rated at 1.96×10^6 Btu/hr heat input, located at Bldg. 5034;
- the one No.2 fuel oil-fired Weil McLain BL 586 WF boiler (B-90) rated at 1.14×10^6 Btu/hr heat input, located at Bldg. 5073;
- the one No.2 fuel oil-fired Peerless 0708 FS SU boiler (B-91) rated at 1.11×10^6 Btu/hr heat input, located at Bldg. 5089;
- the one No.2 fuel oil-fired Bryan CL-180-W-FD (B-95) rated at 1.80×10^6 Btu/hr heat input, located at Bldg. 2857;

- the two No.2 fuel oil-fired Cleaver Brooks M4S-4500 boilers (B-96, B-97) rated at 4.50×10^6 Btu/hr heat input each, located at Bldg. 2800;
- the one No.2 fuel oil-fired Cleaver Brooks M4W-1500 boiler (B-98) rated at 1.50×10^6 Btu/hr heat input, located at Bldg. 2800;
- the one No.2 fuel oil-fired PBI Industries 2000-261500 ATPO boiler (B-99) rated at 1.60×10^6 Btu/hr heat input, located at Bldg. 2800;
- the two No.2 fuel oil-fired Cleaver Brooks M4S-100-6000 boilers (B-100, B-101) rated at 6.00×10^6 Btu/hr heat input each, located at Bldg. 2802;
- the two natural gas and No.2 fuel oil-fired Cleaver Brooks Water Tube FLE-200 (B-103, B-104) rated at 4.00×10^6 Btu/hr heat input each, located at Bldg. 2592;
- the one natural gas and No.2 fuel oil-fired Cleaver Brooks CB-600-125 boiler (B-105) rated at 5.23×10^6 Btu/hr heat input, located at Bldg. 2593;
- the one natural gas and No.2 fuel oil-fired Weil McLain P688W boiler (B-109) rated at 1.70×10^6 Btu/hr heat input, located at Bldg. 2582;
- the one natural gas and No.2 fuel oil-fired Cleaver Brooks CB-800-40 boiler (B-111) rated at 1.68×10^6 Btu/hr heat input, located at Bldg. 2593;
- the two natural gas and No.2 fuel oil-fired Peerless 0-707-FDA-WUP (B-112, B-113) rated at 1.07×10^6 Btu/hr heat input each, located at Bldg. 2594;
- the one natural gas and No.2 fuel oil-fired Burnham 4F311-50-60-GP boiler (B-115) rated at 2.60×10^6 Btu/hr heat input, located at Bldg. 2584;

A copy of all relevant operation, maintenance, and specification documentation as provided by the manufacturer for each unit and device shall be maintained on the premises of the facility. Each unit shall be operated and maintained in adherence with that documentation to the degree appropriate and practicable with the intention of minimizing NO_x emissions.
(9 VAC 5-40-310 and 9 VAC 5-40-311 of State Regulations)

7. Exempted from the requirements of 9 VAC 5 Chapter 40, Article 4 for both volatile organic compounds (VOC) and nitrogen oxides (NO_x) are the following:
 - a. Process operations with a process weight rate capacity less than 100 pounds per hour;

- b. Any combustion unit using solid fuel with a maximum heat input of less than 350,000 Btu per hour;
 - c. Any combustion unit using liquid fuel with a maximum heat input of less than 1,000,000 Btu per hour;
 - d. Any combustion unit using gaseous fuel with a maximum heat input of less than 10,000,000 Btu per hour.
- (9 VAC 5-40-240 of State Regulations)

8. Equipment specifically exempted from demonstrating RACT for NO_x includes the following:

- a. Any stationary internal combustion engine with a rated capacity of less than 450 hp of output power;
- b. Any incinerator with a maximum capacity of less than 50 tons of waste per day (which at Fort Belvoir includes the Shenandoah P25-2GT incinerator and the Consumat C-325-ATC incinerator);
- c. Any incinerator or thermal or catalytic oxidizer used exclusively as an air pollution control equipment;
- d. Any generator used solely to supply emergency power to buildings during periods when normal power supplies are interrupted and during periods of scheduled maintenance (which at Fort Belvoir includes all of the generators named in the equipment list of Condition 2).

(9 VAC 5-40-311 of State Regulations)

9. At all times, including periods of startup, shutdown and malfunction, all units or processes, including those exempted by any conditions above, shall be maintained and operated to the extent possible in a manner consistent with good air pollution control practice of minimizing emissions.
(9 VAC 5-40-20 and 9 VAC 5-170-160 of State Regulations)

10. The permittee shall maintain the following records and documents to demonstrate compliance with this permit:

For units subject to Condition 3., the annual evaluation and adjustment plan required by Item a. and the final report documentation required by Item d. for each annual evaluation and adjustment.

The records of fuel type, quantity, and nitrogen content as specified in Condition 5.

The manufacturer's documentation for operation and maintenance and specifications as required by Conditions 4. and 6.

Sufficient documentation to support claims that units on site are exempted under Condition 7.

The format of such records shall be arranged with the Regional Compliance Manager. These records shall be available on site for inspection by the DEQ and shall be current for the most recent three years.

(9 VAC 5-80-900 of State Regulations)

11. In the event of any change in control of ownership of the permitted source, the permittee shall notify the succeeding owner of the existence of this permit by letter and send a copy of that letter to the Regional Compliance Manager.
(9 VAC 5-80-940 of State Regulations)

12. A copy of this permit shall be maintained on the premises of the facility to which it applies.
(9 VAC 5-80-860 of State Regulations)
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