

State of New Jersey

Department of Environmental Protection
Air Quality Permitting

General Permit

Boilers Less Than 10 million BTU/Hr Combusting Natural Gas, Propane, No. 2 Fuel Oil, Diesel, Kerosene, or A Combination Of These Fuels

This General Permit allows for the construction, installation, reconstruction, modification and operation of a single boiler with a maximum rated capacity (gross heat input) of less than 10 million BTUs per hour, combusting Natural Gas, Propane, Number 2 Fuel Oil, Diesel, Kerosene, or a combination of these fuels, and no other fuels.

The potential-to-emit (PTE) for the equipment covered under this General Permit shall be established based on the General Permit Number selected on the Registration Form.

I. DEFINITIONS

The terms used in this General Permit shall have the meanings given to them in N.J.A.C. 7:27 et seq.

II. AUTHORITY

This General Permit is issued under the authority N.J.S.A 26:2C-9.2. This General Permit shall allow for inspection and evaluation to assure conformance with all provisions of N.J.A.C. 7:27 et seq. An opportunity for public comment on this General Permit was provided on August 18, 1997.

III. APPLICABILITY

This General Permit is for a single boiler with a maximum rated capacity (gross heat input) of less than 10 million BTU per hour, combusting Natural Gas, Propane, Number 2 Fuel Oil, Diesel, Kerosene, or a combination of these fuels, and no other fuels.

IV. EXCLUSIONS

This General Permit cannot be used for boilers which combust non-commercial fuels including used crankcase oil, any other used oil, landfill or refinery gas, facility by-products and any type of waste materials, when used exclusively or have been added to any of the allowable commercial fuels (Natural Gas, Propane, Number 2 Fuel Oil, Diesel and Kerosene).

V. EQUIPMENT/CONTROL SPECIFICATIONS

The Permittee shall retain on site (for the life of the boilers) the maximum BTU rating (maximum gross heat input). Records acceptable to the Department are boiler plate ratings, manufacturer's specifications, or engineering calculations.

VI. POTENTIAL TO EMIT

The following Tables provide the Permittee with a potential-to-emit (PTE), in tons per year, for each air contaminant category. The PTE assigned to each boiler will correspond to the option selected on the registration form.

OPTION A

BOILER BURNING NATURAL GAS, PROPANE, NUMBER 2 FUEL OIL, DIESEL,
KEROSENE OR ANY COMBINATION OF THESE FUELS

POTENTIAL TO EMIT (IN TPY) ESTABLISHED BY SELECTING BOILER SIZE CATEGORY
ASSUMES MAXIMUM SIZE BOILER IN SELECTED CATEGORY FIRING CONTINUOUSLY FOR 8760HR/YR

General Permit Number	Size of Boiler Maximum Heat Input (Million BTU/HR)	Air Contaminant Category				
		Total Suspended Particulates (TSP)	Sulfur Dioxide (SOx)	Oxides of Nitrogen (NOx)	Carbon Monoxide (CO)	Volatile Organic Compounds (VOC)
B-A1	≤ 2	0.12	2.66	1.23	0.31	0.05
B-A2	>2 & ≤ 4	0.25	5.33	2.47	0.62	0.10
B-A3	>4 & ≤ 6	0.37	7.99	3.70	0.93	0.16
B-A4	>6 & ≤ 8	0.49	10.66	4.93	1.23	0.20
B-A5	>8 & < 10	0.62	13.32	6.17	1.54	0.26

OPTION B

BOILER BURNING NATURAL GAS AND/OR PROPANE¹

POTENTIAL TO EMIT (IN TPY) ESTABLISHED BY SELECTING MAXIMUM GAS USAGE
ASSUMES MAXIMUM CUBIC FEET/YR BURNED IN SELECTED CATEGORY

General Permit Number	Annual Natural Gas Limit <small>(Any Propane used must be converted as described in Footnote 1 below.)</small>	Air Contaminant Category				
		(TSP)	(SOx)	(NOx)	(CO)	(VOC)
B-B1	≤ 10,000,000 cubic ft/yr.	0.06	0.01	0.50	0.11	0.03
B-B2	≤ 20,000,000 cubic ft/yr.	0.12	0.01	1.00	0.21	0.06
B-B3	≤ 40,000,000 cubic ft/yr.	0.24	0.01	2.00	0.42	0.12
B-B4	≤ 60,000,000 cubic ft/yr.	0.36	0.02	3.00	0.63	0.18

FOOTNOTE: 1 - Annual volume of Propane (in gallons) used shall be multiplied by the factor 87.1 to get the equivalent volume (in ft³) of Natural Gas. The total of this equivalent volume plus the actual Natural Gas volume shall not exceed the limits of this column for the purpose of determining compliance with this General Permit

OPTION C						
BOILER BURNING NUMBER 2 FUEL OIL, DIESEL, AND/OR KEROSENE						
POTENTIAL TO EMIT (IN TPY) ESTABLISHED BY SELECTING MAXIMUM OIL USAGE						
ASSUMES MAXIMUM GALLON/YR BURNED IN SELECTED CATEGORY						
General Permit Number	Annual Limit Total No. 2 Fuel Oil, Diesel and/or Kerosene	Air Contaminant Category				
		(TSP)	(SOx)	(NOx)	(CO)	(VOC)
B-C1	≤ 100,000 gallons/yr.	0.10	2.16	1.00	0.25	0.03
B-C2	≤ 200,000 gallons/yr	0.20	4.32	2.00	0.50	0.06
B-C3	≤ 350,000 gallons/yr	0.35	7.56	3.50	0.86	0.10
B-C4	≤ 500,000 gallons/yr	0.50	10.80	5.00	1.25	0.14

NOTE: Annual emissions listed in Options A, B and C were calculated using factors from AP-42, Fifth Edition, Volume 1, Chapter 1.

VII. COMPLIANCE PLAN

The Boiler covered by this General Permit is subject to the applicable requirements listed on the following pages.

COMPLIANCE PLAN: Boilers Less Than 10 Million BTU/HR Combusting Natural Gas, Propane, No. 2 Fuel Oil, Diesel, Kerosene, or A Combination Of These Fuels

Item No	Applicable Requirement	Monitoring Requirement	Record keeping Requirement	Submittal/ Action
1.	<p>Permittee shall not use the equipment in a manner which will cause visible emissions, exclusive of visible condensed water vapor, except for a period no more than 3 minutes in any consecutive 30 minute period. {N.J.A.C 7:27-3.2(a) & (c)}</p>	<p>Permittee shall visually observe the stack once each month if the equipment is used for more than 2 continuous hours during the month. {N.J.A.C 7:27-8.13(d)}</p>	<p>Permittee shall record in either a permanent bound log book or in readily accessible computer memories, that the stack was observed (date and time) and if operation of the equipment causes visible emissions (exclusive of visible condensed water vapor) for a period longer than 3 minutes in any consecutive 30 minute period. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>If visible emissions are observed, refer to operator manual for corrective measures and record corrective action. If measures fail to correct visible emissions within 24 hours of observation, report the incident in writing to the Regional Enforcement Office within three working days. {N.J.A.C 7:27-8.13(d)4}</p>
2.	<p>Allowable emission rate for particulates from the combustion of fuel shall be based on heat input rate to the boiler. {N.J.A.C 7:27-4.2}</p>	None	None	None

3.	<p>This equipment shall not cause any air contaminant, including an air contaminant detectable by the sense of smell, to be present in the outdoor atmosphere in such quantity and duration which is, or tends to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property, except in areas over which the owner or operator has exclusive use or occupancy. {N.J.A.C 7:27-5}</p>	None	<p>Permittee shall record in either a permanent bound log book or in readily accessible computer memories instances (date and time) when the operation of equipment has the potential to cause off-property effects. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>Any operation of the equipment which may cause a release of air contaminants in a quantity or concentration which poses a potential threat to public health, welfare, or the environment or which might reasonably result in citizen complaints shall be reported by the Permittee as required by the Air Pollution Control Act. Permittee shall immediately notify the Department of any non-compliance by calling the Environmental Action Hotline at (609)292-7172. {N.J.S.A 26:2C-19(e)}</p>
4.	<p><u>For Option A Only</u> Compliance with annual emission limit for each air contaminant (NOx, VOC, CO, SO2, TSP/PM-10) shall be based on operation of the boiler at a maximum of 8760 hours per year for the size registered. {N.J.A.C 7:27-8.13(a)}</p>	<p>For each fuel delivery received, the Permittee shall review delivery records from the oil distributor to verify delivery of number 2 commercial fuel oil, diesel or kerosene. {N.J.A.C 7:27-8.13(a)}</p>	<p>In a permanent bound log book, the Permittee shall keep fuel oil delivery records verifying that number 2 commercial fuel oil, diesel or kerosene are the only grades of fuel oil being burned by the boiler. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>Permittee shall report any non-compliance within three working days after the event in writing to the Regional Enforcement Office. {N.J.A.C 7:27-8.13(d)4}</p>

5.	<p>For Options B or C Only Compliance with annual emission limit for each air contaminant (NOx, VOC, CO, SO2, TSP/PM-10) shall be based on the amount of fuel burned per year. Permittee shall comply with annual self imposed fuel limit. {N.J.A.C 7:27-8.13(a)}</p>	<p>Permittee shall install and operate a totalizing fuel flow meter monitoring the total amount of fuel burned per year by the boiler. {N.J.A.C 7:27-8.13(d)}</p>	<p>Permittee shall record in either a permanent bound log book or in readily accessible computer memories, fuel type and monthly amount of fuel burned by the boiler. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>Permittee shall report any non-compliance within three working days after the event in writing to the Regional Enforcement Office. {N.J.A.C 7:27-8.13(d)4}</p>
6.	<p>The maximum allowable fuel oil (number 2 commercial fuel oil, diesel or kerosene) sulfur content is based on the geographic location of a facility. This equipment shall not use fuel oil which has a sulfur content exceeding the following:</p> <p>0.2 % sulfur by wt. if facility is located in Bergen, Burlington, Camden, Essex, Gloucester, Hudson, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset and Union Counties</p> <p>0.3 % sulfur by wt. if facility is located in Atlantic, Cape May, Cumberland, Hunterdon, Ocean, Salem, Sussex and Warren Counties {N.J.A.C 7:27-9}</p>	<p>For each fuel oil delivery received, the Permittee shall review the certificate of analysis from the oil distributor for fuel oil sulfur content. {N.J.A.C 7:27-8.13(a)}</p>	<p>In a permanent bound log book, the Permittee shall keep records of fuel oil sulfur content for each delivery received. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>Permittee shall report any non-compliance within three working days after the event in writing to the Regional Enforcement Office. {N.J.A.C 7:27-8.13(d)4}</p>