

Permit Number: [Permit Number]

Facility Name: [Facility Name]

Facility ID: [Facility ID]

## GENERAL PERMIT 1.21 TEMPLATE

**40-50 MMBTU/HR MAXIMUM HEAT INPUT NATURAL GAS AND NO. 2 OIL FIRED BOILER THAT IS CONSTRUCTED,  
MODIFIED OR RECONSTRUCTED AFTER JUNE 4, 2010**

### **B. Facility-Wide Terms and Conditions**

Note: The following are the terms and conditions for a General PTIO to be issued to a non-Title V facility

**Permit Number:** [Permit Number]

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1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.
2. The Ohio EPA has determined that this facility operates affected sources that are subject to the requirements of 40 CFR Part 63, Subpart JJJJJJ, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources. Ohio EPA is not accepting the delegation authority to implement and enforce the area source NESHAP standard. The area source NESHAP standard is implemented and enforced by U.S. EPA, Region 5. The promulgated version of this NESHAP standard and the 40 CFR Part 63, General Provisions may be accessed via the Internet from the Electronic Code of Federal Regulations (e-CFR) website <http://www.ecfr.gov/> or by contacting the Ohio EPA, District Office or Local Air Agency.

The following emissions units are subject to the requirements of this NESHAP standard:

[Emissions Unit ID], [DAPC Description]

## **C. Emissions Unit Terms and Conditions**

1. [Emissions Unit ID], [DAPC Description]

**Operations, Property and/or Equipment Description:**

[DAPC Description]

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The emissions unit shall be designed to emit no more than the following:  0.14 lb of nitrogen oxides (NO <sub>x</sub> ) emissions per MMBtu of heat input.  0.082 lb of carbon monoxide (CO) emissions per MMBtu of heat input.  See b)(2)a. and b)(2)b. below.
b.	OAC rule 3745-31-05(A)(3)(ii)	See b)(2)c.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the stack(s) serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	Particulate emissions (PE) shall not exceed 0.020 lb/MMBtu of actual heat input when burning natural gas and 0.040

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		lb/MMBtu of actual heat input when burning No. 2 fuel oil.
e.	OAC rules 3745-18-06 to 3745-18-94	<p>When burning natural gas, the requirements of these rules do not apply.</p> <p>When burning No. 2 fuel oil, the emission limitations specified by these rules are less stringent than the potential emissions of the boiler.</p>
f.	OAC rule 3745-110-03(A)	See b)(2)d. and d)(1).
g.	40 CFR Part 60, Subpart Dc	<p>When burning No. 2 fuel oil, SO<sub>2</sub> emissions shall not exceed 0.50 lb/MMBtu heat input from oil; or, as an alternative, No. 2 fuel oil combusted in this emissions unit shall not contain greater than 0.5 weight percent sulfur. [40 CFR 60.42c(d)]</p> <p>When burning No. 2 fuel oil, visible particulate emissions from any stack shall not exceed 20% opacity, as a six-minute average, except for one 6-minute period per hour of not more than 27% opacity. [40 CFR 60.43c(c)]</p> <p>Boilers that are constructed, reconstructed, or modified after February 28, 2005 are not subject to a particulate emissions limit under 40 CFR 60.43c when burning No. 2 fuel oil that contains 0.5 weight percent or less sulfur. [40 CFR 60.43c(e)(4)]</p> <p>See b)(2)e. and b)(2)f. below.</p>

(2) Additional Terms and Conditions

- a. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the use of natural gas or No. 2 fuel oil.
- b. The lb/MMBtu actual heat input emission limitations are based on the emissions unit's potentials to emit. Therefore, no monitoring, record keeping, and reporting requirements are necessary to ensure ongoing compliance with these emission limitations.

- c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, sulfur dioxide (SO<sub>2</sub>), and volatile organic compound (VOC) emissions from this air contaminant source since the uncontrolled potential to emit is less than 10 tons/year.
- d. The permittee shall perform a tune-up on this emissions unit annually.
- e. The permittee shall comply with the additional terms and conditions required under 40 CFR Part 60, Subpart Dc, including the following sections:

60.40c(b)	Delegation
60.41c	Definitions
60.42c(i)	The SO <sub>2</sub> emission limit and fuel oil sulfur limit apply at all times, including periods of startup, shutdown, and malfunction.
60.43c(d)	The visible particulate emission limit applies at all times, except periods of startup, shutdown, and malfunction.

- f. The permittee shall comply with the applicable requirements identified in 40 CFR Part 60, Subpart Dc in accordance with the applicable provisions of 40 CFR Part 60, Subpart A.

c) Operational Restrictions

- (1) The permittee shall only burn natural gas or fuel oil that contains no more than 0.50 weight percent sulfur in the steam generating unit(s) in order to demonstrate compliance with the applicable SO<sub>2</sub> and PE emission limits in 40 CFR Part 60, Subpart Dc. The fuel certification shall include the information identified in 40 CFR 60.48c(f)(1).

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform a tune-up on this emissions unit annually and maintain, in a permanently bound log book, or other format approved in writing by the director the following information:
  - a. The date of the last tune-up;
  - b. The name, title and affiliation of the person who performed the tune-up and made any adjustments; and
  - c. Any other information which the Ohio EPA may require as a condition of approval of any permit for the boiler.
- (2) The permittee shall maintain a copy of the notification of the date of initial startup of the steam generating unit(s) required per 40 CFR 60.7. This notification should include the design heat input capacity and identification of the fuels to be combusted in each steam generating unit subject to Part 60, Subpart Dc.
- (3) The permittee shall comply with the monitoring and recordkeeping requirements of 40 CFR Part 60, Subpart Dc, including the following sections:

60.42c(h)(1)	Compliance with the emission limits or fuel oil sulfur limits may be determined based on a certification from the fuel supplier.
60.48c(f)	Fuel supplier certification requirements.
60.48c(g)	Monthly records for the amount of each fuel combusted or total amount of each steam generating unit fuel delivered to the property.
60.48c(i)	The requirements of this rule are less stringent than the requirements of A.3.

e) Reporting Requirements

- (1) Pursuant to the NSPS, the permittee is required to report the following information at the appropriate times (if the information has not already been reported):
- a. construction date (no later than 30 days after such date);
  - b. actual start-up date (within 15 days after such date); and,
  - c. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to the appropriate Local Air Agency or District Office and to:

Ohio Environmental Protection Agency  
 DAPC - Permit Management Unit  
 P.O. Box 163669  
 Columbus, Ohio 43216-3669

- (2) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (4) The permittee shall comply with the reporting requirements of 40 CFR Part 60, Subpart Dc, including the following sections:

60.48c(a)	Submit notification of the date of construction, reconstruction, and actual startup, including the items detailed in 60.48(a)(1)-(4).
60.48c(b)	Submit visible emissions performance test data from the initial and any subsequent performance tests.
60.48c(c)	Submit excess emission reports and maintain records for each performance tests.

60.48c(d)	Submit fuel oil sulfur limit reports.
60.48c(e)	Submit reports including the calendar dates covered in the reporting period and fuel supplier certification as described in 60.48c(f).
60.48c(j)	Reports shall be submitted to the Administrator and be postmarked by the 30th day following the end of the reporting period (reports due: January 31 (covering July to December) and July 31 (covering January to June)).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation(s):

The emissions unit shall be designed to emit no more than 0.14 lb/MMBtu NO<sub>x</sub> emissions.

Applicable Compliance Method(s):

The emission limitation is based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (9/98) for fuel oil combustion. Compliance with the lb/MMBtu emission limitation may be determined by converting the 20 lb NO<sub>x</sub>/1000 gal emission factor into lb NO<sub>x</sub>/MMBtu by dividing by 140 MMBtu/1000 gal (i.e., 20 lb NO<sub>x</sub>/1000 gal / 140 MMBtu/1000 gal = 0.14 lb NO<sub>x</sub>/MMBtu).

If required, the permittee shall demonstrate compliance with the lb/MMBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 7.

b. Emission Limitation(s):

The emissions unit shall be designed to emit no more than 0.082 lb/MMBtu CO emissions.

Applicable Compliance Method(s):

The emission limitation is based upon the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-1 (7/98) for natural gas combustion. Compliance with the lb/MMBtu emission limitation may be determined by converting the 84 lb CO/10<sup>6</sup> scf emission factor into lb CO/MMBtu by dividing by 1,020 Btu/scf (i.e., 84 lb CO/10<sup>6</sup> mmcf / 1020 Btu/scf = 0.082 lb CO/MMBtu).

If required, the permittee shall demonstrate compliance with the lb/MMBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 10.

c. Emission Limitation(s):

Visible particulate emissions from the exhaust stack(s) serving this emissions unit shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method(s):

If required, compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9.

d. Emission Limitation(s):

PE shall not exceed 0.020 lb/MMBtu of actual heat input when burning natural gas and 0.040 lb/MMBtu of actual heat input when burning No. 2 fuel oil.

Applicable Compliance Method(s):

Compliance with the 0.020 lb/MMBtu of actual heat input when burning natural gas may be determined by converting the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.4, Table 1.4-2 (7/98) for natural gas combustion (1.9 lb PE/10<sup>6</sup> mmcf) into lb PE/MMBtu by dividing by 1020 Btu/scf (i.e., 1.9 lb filterable PE/10<sup>6</sup> mmcf / 1020 Btu/scf = 0.0019 lb PE/MMBtu).

Compliance with the 0.040 lb/MMBtu of actual heat input when burning No. 2 fuel oil may be determined by converting the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (5/10) for distillate fuel oil combustion (2 lb filterable PE/1000 gal) into lb PE/MMBtu by dividing by 140 MMBtu/1000 gal (i.e., 2 lb PE/1000 gal / 140 MMBtu/1000 gal = 0.014 lb PE/MMBtu).

If required, the permittee shall demonstrate compliance with the lb/MMBtu emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1- 4, and 5.

e. Emission Limitation(s):

As specified in OAC rules 3745-18-06 to 3745-18-94.

Applicable Compliance Method(s):

Compliance with the emission limitation specified by this rule may be determined by converting the emission factor from AP-42, "Compilation of Air Pollutant Emission Factors", 5th Edition, Section 1.3, Table 1.3-1 (5/10) for distillate fuel oil combustion (142\*S lb SO<sub>2</sub>/1000 gal where S equals the sulfur content (%) of the fuel oil) into lb SO<sub>2</sub>/MMBtu by dividing by 140 MMBtu/1000 gal (i.e., [142 \* 0.0015] lb SO<sub>2</sub>/1000 gal / 140 MMBtu/1000 gal = 0.0015 lb SO<sub>2</sub>/MMBtu). The sulfur content of ultra-low sulfur distillate oil is 0.0015%.

f. Emission Limitation(s):

When burning No. 2 fuel oil, visible particulate emissions from any stack shall not exceed 20% opacity, as a six-minute average, except for one 6-minute period per hour of not more than 27% opacity.

Applicable Compliance Method(s):

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and 40 CFR 60.45c(a)(8).

g. Sulfur Content Limitation(s):

When burning No. 2 fuel oil, SO<sub>2</sub> emissions shall not exceed 0.50 lb/MMBtu heat input from oil; or, as an alternative, No. 2 fuel oil combusted in this emissions unit shall not contain greater than 0.5 weight percent sulfur.

Applicable Compliance Method(s):

Compliance shall be demonstrated by the certification from the fuel supplier as described in 40 CFR 60.48c(f) and paragraph d)(3).

(2) The permittee shall conduct, or have conducted, an initial performance test for this emissions unit (if the emissions test has not already been conducted) in accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after issuance of this permit;
- b. The emission testing shall be conducted to demonstrate compliance with the visible particulate emission limitation, while burning fuel oil.
- c. The following test method shall be employed to demonstrate compliance with the allowable emission rate: for visible particulate emissions, U.S. EPA's Reference Method 9 of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA District Office or local air agency.
- d. The test shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an Intent to Test notification to the appropriate Ohio EPA District Office or local air agency. The Intent to Test notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test, and the person(s) who will be conducting the test. Failure to submit such notification for review and approval prior to the test may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the visible emissions test.

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test, examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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A comprehensive written report on the results of the visible emissions test (including opacity readings and the emissions unit operating parameters) shall be signed by the person(s) responsible for the test and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following the completion of the test. The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.