

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

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A. Boilers No. 1 & No 2

Process Description: Two identical Babcock & Wilcox, forced draft water tube boilers
Facility ID: B001, B002
Maximum Design Rate: 92.0 MMBtu/hr each
Fuel(s): Natural gas and no. 2 fuel oil as an emergency fuel
Control Device(s): None

1. Restrictions:

- ~~a. The permittee shall continue to meet the conditions of Operating Permit No. 0022, in addition to the revisions in this permit. (§2102.04.b.5)~~
- b. At no time shall the permittee allow emissions of nitrogen oxides from each boiler to exceed 0.145 pounds per MMBtu at any time. The annual nitrogen oxides limits for boiler no. 1 and boiler no. 2 are 24.4 tons and 36.7 tons, respectively, during any 12 consecutive month period. (§2105.06, 25 Pa. Code §129.99)
- c. At no time shall the permittee operate boilers no. 1 or no. 2 unless all process equipment and O₂ trim equipment are properly operated and maintained according to condition V.A.3.a. (RACT Order #220, Condition 1.2; §2105.0625 Pa. Code §129.99)
- d. At no time shall the permittee operate boiler no. 1 or no. 2 using any fuel other than natural gas with the exception of no.2 fuel oil which may be combusted only during emergency conditions and/or natural gas curtailment. (RACT Order #220, Condition 1.3; §2105.06, 25 Pa. Code §129.99)
- e. Natural gas usage in boiler no. 1 shall not exceed the maximum potential usage of 90,200 scf/hr and 395 million scf/yr. Natural gas usage in boiler no. 2 shall not exceed the maximum potential usage of 90,200 scf/hr and 514 million scf/yr. (§2103.12.h.1; §2103.12.a.2.C, 25 Pa. Code §129.99)
- f. No. 2 fuel oil combusted in each boiler shall not exceed 660 gal/hr and 330,000 gallons in any consecutive twelve-month period, at any time. All fuel oil combusted shall meet current ASTM specifications for no.2 fuel oil and contain 0.05% sulfur (wt. percent) or less. (§2103.12.h.1, 25 Pa. Code §129.99)
- g. Emissions from boiler no. 1 and boiler no. 2, shall not exceed the following limitations in Table V-A-1 or V-A-2 at any time: (§2104.02.a.1, §2105.06, §2101.02.c.4, §2103.12.a.2.B, 25 Pa. Code §129.99)

TABLE V-A-1: Boiler No. 1 Emission Limitations

POLLUTANT	Natural Gas (lb/hr)	No. 2 Fuel Oil (lb/hr)	ANNUAL EMISSION LIMIT (tons/year) ¹
Nitrogen Oxides	13.34	13.25	24.4

1) A year is defined as any consecutive 12-month period.

TABLE V-A-2: Boiler No. 2 Emission Limitations

POLLUTANT	Natural Gas (lb/hr)	No. 2 Fuel Oil (lb/hr)	ANNUAL EMISSION LIMIT (tons/year) ¹
Nitrogen Oxides	13.34	13.25	36.7

1) A year is defined as any consecutive 12-month period.

2. Testing Requirements:

- a. While combusting natural gas, the permittee shall perform NO_x emission testing on boilers no.1 & no.2, at least once every two (2) years from the most recent stack test. Such testing shall consist of methods no. 1 through no. 5 and no. 7E of appendix A of 40 CFR 60 and be conducted in accordance with such test methods and §2108.02 of Article XXI. (RACT Order #220, Condition 1.4; §2105.06; §2103.12.h.1; §2108.02 and §2103.12.i, 25 Pa. Code §129.100)
- ~~b. The permittee shall perform NO_x and particulate matter testing after accruing 40 or more operating hours in any consecutive 12-month period while firing fuel oil resulting from periods of gas curtailment or gas supply interruption in order to demonstrate compliance with the fuel oil NO_x and particulate emission limitations in conditions in conditions V.A.1.g. Such testing shall be conducted in accordance with Article XXI §2108.02 and as part of the next regularly scheduled test program required in condition V.A.2.a above. The permittee shall not be required to repeat the fuel oil testing more often than once in any five year period, unless requested to do so by the Department. (§2108.02 and §2103.12.i)~~
- ~~e. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. (§2103.12.h.1)~~

3. Monitoring Requirements:

- a. The permittee shall continuously monitor the oxygen content of the flue gas of each boiler to within 2% of actual and record the oxygen content to the nearest 0.2%, to ensure the boilers are being operated and maintained properly and are operating under the conditions demonstrated during the most recent compliance test. (§2103.12.i; §2108.03, 25 Pa. Code §129.100)

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain the following data for boilers no. 1 and no.2 (RACT Order #220, Condition 1.5; §2105.06; §2103.12.h.1 and §2103.12.j, 25 Pa. Code §129.100):
 - 1) Fuel consumption (daily, monthly, and 12-month), type of fuel consumed and suppliers' certification of sulfur content, and heating value;
 - 2) Steam load, (mlbs/day, monthly average);
 - 3) Flue gas oxygen (continuously, monthly average)
 - 4) Cold starts (date, time and duration of each occurrence);
 - 5) Total operating hours, (hours/day, monthly and 12-month); and
 - 6) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.

- 7) Stack test protocols and reports.
- b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.h.1, 25 Pa. Code §129.100)
- c. All records required under this section shall be maintained by the permittee for a period of five years following the date of such record. [§2103.12.j.2, 25 Pa. Code §129.100]

5. Reporting Requirements:

- a. The permittee shall report the following information to the Department within thirty days of the end of each calendar half. The reports shall contain all required information for the time period of the report: (§2103.12.k.1, 25 Pa. Code §129.100)
 - 1) Monthly and 12-month data required to be recorded by condition V.A.4.a above;
 - 2) Cold start information; and
 - 3) Non-compliance information required to be recorded by V.A.4.b above.
- ~~b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [§2103.12.k]~~

6. Work Practice Standard:

The permittee shall at all times properly operate and maintain all process and emission control equipment at the facility according to good engineering practice. (25 Pa. Code §129.99)

B. Boiler No. 3

Process Description: One Babcock & Wilcox, forced draft water tube, natural gas-fired boiler
Facility ID: B003
Capacity: 131.1 MMBtu/hr
Fuel(s): Natural gas and no. 2 fuel oil as an emergency fuel
Control Device: None

1. Restrictions:

- ~~a. The permittee shall continue to meet the conditions of Operating Permit No. 0022, in addition to the revisions in this permit. [§2102.04.b.5]~~
- b. At no time shall the permittee allow emissions of nitrogen oxides from boiler No. 3 to exceed 0.145 pounds per MMBtu at any time and 58.3 tons during any 12 consecutive months (Condition 1.1; §2105.06, 25 Pa. Code §129.99).
- c. At no time shall the permittee operate boiler No. 3 unless all process equipment and O₂ trim equipment are properly operated and maintained according to condition V.B.3.a (RACT Order #220, Condition 1.2; §2105.06, 25 Pa. Code §129.99).
- d. At no time shall the permittee operate boiler no. 3 using any fuel other than natural gas with the exception of no.2 fuel oil which may be combusted only during emergency conditions and/or natural gas curtailment (RACT Order #220, Condition 1.3; §2105.06, 25 Pa. Code §129.99).
- e. Natural gas usage in boiler No.3 shall not exceed the maximum potential usage of 128,430 scf/hr and 1,069 million scf/yr. (§2103.12.h.1, 25 Pa. Code §129.99)
- f. No. 2 fuel oil combustion in boiler no.3 shall not exceed 940 gal/hr and 470,000 gallons in any consecutive twelve-month period, at any time. All fuel oil combusted shall meet current ASTM specifications for no.2 fuel oil and shall contain 0.05% sulfur (wt. percent) or less. (§2103.12.h.1, 25 Pa. Code §129.99)
- g. Emissions from boiler No. 3 shall not exceed the emission limitations in Table V-B-1 at any time: (§2104.02.a.1, §2105.06, §2101.02.c.4, §2103.12.a.2.B, 25 Pa. Code §129.99)

TABLE V-B-1: Boiler No. 3 Emission Limitations

POLLUTANT	Natural Gas (lb/hr)	No. 2 Fuel Oil (lb/hr)	ANNUAL EMISSION LIMIT (tons/year) ¹
Nitrogen Oxides	19.01	22.65	58.3

1) A year is defined as any consecutive 12-month period.

2. Testing Requirements:

- a. While combusting natural gas, the permittee shall perform NO_x emission testing on boiler No.3, at least once every two (2) years from the most recent stack test. Such testing shall consist of methods no. 1 through no. 5 and no. 7E of appendix A of 40 CFR 60 and be conducted in accordance with

such test methods and §2108.02 of Article XXI. (RACT Order #220, Condition 1.4; §2105.06; §2103.12.h.1; §2108.02 and §2103.12.i, 25 Pa. Code §129.100)

- ~~b. The permittee shall perform NO_x and particulate matter testing on boiler No. 3 after accruing 40 or more operating hours in any consecutive 12-month period while firing fuel oil resulting from periods of gas curtailment or gas supply interruption to demonstrate compliance with conditions V.B.1.b and V.B.1.g. Such testing shall be conducted in accordance with Article XXI §2108.02, and as part of the next regularly scheduled test required in condition V.B.2.a above. The permittee shall not be required to repeat the fuel oil testing more often than once in any five year period, unless requested to do so by the Department. (§2108.02 and §2103.12.i)~~
- ~~e. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with Article XXI §2108.02. [§2108.02]~~

3. Monitoring Requirements:

- a. The permittee shall continuously monitor the oxygen content of the flue gas of the boiler to within 2% of actual and shall record the percent oxygen content to the nearest 0.2%, to ensure the boiler is being operated and maintained properly and is operating under the conditions demonstrated during the most recent compliance test to meet the lb/MMBtu requirements of the NO_x RACT. (§2103.12.i; §2108.03; §2102.04.e, 25 Pa. Code §129.100)
- b. The permittee shall inspect boiler no.3 weekly, to insure compliance with condition V.B.1.c above. (§2103.12.i; §2102.04.e, 25 Pa. Code §129.100)

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain the following data for Boiler No. 3 (RACT Order #220, Condition 1.5; §2105.06; §2103.12.h.1 and §2103.12.j, 25 Pa. Code §129.100):
 - 1) Fuel consumption (daily, monthly, and 12-month), type of fuel consumed and suppliers' certification of sulfur content and heating value;
 - 2) Steam load, (mlbs/day, monthly average);
 - 3) Flue gas oxygen (continuously, monthly average);
 - 4) Cold starts (date, time and duration of each occurrence);
 - 5) Total operating hours (hours/day), monthly and 12-month);
 - 6) Records of operation, maintenance, inspection calibration and/or replacement of combustion equipment, and
 - 7) Stack test protocols and reports.
- b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. (§2103.12.h.1, 25 Pa. Code §129.100)
- c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. (§2103.12.j.2, 25 Pa. Code §129.100)

5. Reporting Requirements:

- a. The permittee shall report the following information to the Department within thirty days of the end of each calendar half. The reports shall contain all required information for the time period of the report: (§2103.12.k.1, 25 Pa. Code §129.100)
 - 1) Monthly and 12-month data required to be recorded by condition V.B.4.a above;
 - 2) Cold start information; and
 - 3) Non-compliance information required to be recorded by V.B.4.b above.
- ~~b. Until terminated by written notice from the Department, the requirement for the permittee to report cold starts 24 hours in advance in accordance with §2108.01.d is waived and the permittee may report all cold starts in accordance with Condition V.B.5.a above. (§2108.01.d, §2103.12.k.1)~~
- ~~c. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [§2103.12.k]~~

6. Work Practice Standard:

The permittee shall at all times properly operate and maintain all process and emission control equipment at the facility according to good engineering practice. (25 Pa. Code §129.99)

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