

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

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A. Boilers No. 1 through No. 4

Process Description: Four identical M21 Keystone O-type, package boilers with a common stack
Facility ID: B001, B002, B003 & B004
Maximum Design Rate: 150 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. 0044, 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 0.22 pounds per MMBtus and 72.3 tons during any 12 consecutive month period (RACT Order #265, Condition 1.1; §2105.06, 25 Pa. Code §129.99).
- c. At no time shall the permittee operate boilers no. 1 through no. 4 unless all process equipment and O₂ trim equipment are properly operated and maintained according to condition V.A.3.a below (RACT Order #265, Condition 1.2; §2105.06, 25 Pa. Code §129.99).
- d. Natural gas usage in each boiler shall not exceed the maximum potential usage of 147,060 scf in any one-hour period and 644.12 MMscf (50% of annual capacity) in any consecutive twelve-month period. (§2103.12.h.1, §2103.12.a.2.C, 25 Pa. Code §129.99)
- e. At no time shall the permittee operate the subject boilers using any fuel other than natural gas with the exception of no.2 fuel oil, which may be combusted only during combustion tuning, emergency conditions and/or natural gas curtailment (RACT Order #265, Condition 1.3; §2105.06, 25 Pa. Code §129.99).
- f. Emissions from each boiler shall not exceed the following limitations in Table V-A-1 at any time: (§2101.02.c.4, §2103.12.a.2.B, §2104.03.a.2; §2104.03.b, 25 Pa. Code §129.99)

TABLE V-A-1: Emission Limitations for B001, B002, B003 & B004 (each)

POLLUTANT	Natural Gas (lb/hr)	No. 2 Fuel Oil (lb/hr)	ANNUAL EMISSION LIMIT (tons/year) ¹
Nitrogen Oxides	33.0	25.95	72.3

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

- g. At no time shall No. 2 fuel oil combustion in each boiler exceed 1,080 gallons each in any one-hour period and 540,035 gallons in any consecutive twelve-month period. (§2103.12.h.1, 25 Pa. Code §129.99).

2. Testing Requirements:

- a. The permittee shall perform NO_x emission testing on boilers no.1 through no. 4, in accordance with Site Level Condition IV.14 above, once every two years in order to demonstrate compliance with the natural gas NO_x emission limitations in conditions V.A.1.b and V.A.1.f above (§2103.12.i, §2108.02, 25 Pa. Code §129.100)
- b. The permittee shall perform NO_x emission testing on boilers no.1 through no. 4 within 60 days of firing fuel oil, in order to demonstrate compliance with the fuel oil NO_x emission limitations in condition V.A.1.f above (RACT Order #265, Condition 1.4; §2103.12.i; §2108.02, 25 Pa. Code §129.100)
- ~~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 3% of the measured value and record the oxygen content to the nearest 0.1%, to ensure the subject boilers are being operated and maintained properly and are operating under the conditions demonstrated during the most recent compliance test. (§2103.12.i and §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 through no. 4: (§2103.12.j; §2103.12.h.1 and RACT Order #265, Condition 1.5; §2105.06, 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 for each boiler;
 - 2) Steam load, (Mlbs/day, monthly average);
 - 3) Flue gas oxygen (hourly high, low and average, monthly average)
 - 4) Total operating hours, (hours/day, monthly and 12-month); and
 - 5) Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment; and
 - 6) 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; and
- 2) 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:

- a. 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. The permittee shall conduct annual adjustment and tune-up on boilers no.1 through no. 4 to include at a minimum: [25 Pa Code §129.99; §2102.04.b.5; §2105.06.d.2]
 - 1) Inspection, adjustment, cleaning, or replacement of fuel-burning equipment, including the burners and moving parts necessary for proper operation as specified by the manufacturer;
 - 2) Inspection of the flame pattern or characteristics and adjustments necessary to minimize total emissions of NO_x, ~~and to the extent practicable minimize emissions of CO~~; and
 - 3) Inspection of the air-to-fuel ratio control system and adjustments necessary to ensure proper calibration and operation as specified by the manufacturer.
- c. The following records must be maintained for the adjustment and tune-up required in condition V.A.6.b for boilers no.1 through no. 4: [25 Pa Code §129.99; §2102.04.b.5].
 - 1) The date of the adjustment procedure;
 - 2) The name of the service company and technicians;
 - 3) The operating rate or load after adjustment;
 - 4) The ~~CO and~~ NO_x emission rates before and after adjustment; and
 - 5) The excess oxygen rate after adjustment.

Pages 20 through 21
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