

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

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A. Boilers No. 1 & 2:

Process Description: Steam Production
Facility ID: B001 & B002
Capacity: 760 MMBtu/hr; 481 MMBtu/hr
Raw Materials: Desulfurized coke oven gas and natural gas
Control Device: NA

1. Restrictions:

- a. ~~The permittee shall continue to meet the conditions of the current Title V Operating Permit #0052 not otherwise affected by the revisions in this permit. (§2102.04.b.5; §2105.06.d)~~
- b. NO_x emissions from each Boilers No. 1 or 2 shall not exceed the limitations in Table V-A-1 below, with the exception of actions to mitigate emergency situations. The NO_x emissions conditions in in Table V-A-1 below shall be determined by a thirty (30) day rolling average and a twelve (12) month rolling average Continuous Emission Monitoring (CEM) data for the lbs/MMBtu and tons/yr emission limitation respectively (25 Pa Code §129.99; RACT Order No. 234, Condition 1.5; 2102.04.b.5; §2105.06.d)

TABLE V-A-1: NO_x Emission Limitations

Process	Emission Limit** lbs/MMBtu	Hourly Emission Limit (lb/hr) **	Annual Emission Limit (tons/year)*
Boiler 1	0.48	364.80	1,598
Boiler 2	0.37	177.97	780

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

**Based on a 30-day rolling average.

2. Testing Requirements:

- a. Emissions of NO_x may be determined by the CEMs required in Condition V.A.3 below in lieu of a stack test to determine compliance with the emissions limitation of Conditions V.A.1.b, V.A.1.c and V.A.1.e above. (§2103.12.i; §2103.12.h.1; §2108.02; §2108.03; 25 Pa Code §129.100)
- b. ~~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 Site Level Condition IV.14 and §2108.02. (§2103.12.h.1)~~

3. ~~Monitoring Requirements:~~

- a. ~~The permittee shall install, operate, and maintain continuous nitrogen oxides monitoring systems and other monitoring systems to convert data to required reporting units in compliance with 25 PA Code §§139.101 - 139.111 relating to requirements for continuous in-stack monitoring for stationary sources. (§2108.03.b.2 and RACT Plan 234)~~

4. Record Keeping Requirements:

- a. The permittee shall maintain all appropriate records to demonstrate compliance with the requirements of §2105.06. Such records shall provide sufficient data and calculations to clearly demonstrate that all requirements of §2105.06 are met. The permittee shall record and maintain such data and information required to determine compliance for the facility in a time frame consistent with the averaging period of the requirements of both §2105.06 and RACT Order No. 234. 2102.04.b.5; §2108.03.d, §2105.06; 25 Pa Code §129.100; RACT Plan 234)
 1. An identification of each instance during the reporting period during which emissions exceeded the applicable emission limitation rates in Condition V.A.1.b above and an identification of the reasons, if known, for such exceedance. The averaging period used for making such identification shall correspond to the averaging period specified in condition V.A.1.d above.
 2. An identification of each period during which the continuous emission monitoring system was inoperative, except for zero and span drift checks, the reasons therefore, and the nature of repairs or adjustments performed or to be performed.
 3. An identification of calibrations, zero and span drift checks, and other quality assurance procedures.
- 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.j)~~
- e. ~~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; RACT Plan 234, Condition 1.8)~~

5. Reporting Requirements:

- a. ~~The permittee shall report the following information semi-annually to the Department in accordance with General Condition III.15. The reports shall contain all required information for the time period of the report. The reports shall be postmarked by the 30th day following the end of the reporting period. (§2103.12.k; §2103.12.a.2.D)~~
 1. ~~Total monthly Fuel Combustion Unit, fuel use, per fuel type;~~
 2. ~~Cold start information; and~~
 3. ~~Non-compliance information required to be recorded by Condition V.A.4.b above~~
- b. ~~The permittee shall submit the information identified in V.A.4.a.1 through 3 above to the PADEP as a written report at three month intervals.~~
- e. ~~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 Standards:

At no time shall the permittee allow Boilers No. 1 or 2 to operate unless the subject equipment is properly operated and maintained according to good engineering and air pollution control practices by performing regular maintenance with the exception of actions to mitigate emergency conditions. (RACT Order No. 234, Condition 1.1; §2102.04.b.5; 25 Pa Code §129.99).

B. Boilers R1 and R2:

Process Description: Steam production
Facility ID: B005 & B006
Max. Design Rate: 229 MMBtu/hr, each (Heat Input)
Capacity: 229 MMBtu/hr, each (Heat Input)
Raw Materials: Desulfurized coke oven gas
Control Device: NA

1. Restrictions:

- a. ~~The permittee shall continue to meet the conditions of the current Title V Operating Permit #0052 not otherwise affected by the revisions in this permit. (§2102.04.b.5; §2105.06.d)~~
- b. NO_x emissions from each Boilers No. R1 or R2 shall not exceed the limitations in Table V-B-1 below with the exception of actions to mitigate emergency situations: (25 Pa Code §129.99; §2102.04.b.5; §2105.06.d)

TABLE V-B-1: NO_x Emission Limitations

Process	Emission Limit lbs/MMBtu	Hourly Emission Limit (lb/hr)	Annual Emission Limit (tons/year)*
Boiler R1	0.31	70.99	310.94
Boiler R2	0.31	70.99	310.94

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

2. ~~Testing Requirements:~~

- a. ~~The permittee shall perform emissions testing on Boilers R1 and R2 at least once every two years for NO_x. Such testing shall be in accordance with EPA Methods 7 through 7E or other such methods as approved by the Department. [RACT Plan 234 and §2108.02.c; §2107.05]~~
- b. ~~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 Site Level Condition IV.14 above and Article XXI §2108.02. (§2103.12.h.1)~~

3. ~~Monitoring Requirements:~~

~~None except as provided elsewhere in the permit~~

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain the following data for the boilers: (§2103.12.j; 25 Pa Code §129.100)
- Records of the amount of coke oven gas combusted and the H₂S content of the coke oven gas (daily, monthly and 12 months)
 - Cold starts (date, time and duration of each occurrence);

3. Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.

~~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.j)~~

~~e. 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)~~

5. ~~Reporting Requirements:~~

~~a. The permittee shall report the following information semi-annually to the Department in accordance with General Condition III.15. The reports shall contain all required information for the time period of the report. (§2103.12.k; §2103.12.a.2.D)~~

- ~~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 Condition V.B.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 Standards:

At no time shall the permittee allow Boiler No. R1 or R2 to operate unless the subject equipment is properly operated and maintained according to good engineering and air pollution control practices by performing regular maintenance with the exception of actions to mitigate emergency conditions. (RACT Order No. 234, Condition 1.1; §2102.04.b.5; 25 Pa Code §129.99).

C. Boilers T1 and T2:

Process Description: Steam production
Facility ID: B007 & B008
Max. Design Rate: 156 MMBtu/hr, each (Heat Input)
Capacity: 156 MMBtu/hr, each (Heat Input)
Raw Materials: Desulfurized coke oven gas and natural gas
Control Device: NA

1. Restrictions:

- a. ~~The permittee shall continue to meet the conditions of the current Title V Operating Permit #0052 not otherwise affected by the revisions in this permit. (§2102.04.b.5; §2105.06.d)~~
- b. NO_x emissions from each Boilers No. T1 or T2 shall not exceed the limitations in Table V-C-1 below, with the exception of actions to mitigate emergency situations: (25 Pa Code §129.99; §2102.04.b.5; §2105.06.d)

TABLE V-C-1: NO_x Emission Limitations

Process	Emission Limit lbs/MMBtu	Hourly Emission Limit (lb/hr)	Annual Emission Limit (tons/year)*
Boiler T1	0.31	48.36	211.82
Boiler T2	0.31	48.36	211.82

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

2. ~~Testing Requirements:~~

- a. ~~The permittee shall perform emissions testing on Boilers T1 and T2 at least once every two years for NO_x. Such testing shall be in accordance with EPA Methods 7 through 7E or other such methods as approved by the Department. (RACT Plan 234 and §2108.02.e; §2107.05)~~
- b. ~~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 Site Level Condition IV.14 above and Article XXI §2108.02. (§2103.12.h.1)~~

3. ~~Monitoring Requirements:~~

~~None except as provided elsewhere in the permit~~

4. Record Keeping Requirements:

- a. The permittee shall keep and maintain the following data for the boilers T1 and T2: (§2103.12.j; 25 Pa Code §129.100)
- Records of the type and amount of fuel combusted and the H₂S content of the coke oven gas (daily, monthly and 12 months)

2. Cold starts (date, time and duration of each occurrence);
3. Records of operation, maintenance, inspection, calibration and/or replacement of combustion equipment.

- 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.j)~~
- e. ~~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)~~

5. **Reporting Requirements:**

- a. ~~The permittee shall report the following information to the Department semi-annually in accordance with General Condition III.15. The reports shall contain all required information for the time period of the report. The reports shall be postmarked by the 30th day following the end of the reporting period. (§2103.12.k; §2103.12.a.2.D)~~
 1. ~~Monthly and 12-month data required to be recorded by Condition V.C.4.a above;~~
 2. ~~Cold start information; and~~
 3. ~~Non-compliance information required to be recorded by Condition V.C.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 Standards:**

At no time shall the permittee allow Boiler No. T1 or T2 to operate unless the subject equipment is properly operated and maintained according to good engineering and air pollution control practices by performing regular maintenance with the exception of actions to mitigate emergency conditions. (RACT Order No. 234, Condition 1.1; §2102.04.b.5; 25 Pa Code §129.99).

D. Process Equipment Sources

1. Work Practice Standards:

- a. ~~The following work practice requirements are consistent with the current requirements established in the Clairton Title V Permit #0052 and underlying installation permits (§2013.12.f)~~
- b. At no time shall the permittee operate the following equipment at the facility unless they are properly operated and maintained according to good engineering and air pollution control practices by performing regular maintenance with the exception of actions to mitigate emergency conditions. (RACT Order No. 234, Condition 1.1; 25 Pa Code §129.99; §2102.04.b.5)
 - 1. Coke Oven Batteries No. 1, 2, 3, 13, 14, 15, 19, 20, B and C (P001-P003, P007-P012, P046)
 - 2. Pushing Emission Control System for the coke oven batteries specified in V.D.1.b.1
 - 3. By-Product Recovery Plant (P021)
 - 4. Desulfurization Plant (With Scot Plant Incinerator) (P019)
 - 5. Wastewater Treatment Plant
- c. The coke oven batteries listed in condition V.D.1.b.1 above shall continue to comply with the NESHAP Subpart CCCC and Subpart L work practice standard. (§63.306; 63.7300; 25 Pa Code §129.99; §2102.04.b.5)
- d. The permittee shall not operate Coke Oven Battery C unless the PROven® System is maintained and operated in such manner that the collector main is maintained at a negative pressure and each individual oven is maintained at the lowest positive pressure necessary to inhibit leaks of raw coke oven gas to the atmosphere from oven doors, charging port lids, and offtakes. [25 Pa Code §129.99; §2102.04.b.6]
- e. At no time shall the permittee operate the by-products plant unless the clean coke oven gas blanketing system is being properly maintained and operated at all times while the plant process units blanketed by the system are emitting VOCs, with the exception of emergency or planned outages, repairs or maintenance. [§2105.06; RACT Plan 234; 25 Pa Code §129.99]
- f. For the By-Product Recovery Plant, the permittee shall: [§2105.06; 25 Pa Code §129.99; §2104.08]
 - 1. The permittee shall comply with each applicable emission limitation, work practice standard, and operation and maintenance requirement of 40 CFR Part 61, Subpart V - *National Emission Standards for Equipment Leaks (Fugitive Emission Sources)*. [25 PA Code §129.99]
- g. For the Coke Oven Gas Desulfurization Plant, the permittee shall: [§2105.06; 25 Pa Code §129.99]
 - 1. Properly maintain two Claus Plants at the coke oven gas desulfurization plant. Each Claus Plant shall be capable of independently processing all of the coke oven gas produced by the coke plant at full production.
 - 2. Operating and maintaining a Vacuum Carbonate Unit at all times that coke oven gas is being produced at the Clairton Works.
 - 3. Maintaining in good working order spare heat exchangers in the Vacuum Carbonate Units at the Clairton Works coke oven gas desulfurization facility.
 - 4. Maintaining in good working order spare pumps in the Vacuum Carbonate Units at the coke oven gas desulfurization facility.

5. Good combustion practices.

E. Quench Towers (P013, P015, P016, P017, P047, 051, P052):

Process Description: Water quenching of incandescent coke

Raw Materials: Incandescent coke, water

Control Device: Baffles installed in the quench towers to capture entrained water droplets

1. Work Practice Standards:

- ~~a. The following work practice requirements are consistent with the current requirements established in the Clairton Title V Permit #0052 and underlying installation permits (§2013.12.f)~~
- b. At no time shall the permittee operate the following quench towers at the facility unless they are properly operated and maintained according to good engineering and air pollution control practices by performing regular maintenance with the exception of actions to mitigate emergency conditions. (25 Pa Code §129.99; §2102.04.b.5)
 - 1. Quench Tower No. 1 (P013)
 - 2. Quench Tower No. 5 (P015)
 - 3. Quench Tower No. 7 (P016)
 - 4. Quench Tower B (P017)
 - 5. Quench Tower C (P047)
 - 6. 5A Quench Tower (P051)
 - 7. 7A Quench Tower (P052)
- c. The permittee shall be in compliance with the quench tower work practice standards, and operation and maintenance requirements of NESHAP 40 CFR 63, Subpart CCCCC at all times, except during periods of startup, shutdown, and malfunction as defined in §63.2. [25 Pa Code §129.99; §2103.12.h.6; §63.7295(b) & (c)]

F. Ammonia Flare (B010):

1. Work Practice Standards:

- a. The permittee shall properly operate and maintain the ammonia flare according to good engineering and air pollution control practices by performing regular maintenance with the exception of actions to mitigate emergency conditions. (25 Pa Code §129.99; §2102.04.b.5)
- b. The permittee shall maintain and operate the flare according to a flare minimization plan that includes (25 Pa Code §129.99; §2102.04.b.5)
 1. A listing of all process units and ancillary equipment connected to the ammonia flare;
 2. A description of the equipment, processes and procedures installed or implemented within the last five years to reduce flaring; and a description of any equipment, processes or procedures the owner or operator plans to install or implement to eliminate or reduce flaring from planned, turnarounds and other scheduled maintenance, based on an evaluation of these activities during the previous five years
 3. The facility must follow the flare minimization plan and operate the flare in such a manner that minimizes all flaring except during emergencies, shutdowns, startups, turnarounds or essential operational needs; and
 4. The plan should be updated periodically to account for changes in the operation of the flare, such as new connections to the flare or the installation of a flare gas recovery system.

Pages 32 through 33 have
been redacted.