



**AIR QUALITY PROGRAM
301 39th Street, Bldg. #7
Pittsburgh, PA 15201-1811**


**Federally Enforceable Installation Permit
For 1-Hour SO₂ NAAQS**

Issued To: U. S. Steel Mon Valley Works
Clairton Plant
400 State Street
Clairton, PA 15025-1855

ACHD Permit#: 0052-1017

Date of Issuance: September 14, 2017

Expiration Date: (See Section III.12)

Issued By: 
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Section Chief, Engineering

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AMENDMENTS:

<i>DATE</i>	<i>SECTION(S)</i>
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I. CONTACT INFORMATION

Facility Location: U. S. Steel Mon Valley Works
Clairton Plant
400 State Street
Clairton, PA 15025-1855

Permittee/Owner: U. S. Steel Mon Valley Works
Clairton Plant
400 State Street
Clairton, PA 15025-1855

Responsible Official: Kurt Barshick
Title: General Manager
Company: U. S. Steel Mon Valley Works
Address: P.O. Box 878
Dravosburg, PA 15034
Telephone Number: (412) 675-2600
Fax Number: (412) 675-5407

Facility Contact: Jonelle Scheetz
Title: Environmental Control Engineer
Telephone Number: (412) 233-1015
Fax Number: (412) 233-1011
E-mail Address: jsscheetz@uss.com

AGENCY ADDRESSES:

ACHD Contact: Chief Engineer
Allegheny County Health Department
Air Quality Program
301 39th Street, Building #7
Pittsburgh, PA 15201-1811

EPA Contact: Enforcement Programs Section (3AP12)
USEPA Region III
1650 Arch Street
Philadelphia, PA 19103-2029

II. FACILITY DESCRIPTION

FACILITY DESCRIPTION

U. S. Steel Mon Valley Works Clairton Plant is the largest by-products coke plant in North America. The Clairton Plant operates 10 coke batteries and produces approximately 13,000 tons of coke per day from the destructive distillation (carbonization) of more than 18,000 tons of coal. During the carbonization process, approximately 225 million cubic feet of coke oven gas are produced. The volatile products of coal contained in the coke oven gas are recovered in the by-products plant. In addition to the coke oven gas, daily production of these by-products include 145,000 gallons of crude coal tar, 55,000 gallons of light oil, 35 tons of elemental sulfur, and 50 tons of anhydrous ammonia. The coke produced is used in the blast furnace operations in the production of molten iron for steel making.

INSTALLATION DESCRIPTION

As part of the attainment demonstration for sulfur dioxide (SO₂), U. S. Steel has agreed to reduced sulfur dioxide emission limits. These limits will be federally enforceable upon issuance of this permit and incorporated into the Allegheny County portion of the Pennsylvania State Implementation Plan (SIP). U. S. Steel has significantly decreased the H₂S in its coke oven gas through improvements to the desulfurization process that results in reduction of the hydrogen sulfide contained in coke oven gas burned in combustion units identified in this permit.

The emission units regulated by this permit are summarized in Table II-1:

TABLE II-1: Emission Unit Identification

I.D.	SOURCE DESCRIPTION	SO ₂ CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
B001	Boiler 1	NA	760 MMBtu/hour	Coke Oven Gas and Natural Gas	NA
B002	Boiler 2	NA	481 MMBtu/hour	Coke Oven Gas and Natural Gas	NA
B005	Boiler R1	NA	229 MMBtu/hour	Coke Oven Gas and Natural Gas	NA
B006	Boiler R2	NA	229 MMBtu/hour	Coke Oven Gas and Natural Gas	NA
B007	Boiler T1	NA	56 MMBtu/hour	Coke Oven Gas and Natural Gas	NA
B008	Boiler T2	NA	156 MMBtu/hour	Coke Oven Gas and Natural Gas	NA
P001	Battery 1 (Underfiring)	NA	517,935 tons of coal charged per year	Coke Oven Gas and Natural Gas	S001
P002	Battery 2 (Underfiring)	NA	517,935 tons of coal charged per year	Coke Oven Gas and Natural Gas	S002

I.D.	SOURCE DESCRIPTION	SO ₂ CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
P003	Battery 3 (Underfiring)	NA	517,935 tons of coal charged per year	Coke Oven Gas and Natural Gas	S003
P007	Battery 13 (Underfiring)	NA	545,675 tons of coal charged per year	Coke Oven Gas and Natural Gas	S007
P008	Battery 14 (Underfiring)	NA	545,675 tons of coal charged per year	Coke Oven Gas and Natural Gas	S008
P009	Battery 15 (Underfiring)	NA	545,675 tons of coal charged per year	Coke Oven Gas and Natural Gas	S009
P010	Battery 19 (Underfiring)	NA	1,002,290 tons of coal charged per year	Coke Oven Gas and Natural Gas	S010
P011	Battery 20 (Underfiring)	NA	1,002,290 tons of coal charged per year	Coke Oven Gas and Natural Gas	S011
P012	B Battery (Underfiring)	NA	1,491,025 tons of coal charged per year	Coke Oven Gas and Natural Gas	S012
P046	C Battery (Underfiring)	NA	1,379,059 tons of coal charged/year	Coke Oven Gas and Natural Gas	S046
P013	Quench Tower 1	NA	1,553,805 tons of coal per year	Incandescent coke and water	NA
P017	Quench Tower B	NA	1,491,025 tons of coal per year	Incandescent coke and water	NA
P047	Quench Tower C	NA	1,379,059 tons of coal per year	Incandescent coke and water	NA
P015A	Quench Tower 5A	NA	1,270,200 tons of coke per year	Incandescent coke and water	NA
P016A	Quench Tower 7A	NA	1,555,630 tons of coke per year	Incandescent coke and water	NA

DECLARATION OF POLICY

Pollution prevention is recognized as the preferred strategy (over pollution control) for reducing risk to air resources. Accordingly, pollution prevention measures should be integrated into air pollution control programs wherever possible, and the adoption by sources of cost-effective compliance strategies, incorporating pollution prevention, is encouraged. The Department will give expedited consideration to any permit modification request based on pollution prevention principles.

The permittee is subject to the terms and conditions set forth below. These terms and conditions constitute provisions of Allegheny County Health Department Rules and Regulations, Article XXI Air Pollution Control. The subject equipment has been conditionally approved for operation. The equipment shall be operated in conformity with the plans, specifications, conditions, and instructions which are part of your application, and may be periodically inspected for compliance by the Department. In the event that the terms and conditions of this permit or the applicable provisions of Article XXI conflict with the application for this permit, these terms and conditions and the applicable provisions of Article XXI shall prevail. Additionally, nothing in this permit relieves the permittee from the obligation to comply with all applicable Federal, State and Local laws and regulations.

III. GENERAL CONDITIONS

1. Prohibition of Air Pollution (§2101.11)

It shall be a violation of this permit to fail to comply with, or to cause or assist in the violation of, any requirement of this permit, or any order or permit issued pursuant to authority granted by Article XXI. The permittee shall not willfully, negligently, or through the failure to provide and operate necessary control equipment or to take necessary precautions, operate any source of air contaminants in such manner that emissions from such source:

- a. Exceed the amounts permitted by this permit or by any order or permit issued pursuant to Article XXI;
- b. Cause an exceedance of the ambient air quality standards established by Article XXI §2101.10; or
- c. May reasonably be anticipated to endanger the public health, safety, or welfare.

2. Nuisances (§2101.13)

Any violation of any requirement of this Permit shall constitute a nuisance.

3. Definitions (§2101.20)

- a. Except as specifically provided in this permit, terms used retain the meaning accorded them under the applicable provisions and requirements of Article XXI or the applicable federal or state regulation. Whenever used in this permit, or in any action taken pursuant to this permit, the words and phrases shall have the meanings stated, unless the context clearly indicates otherwise.
- b. Unless specified otherwise in this permit or in the applicable regulation, the term “year” shall mean any twelve (12) consecutive months.
- c. The definitions in §40 CFR 63, Subpart L at §63.301 and Subpart CCCC at §63.7352 are incorporated by reference.

- d. Unless specified otherwise in this permit or in the applicable regulation, the term “SIP” shall mean the Allegheny County Portion of the Pennsylvania State Implementation Plan, Attainment Demonstration for the Allegheny, PA SO₂ Nonattainment Area 2010 Standards as adopted by the Allegheny County Board of Health on July 12, 2017.

4. Certification (§2102.01)

Any report or compliance certification submitted under this permit shall contain written certification by a responsible official as to truth, accuracy, and completeness. This certification and any other certification required under this permit shall be signed by a responsible official of the source, and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

5. Operation and Maintenance (§2105.03)

All air pollution control equipment required by this permit or Article XXI, and all equivalent compliance techniques that have been approved by the Department, shall be properly installed, maintained, and operated consistent with good air pollution control practice.

6. Conditions (§2102.03.c)

It shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02, for any person to fail to comply with any terms or conditions set forth in this permit.

7. Transfers (§2102.03.e)

This permit shall not be transferable from one person to another, except in accordance with Article XXI §2102.03.e and in cases of change-in-ownership which are documented to the satisfaction of the Department, and shall be valid only for the specific sources and equipment for which this permit was issued. The transfer of permits in the case of change-in-ownership may be made consistent with the administrative permit amendment procedure of Article XXI §2103.14.b.

8. Effect (§2102.03.g)

Issuance of this permit shall not in any manner relieve any person of the duty to fully comply with the requirements of Article XXI or any other provision of law, nor shall it in any manner preclude or affect the right of the Department to initiate any enforcement action whatsoever for violations of Article XXI or this Permit, whether occurring before or after the issuance of such permit. Further, the issuance of this permit shall not be a defense to any nuisance action, nor shall such permit be construed as a certificate of compliance with the requirements of Article XXI or this Permit.

9. General Requirements (§2102.04.a)

It shall be a violation of this Permit giving rise to the remedies set forth in Article XXI §2109 for any person to install, modify, replace, reconstruct, or reactivate any source or air pollution control equipment to which this Permit applies unless either:

- a. The Department has first issued an Installation Permit for such source or equipment; or

- b. Such action is solely a reactivation of a source with a current Operating Permit, which is approved under §2103.13 of Article XXI.

10. Conditions (§2102.04.e)

Further, the initiation of installation, modification, replacement, reconstruction, or reactivation under this Installation Permit and any reactivation plan shall be deemed acceptance by the source of all terms and conditions specified by the Department in this permit and plan.

11. Revocation (§2102.04.f)

- a. The Department may, at any time, revoke this Installation Permit if it finds that:
 - 1) Any statement made in the permit application is not true, or that material information has not been disclosed in the application;
 - 2) The source is not being installed, modified, replaced, reconstructed, or reactivated in the manner indicated by this permit or applicable reactivation plan;
 - 3) Air contaminants will not be controlled to the degree indicated by this permit;
 - 4) Any term or condition of this permit has not been complied with;
 - 5) The Department has been denied lawful access to the premises or records, charts, instruments and the like as authorized by this Permit; or
- b. Prior to the date on which construction of the proposed source has commenced the Department may, revoke this Installation Permit if a significantly better air pollution control technology has become available for such source, a more stringent regulation applicable to such source has been adopted, or any other change has occurred which requires a more stringent degree of control of air contaminants.

12. Term (§2102.04.g)

This Installation Permit shall expire in 18 months if construction has not commenced within such period or shall expire 18 months after such construction has been suspended, if construction is not resumed within such period. In any event, this Installation Permit shall expire upon completion of construction, except that this Installation Permit shall authorize temporary operation to facilitate shakedown of sources and air cleaning devices, to permit operations pending issuance of a related subsequent Operating Permit, or to permit the evaluation of the air contamination aspects of the source. Such temporary operation period shall be valid for a limited time, not to exceed 180 days, but may be extended for additional limited periods, each not to exceed 120 days, except that no temporary operation shall be authorized or extended which may circumvent the requirements of this Permit.

13. Annual Installation Permit Administrative Fee (§2102.10.c & e)

No later than 30 days after the date of issuance of this Installation Permit and on or before the last day of the month in which this permit was issued in each year thereafter, during the term of this permit until a subsequent corresponding Operating Permit or amended Operating Permit is properly applied for, the owner or operator of such source shall pay to the Department, in addition to all other applicable emission and administration fees, an Annual Installation Permit Administration Fee in an amount of \$750.

14. Severability Requirement (§2103.12.l)

The provisions of this permit are severable, and if any provision of this permit is determined to by a court of competent jurisdiction to be invalid or unenforceable, such a determination will not affect the remaining

provisions of this permit.

15. Reporting Requirements (§2103.12.k)

- a. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by the Responsible Official.
- b. Prompt reporting of deviations from permit requirements is required, including those attributable to upset conditions as defined in this permit and Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.
- c. All reports submitted to the Department shall comply with the certification requirements of General Condition III.4 above.
- d. Semiannual reports required by this permit shall be submitted to the Department as follows:
 - 1) One semiannual report is due by July 31 of each year for the time period beginning January 1 and ending June 30.
 - 2) One semiannual report is due by January 31 of each year for the time period beginning July 1 and ending December 31.
- e. Quarterly reports required by this permit shall be submitted to the Department on the last day of the month following each calendar quarter. The first quarterly report for the period October 4, 2018 to December 31, 2018, will be due January 31, 2019.
- f. Reports may be emailed to the Department at aqreports@alleghenycounty.us in lieu of mailing a hard copy.

16. Minor Installation Permit Modifications (§2102.10.d)

Modifications to this Installation Permit may be applied for but only upon submission of an application with a fee in the amount of \$300 and where:

- a. No reassessment of any control technology determination is required; and
- b. No reassessment of any ambient air quality impact is required.

17. Violations (§2104.06)

The violation of any emission standard established by this Permit shall be a violation of this Permit giving rise to the remedies provided by Article §2109.02.

18. Other Requirements Not Affected (§2105.02)

Compliance with the requirements of this permit shall not in any manner relieve any person from the duty to fully comply with any other applicable federal, state, or county statute, rule, regulation, or the like, including, but not limited to, any applicable NSPSs, NESHAPs, MACTs, or Generally Achievable Control Technology standards now or hereafter established by the EPA, and any applicable requirement of BACT or LAER as provided by Article XXI, any condition contained in this Installation Permit and/or any additional or more stringent requirements contained in an order issued to such person pursuant to Part I of Article XXI.

19. Other Rights and Remedies Preserved (§2109.02.b)

Nothing in this permit shall be construed as impairing any right or remedy now existing or hereafter created in equity, common law or statutory law with respect to air pollution, nor shall any court be deprived of such jurisdiction for the reason that such air pollution constitutes a violation of this permit

20. Penalties, Fines, and Interest (§2109.07.a)

A source that fails to pay any fee required under this Permit or article XXI when due shall pay a civil penalty of 50% of the fee amount, plus interest on the fee amount computed in accordance with of Article XXI §2109.06.a.4 from the date the fee was required to be paid. In addition, the source may have its permit revoked.

21. Appeals (§2109.10)

In accordance with State Law and County regulations and ordinances, any person aggrieved by an order or other final action of the Department issued pursuant to Article XXI shall have the right to appeal the action to the Director in accordance with the applicable County regulations and ordinances.

IV. SITE LEVEL TERMS AND CONDITIONS

1. Reporting of Upset Conditions (§2103.12.k.2)

The permittee shall promptly report all deviations from permit requirements, including those attributable to upset conditions as defined in Article XXI §2108.01.c, the probable cause of such deviations, and any corrective actions or preventive measures taken.

2. Visible Emissions (§2104.01.a)

a. Except as provided for by Article XXI §2108.01.d pertaining to a cold start, no person shall operate, or allow to be operated, any source in such manner that the opacity of visible emissions from a flue or process fugitive emissions from such source, excluding uncombined water:

- 1) Equal or exceed an opacity of 20% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or,
- 2) Equal or exceed an opacity of 60% at any time.

b. Condition IV.2.a above does not apply to coke ovens or coke oven batteries.

3. Odor Emissions (§2104.04) (County-only enforceable)

No person shall operate, or allow to be operated, any source in such manner that emissions of malodorous matter from such source are perceptible beyond the property line. The permittee shall take all reasonable action as may be necessary to prevent malodorous matter from becoming perceptible beyond facility boundaries. Further, the permittee shall perform such observations as may be deemed necessary along facility boundaries to ensure that malodorous matter beyond the facility boundary in accordance with Article XXI §2107.13 is not perceptible and record all findings and corrective action measures taken.

4. Materials Handling (§2104.05)

The permittee shall not conduct, or allow to be conducted, any materials handling operation in such manner that emissions from such operation are visible at or beyond the property line.

5. Operation and Maintenance (§2105.03)

All air pollution control equipment required by this permit or any order under Article XXI, and all equivalent compliance techniques approved by the Department, shall be properly installed, maintained, and operated consistently with good air pollution control practice.

6. Open Burning (§2105.50)

No person shall conduct, or allow to be conducted, the open burning of any material, except where the Department has issued an Open Burning Permit to such person in accordance with Article XXI §2105.50 or where the open burning is conducted solely for the purpose of non-commercial preparation of food for human consumption, recreation, light, ornament, or provision of warmth for outside workers, and in a manner which contributes a negligible amount of air contaminants.

7. Shutdown of Control Equipment (§2108.01.b)

- a. In the event any air pollution control equipment is shut down for reasons other than a breakdown, the person responsible for such equipment shall report, in writing, to the Department the intent to shut down such equipment at least 24 hours prior to the planned shutdown. Notwithstanding the submission of such report, the equipment shall not be shut down until the approval of the Department is obtained; provided, however, that no such report shall be required if the source(s) served by such air pollution control equipment is also shut down at all times that such equipment is shut down.
- b. The Department shall act on all requested shutdowns as promptly as possible. If the Department does not take action on such requests within ten (10) calendar days of receipt of the notice, the request shall be deemed denied, and upon request, the owner or operator of the affected source shall have a right to appeal in accordance with the provisions of Article XI.
- c. The prior report required by Site Level Condition IV.7.a above shall include:
 - 1) Identification of the specific equipment to be shut down, its location and permit number (if permitted), together with an identification of the source(s) affected;
 - 2) The reasons for the shutdown;
 - 3) The expected length of time that the equipment will be out of service;
 - 4) Identification of the nature and quantity of emissions likely to occur during the shutdown;
 - 5) Measures, including extra labor and equipment, which will be taken to minimize the length of the shutdown, the amount of air contaminants emitted, or the ambient effects of the emissions;
 - 6) Measures which will be taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impracticable to shut down or curtail the affected source(s) during the shutdown; and
 - 7) Such other information as may be required by the Department.

8. Breakdowns (§2108.01.c)

- a. In the event that any air pollution control equipment, process equipment, or other source of air contaminants breaks down in such manner as to have a substantial likelihood of causing the emission of air contaminants in violation of this permit, or of causing the emission into the open air of potentially toxic or hazardous materials, the person responsible for such equipment or source shall immediately, but in no event later than sixty (60) minutes after the commencement of the breakdown, notify the Department of such breakdown and shall, as expeditiously as possible but in no event later than seven (7) days after the original notification, provide written notice to the Department.
- b. To the maximum extent possible, all oral and written notices required shall include all pertinent facts, including:
 - 1) Identification of the specific equipment which has broken down, its location and permit number (if permitted), together with an identification of all related devices, equipment, and other sources which will be affected.
 - 2) The nature and probable cause of the breakdown.
 - 3) The expected length of time that the equipment will be inoperable or that the emissions will continue.

- 4) Identification of the specific material(s) which are being, or are likely to be emitted, together with a statement concerning its toxic qualities, including its qualities as an irritant, and its potential for causing illness, disability, or mortality.
 - 5) The estimated quantity of each material being or likely to be emitted.
 - 6) Measures, including extra labor and equipment, taken or to be taken to minimize the length of the breakdown, the amount of air contaminants emitted, or the ambient effects of the emissions, together with an implementation schedule.
 - 7) Measures being taken to shut down or curtail the affected source(s) or the reasons why it is impossible or impractical to shut down the source(s), or any part thereof, during the breakdown.
- c. Notices required shall be updated, in writing, as needed to advise the Department of changes in the information contained therein. In addition, any changes concerning potentially toxic or hazardous emissions shall be reported immediately. All additional information requested by the Department shall be submitted as expeditiously as practicable.
- d. Unless otherwise directed by the Department, the Department shall be notified whenever the condition causing the breakdown is corrected or the equipment or other source is placed back in operation by no later than 9:00 AM on the next County business day. Within seven (7) days thereafter, written notice shall be submitted pursuant to Paragraphs a and b above.
- e. Breakdown reporting shall not apply to breakdowns of air pollution control equipment which occur during the initial startup of said equipment, provided that emissions resulting from the breakdown are of the same nature and quantity as the emissions occurring prior to startup of the air pollution control equipment.
- f. In no case shall the reporting of a breakdown prevent prosecution for any violation of this permit or Article XXI.

9. Cold Start (§2108.01.d)

In the event of a cold start on any fuel-burning or combustion equipment, except stationary internal combustion engines and combustion turbines used by utilities to meet peak load demands, the person responsible for such equipment shall report in writing to the Department the intent to perform such cold start at least 24 hours prior to the planned cold start. Such report shall identify the equipment and fuel(s) involved and shall include the expected time and duration of the startup. Upon written application from the person responsible for fuel-burning or combustion equipment which is routinely used to meet peak load demands and which is shown by experience not to be excessively emissive during a cold start, the Department may waive these requirements and may instead require periodic reports listing all cold starts which occurred during the report period. The Department shall make such waiver in writing, specifying such terms and conditions as are appropriate to achieve the purposes of Article XXI. Such waiver may be terminated by the Department at any time by written notice to the applicant.

10. Monitoring of Malodorous Matter Beyond Facility Boundaries (§2104.04)

The permittee shall take all reasonable action as may be necessary to prevent malodorous matter from becoming perceptible beyond facility boundaries. Further, the permittee shall perform such observations as may be deemed necessary along facility boundaries to insure that malodorous matter beyond the facility boundary in accordance with Article XXI §2107.13 is not perceptible and record all findings and corrective action measures taken.

11. Emissions Inventory Statements (§2108.01.e & g)

- a. Emissions inventory statements in accordance with §2108.01.e shall be submitted to the Department by March 15 of each year for the preceding calendar year. The Department may require more frequent submittals if the Department determines that more frequent submissions are required by the EPA or that analysis of the data on a more frequent basis is necessary to implement the requirements of Article XXI or the Clean Air Act.
- b. The failure to submit any report or update within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

12. Orders (§2108.01.f)

In addition to meeting the requirements Site Level Conditions IV.7 through IV.11, inclusive, the person responsible for any source shall, upon order by the Department, report to the Department such information as the Department may require in order to assess the actual and potential contribution of the source to air quality. The order shall specify a reasonable time in which to make such a report.

13. Violations (§2108.01.g)

The failure to submit any report or update thereof required by Site Level Conditions IV.7 through IV.12 above, inclusive, within the time specified, the knowing submission of false information, or the willful failure to submit a complete report shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

14. Emissions Testing (§2108.02)

- a. **Orders:** No later than 60 days after achieving full production or 120 days after startup, whichever is earlier, the permittee shall conduct, or cause to be conducted, such emissions tests as are specified by the Department to demonstrate compliance with the applicable requirements of this permit and shall submit the results of such tests to the Department in writing. Upon written application setting forth all information necessary to evaluate the application, the Department may, for good cause shown, extend the time for conducting such tests beyond 120 days after startup but shall not extend the time beyond 60 days after achieving full production. Emissions testing shall comply with all applicable requirements of Article XXI, §2108.02.e.
- b. **Tests by the Department:** Notwithstanding any tests conducted pursuant to this permit, the Department or another entity designated by the Department may conduct emissions testing on any source or air pollution control equipment. At the request of the Department, the permittee shall provide adequate sampling ports, safe sampling platforms and adequate utilities for the performance of such tests.
- c. **Testing Requirements:** No later than 45 days prior to conducting any tests required by this permit, the person responsible for the affected source shall submit for the Department's approval a written test protocol explaining the intended testing plan, including any deviations from standard testing procedures, the proposed operating conditions of the source during the test, calibration data for specific test equipment and a demonstration that the tests will be conducted under the direct supervision of persons qualified by training and experience satisfactory to the Department to conduct such tests. In addition, at least 30 days prior to conducting such tests, the person responsible shall notify the Department in writing of the time(s) and date(s) on which the tests will be conducted

and shall allow Department personnel to observe such tests, record data, provide pre-weighed filters, analyze samples in a County laboratory and to take samples for independent analysis. Test results shall be comprehensively and accurately reported in the units of measurement specified by the applicable emission limitations of this permit.

- d. Test methods and procedures shall conform to the applicable reference method set forth in this permit or Article XXI Part G, or where those methods are not applicable, to an alternative sampling and testing procedure approved by the Department consistent with Article XXI §2108.02.e.2.
- e. **Violations:** The failure to perform tests as required by this permit or an order of the Department, the failure to submit test results within the time specified, the knowing submission of false information, the willful failure to submit complete results, or the refusal to allow the Department, upon presentation of a search warrant, to conduct tests, shall be a violation of this permit giving rise to the remedies provided by Article XXI §2109.02.

15. Abrasive Blasting (§2105.51)

- a. Except where such blasting is a part of a process requiring an operating permit, no person shall conduct or allow to be conducted, abrasive blasting or power tool cleaning of any surface, structure, or part thereof, which has a total area greater than 1,000 square feet unless such abrasive blasting complies with all applicable requirements of Article XXI §2105.51.
- b. In addition to complying with all applicable provisions of §2105.51, no person shall conduct, or allow to be conducted, abrasive blasting of any surface unless such abrasive blasting also complies with all other applicable requirements of Article XXI unless such requirements are specifically addressed by §2105.51.

16. Asbestos Abatement (§2105.62, §2105.63)

In the event of removal, encasement, or encapsulation of Asbestos-Containing Material (ACM) at a facility or in the event of the demolition of any facility, the permittee shall comply with all applicable provisions of Article XXI §2105.62 and §2105.63.

17. Permit Source Premises (§2105.40)

- a. **General.** No person shall operate, or allow to be operated, any source for which a permit is required by Article XXI Part C in such manner that emissions from any open land, roadway, haul road, yard, or other premises located upon the source or from any material being transported within such source or from any source-owned access road, haul road, or parking lot over five (5) parking spaces:
 - 1) Are visible at or beyond the property line of such source;
 - 2) Have an opacity of 20% or more for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or
 - 3) Have an opacity of 60% or more at any time.
- b. **Deposition on Other Premises.** Visible emissions from any solid or liquid material that has been deposited by any means from a source onto any other premises shall be considered emissions from such source within the meaning of Site Level Condition IV.17.a above.

18. Parking Lots and Roadways (§2105.42)

- a. The permittee shall not maintain for use, or allow to be used, any parking lot over 50 parking spaces or used by more than 50 vehicles in any day or any other roadway carrying more than 100 vehicles in any day or 15 vehicles in any hour in such manner that emissions from such parking lot or roadway:
 - 1) Are visible at or beyond the property line;
 - 2) Have an opacity of 20% or more for a period or periods aggregating more than three (3) minutes in any 60 minute period; or
 - 3) Have an opacity of 60% or more at any time.
- b. Visible emissions from any solid or liquid material that has been deposited by any means from a parking lot or roadway onto any other premises shall be considered emissions from such parking lot or roadway.
- c. Site Level Condition IV.18.a above shall apply during any repairs or maintenance done to such parking lot or roadway.
- d. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.18 may be enforced by any municipal or local government unit having jurisdiction over the place where such parking lots or roadways are located. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.18.

19. Permit Source Transport (§2105.43)

- a. No person shall transport, or allow to be transported, any solid or liquid material outside the boundary line of any source for which a permit is required by Article XXI Part C in such manner that there is any visible emission, leak, spill, or other escape of such material during transport.
- b. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.19 may be enforced by any municipal or local government unit having jurisdiction over the place where such visible emission, leak, spill, or other escape of material during transport occurs. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violation of Site Level Condition IV.19.

20. Construction and Land Clearing (§2105.45)

- a. No person shall conduct, or allow to be conducted, any construction or land clearing activities in such manner that the opacity of emissions from such activities:
 - 1) Equal or exceed 20% for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period; or
 - 2) Equal or exceed 60% at any time.
- b. Notwithstanding any other provision of this permit, the prohibitions of Site Level Condition IV.20 may be enforced by any municipal or local government unit having jurisdiction over the place

where such construction or land clearing activities occur. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.20.

21. Demolition (§2105.47)

- a. No person shall conduct, or allow to be conducted, any demolition activities in such manner that the opacity of the emissions from such activities equal or exceed 20% for a period or periods aggregating more than three (3) minutes in any 60 minute period.
- b. Notwithstanding any other provisions of this permit, the prohibitions of Site Level Condition IV.21 may be enforced by any municipal or local government unit having jurisdiction over the place where such demolition activities occur. Such enforcement shall be in accordance with the laws governing such municipal or local government unit. In addition, the Department may pursue the remedies provided by Article XXI §2109.02 for any violations of Site Level Condition IV.21.

22. Fugitive Emissions (§2105.49)

The person responsible for a source of fugitive emissions, in addition to complying with all other applicable provisions of this permit shall take all reasonable actions to prevent fugitive air contaminants from becoming airborne. Such actions may include, but are not limited to:

- a. The use of asphalt, oil, water, or suitable chemicals for dust control;
- b. The paving and maintenance of roadways, parking lots and the like;
- c. The prompt removal of earth or other material which has been deposited by leaks from transport, erosion or other means;
- d. The adoption of work or other practices to minimize emissions;
- e. Enclosure of the source; and
- f. The proper hooding, venting, and collection of fugitive emissions.

23. Episode Plans (§2106.02)

The permittee shall upon written request of the Department, submit a source curtailment plan, consistent with good industrial practice and safe operating procedures, designed to reduce emissions of air contaminants during air pollution episodes. Such plans shall meet the requirements of Article XXI §2106.02.

24. New Source Performance Standards (§2105.05)

- a. It shall be a violation of this permit giving rise to the remedies provided by §2109.02 of Article XXI for any person to operate, or allow to be operated, any source in a manner that does not comply with all requirements of any applicable NSPS now or hereafter established by the EPA, except if such person has obtained from EPA a waiver pursuant to Section 111 or Section 129 of the Clean Air Act or is otherwise lawfully temporarily relieved of the duty to comply with such requirements.
- b. Any person who operates, or allows to be operated, any source subject to any NSPS shall conduct, or cause to be conducted, such tests, measurements, monitoring and the like as is required by such standard. All notices, reports, test results and the like as are required by such standard shall be submitted to the Department in the manner and time specified by such standard. All information, data and the like which is required to be maintained by such standard shall be made available to the

Department upon request for inspection and copying.

25. SO₂ Compliance Monitoring

- a. The permittee shall not operate, or allow to be operated, any source in such manner that unburned coke oven gas is emitted into the open air. In addition, the permittee shall not flare, mix, or combust coke oven gas, or allow such gas to be flared, mixed or combusted unless the concentration of sulfur compounds, measured as hydrogen sulfide, in such gas is less than or equal to 35 grains per hundred dry standard cubic feet of coke oven gas produced by Clairton Plant, when all sulfur emissions from the Claus Sulfur Recovery Plant and the tail gas cleaning equipment thereon, expressed as equivalent H₂S are added to the measured H₂S. The concentration of sulfur compounds specified shall include the tail-gas sulfur, measured as hydrogen sulfide, emitted from sulfur removal equipment. [§2105.21.h].
- b. For sources listed in Table V-A-1, the permittee shall determine the H₂S grain loading and flow rate of the fuel as combusted. The permittee shall record the output of each system for measuring sulfur dioxide emissions discharged to the atmosphere.

26. SO₂ Compliance

The restrictions and requirements in Sections V.A and 0 will become effective on or before October 4, 2018.

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

A. SO₂ Limits – Boilers and Coke Oven Battery Underfire Stacks

1. Restrictions:

- a. The combustion units listed in Table V-A-1 shall only combust natural gas and coke oven gas. (§2102.04.b.6)
- b. SO₂ emissions from the following sources shall not exceed the limitations in Table V-A-1 below: [§2102.04.b.6, §2105.21.h]

TABLE V-A-1. SO₂ Emission Limitations

Process	Thirty-day (30-day) Emission Limit* (lb/hr)	Supplementary 24-hr Limit** (lb/hr)
Boiler 1	118.44***	134.06***
Boiler 2		
Boiler R1		
Boiler R2		
Boiler T1		
Boiler T2		
Battery 1 Underfiring	10.41	13.27
Battery 2 Underfiring	9.15	11.66
Battery 3 Underfiring	10.57	13.47
Battery 13 Underfiring	13.93	15.70
Battery 14 Underfiring	14.03	15.80
Battery 15 Underfiring	18.67	21.04
Battery 19 Underfiring	29.37	33.09
Battery 20 Underfiring	27.00	30.42
B Battery Underfiring	21.38	27.26
C Battery Underfiring	32.03	40.83

* Limits are based on a rolling 30-day average of 24-hour (calendar day) averages.

** Supplementary 24-hour limit is not to be exceeded more than 3 times consecutively (over any consecutive 3 calendar day period).

*** Emission limits are on an aggregate basis.

2. Testing Requirements:

- a. The permittee shall have sulfur dioxide (SO₂) emissions stack tests performed on the boiler stacks and battery underfire stacks at least once every two years as required by Article XXI §2108.02.b. SO₂ emission tests shall be conducted according to Method 6, 6A, 6B, or 6C as specified in 40 CFR 60, Appendix A. The permittee shall submit a stack test protocol to the Department for approval at least 45 days prior to the test date(s). [§2108.02.b and §2108.02.e]
- b. Emissions of SO₂ shall be determined by converting the H₂S grain loading of the fuel burned and the fuel flow rate to pounds per hour to determine compliance with the emission limitations of Table V-A-1 above. [§2103.12.h.1]
- c. The Department reserves the right to require emissions testing; sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

- a. Except for monitor malfunctions, , associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee shall continuously monitor and record the H₂S concentration (in grains(gr)/100 dscf) of the COG combusted and the fuel flow rate required in Site Level Condition IV.25.b. Continuously shall be defined as at least once every 15 minutes. [§2102.04.b.6; §2103.12.i]
- b. Monitoring of the H₂S concentration of the COG shall meet the requirements of 90% data availability . [§2102.04.b.6; §2103.12.i]
- c. On or before March 31, 2018, the permittee shall propose, for Department approval, a procedure for measuring the H₂S content of the gas during periods of monitoring malfunction or breakdowns. [§2102.04.b.6; §2103.12.i]

4. Record Keeping Requirements:

- a. The permittee shall keep records of hourly fuel use (COG and natural gas) and hourly H₂S concentration in grains per 100 dscf. [§2103.12.j]
- 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. [§2102.04.b.6]
- 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. [§2102.04.b.6]

5. Reporting Requirements:

- a. The permittee shall report the concentration of H₂S per 100 dscf of COG averaged over a calendar day to the Department on a quarterly basis, in accordance with General Condition III.15.e. All instances of non-compliance with the conditions of this permit along with all corrective action taken to restore the subject equipment to compliance shall be reported. [§2103.12.k]

- b. Reporting instances of non-compliance in accordance with condition V.A.5.a above, does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. (§2103.12.k)
- 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 Standards:

None except as provided elsewhere.

7. Additional Requirements:

None except as otherwise provided.

B. SO₂ Limits – PEC Baghouses, SCOT Stack, Quench Towers, and Hot Cars**1. Restrictions:**

- a. During planned outages of the SCOT Plant, the permittee shall re-route the Claus Plant tail gas to the battery suction main. [§2102.04.b.6]
- b. In the event of an unplanned SCOT Plant outage, the Claus Plant tail gas shall be re-routed to the battery suction main as soon as practicable. [§2102.04.b.6]
- c. SO₂ emissions from the following sources shall not exceed the limitations in Table V-B-1 below: [§2102.04.b.6, §2105.21.h.4]

TABLE V-B-1: SO₂ Emission Limitations

POLLUTANT	SO₂ Emission Limit (lb/hr)
PEC Baghouse 1-3	7.10
PEC Baghouse 13-15	7.46
PEC Baghouse 19-20	7.78
PEC Baghouse B	7.50
PEC Baghouse C	8.65
SCOT Stack	24.00
Quench Tower 1	0.75
Quench Tower B	4.09
Quench Tower C	5.00
Quench Tower 5A	7.56
Quench Tower 7A	7.21
Batteries 1-3 Hot Car	10.64
Batteries 13-15 Hot Car	11.21
Batteries 19-20 Hot Car	13.73
C Battery Hot Car	5.82

2. Testing Requirements:

- a. The permittee shall perform or cause to be performed baghouse emission stack tests for SO₂ at least once every two years in accordance with approved EPA methods and performed according to §2108.02 of Article XXI. [§2108.02]
- b. The permittee shall have SCOT Plant emission stack tests for SO₂ conducted at least once every two years in accordance with approved EPA methods and performed according to §2108.02 of Article XXI. [§2108.02]

- c. 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 §2108.02. [§2103.12.h.1]

3. Monitoring Requirements:

- a. The permittee shall monitor and record the online (operating) hours of the SCOT Plant. [§2103.12.i]
- b. The permittee shall record the number of pushes per day and the amount of coal charged daily for each Battery Unit. [§2103.12.i]

4. Record Keeping Requirements:

- a. 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. [§2102.04.b.6; §2103.12.j]
- b. The permittee shall maintain monthly records of all monitoring required per Condition V.B.3 for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [§2102.04.b.6; §2103.12.j.2]

5. Reporting Requirements:

- a. The permittee shall report to the Department quarterly, in accordance with General Condition III.15.e, all instances of non-compliance with the conditions of this permit along with all corrective action taken to restore the subject equipment to compliance. [§2103.12.k]
- b. Reporting instances of non-compliance in accordance with condition V.A.5.a above, 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:

None except as provided elsewhere.

7. Additional Requirements:

None except as otherwise provided.