

**ALLEGHENY COUNTY HEALTH DEPARTMENT
AIR QUALITY PROGRAM**

In the Matter of: United States Steel
Corporation — Clairton Coke Works
400 State Street
Clairton, PA 15025

Order #190603

EMERGENCY ORDER

AND NOW, this 17th day of June, 2019 (hereinafter “Effective Date”), the Allegheny County Health Department (hereinafter the “Department”) has found as a factual matter and has legally concluded the following:

1. The Director of the Department has been delegated authority pursuant to the federal Clean Air Act, 42 U.S.C. Sections 7401 -7671q (hereinafter “CAA”), and the Pennsylvania Air Pollution Control Act, 35 P.S. Sections 4001-4014 (hereinafter “APCA”), and the Department is a local health agency organized under the Local Health Administration Law, 19 P.S. §§ 12001-12028, whose powers and duties include the enforcement of laws relating to public health within Allegheny County, including but not limited to, the Department’s Rules and Regulations, Article XXI, Air Pollution Control (Allegheny County Code of Ordinances Chapters 505, 507 and 535) (hereinafter “Article XXI”).

2. United States Steel Corporation (“U.S. Steel”) is a corporation organized under the law of the state of Delaware and operates coke ovens at its Clairton Works facility situated in the city of Clairton, Allegheny County, PA.

3. U.S. Steel Clairton Works is the largest by-products coke plant in North America. Clairton Works operates ten coke batteries and produces approximately 10,000 tons of coke per day from the destructive distillation (carbonization) of more than 16,000 tons of coal. During the

carbonization process, approximately 215 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.

4. Clairton Works is located approximately 20 miles south of Pittsburgh on 392 acres along 3.3 miles of the west bank of the Monongahela River. The plant was built by St Clair Steel Company in 1901 and bought by U.S. Steel in 1904. The first coke batteries were built in 1918. The coke produced is used in the blast furnace operations in the production of molten iron for steel making.

5. On or about December 24, 2018, and in conformity with Article XXI, Section 2108.01(c) of the Allegheny County Health Department Rules and Regulations, U.S. Steel reported to the Department the occurrence of a fire at the Clairton Works.

6. That fire required the shutdown of the #2 and #5 Control Rooms. According to U.S. Steel, the shutdown of the #2 and #5 Control Rooms necessitated the bypass of raw coke oven gas from the ordinary operation of the desulfurization process to downriver systems. For purposes of this Enforcement Order, the term “raw,” as it pertains to coke oven gas, shall mean any coke oven gas that has not been conditioned by the processes situated in Control Rooms No. 2 or 5.

7. Whereas, in normal operation, raw coke oven gas passes through Control Rooms #2 and #5 to be “cleaned” of light oils and many pollutants (including precursors to SO₂ and PM_{2.5}) and then reintroduced into the coking process as underfire heat. Some of that raw coke oven gas was being displaced by natural gas.

8. However, some of the raw coke oven gas continued to be employed in the coking operations and some of the raw coke oven gas was flared at the bypass bleeder stack flare situated at each of the batteries.

9. At that time, U.S. Steel acknowledged that the County's H₂S limit of 35 grains per hundred dry standard cubic foot of coke oven gas was exceeded.

10. To the extent that coke oven gas from Clairton is utilized as a combustion source at both the Edgar Thomson and Irvin plants, U.S. Steel predicted the possibility of increased emissions of PM_{2.5} and SO₂ at those facilities.

11. SO₂ and PM_{2.5} are criteria pollutants required to be controlled under the Clean Air Act, Article XXI of the Allegheny County Health Department Rules and Regulations and U.S. Steel's Title V permits.

12. Exceedances of the SO₂, H₂S and PM_{2.5} standards were exceeded on the following days for the particulate pollutant as measured at the listed monitoring location:

Date	Pollutant	Monitor
12/26/2018	SO ₂	Liberty
12/26/2018	SO ₂	Liberty
12/26/2018	H ₂ S	Liberty
12/28/2018	SO ₂	Liberty
12/28/2018	H ₂ S	Liberty
1/2/2019	SO ₂	Liberty
1/3/2019	SO ₂	Liberty
1/7/2019	SO ₂	North Braddock
1/8/2019	SO ₂	Liberty
1/8/2019	SO ₂	Liberty
1/8/2019	H ₂ S	Liberty

2/2/2019	PM-2.5	Liberty
2/2/2019	H2S	Liberty
2/3/2019	PM-2.5	Liberty
2/3/2019	H2S	Liberty
2/4/2019	PM-2.5	Liberty
2/4/2019	SO2	North Braddock
2/4/2019	H2S	Liberty
3/14/2019	H2S	Liberty
3/19/2019	H2S	Liberty
3/24/2019	H2S	Liberty
3/28/2019	SO2	Liberty
3/28/2019	H2S	Liberty
3/29/2019	H2S	Liberty
4/3/2019	H2S	Liberty
4/4/2019	H2S	Liberty
4/9/2019	H2S	Liberty
5/6/2019	H2S	Liberty

13. On June 17, 2019 at approximately 4:00am, U.S. Steel, again, experienced a fire episode at its Clairton facility. This time, an electrical fire occurred in Control Room 1. The cause purportedly was from an electrical issue with breakers that, in turn, caused Control Rooms 2 and 5 to become inoperable. Again, raw coke oven gas is not being desulfurized. Again, U.S. Steel has acknowledged that the H₂S coke oven gas concentrations from Clairton are exceeding the County's limit of 35 grains per hundred dry standard cubic foot of coke oven gas. Again, raw coke oven gas is being flared at U.S. Steel's downriver Irvin facility. Unlike the December 24, 2018 fire, U.S. Steel is not using coke oven gas at its Edgar Thomson facility.

14. This sudden and demonstrable increase in the emission of SO₂ and PM_{2.5} into the atmosphere and correlating H₂S grain loading exceedance present a risk to the public health, safety and welfare necessitating immediate action by the Department.

15. The fact that this is the second fire at Clairton (indeed the second fire to result in excess emissions of PM_{2.5} and SO₂.) coupled with data obtained following the December 24, 2018 fire, indicating that measures taken by U.S. Steel and intended to mitigate those excess emissions failed, now inform the Department that despite its best efforts U.S. Steel cannot currently maintain coking operations in such a fashion as to avoid risking the public health and operate within its permitted and regulatory limitations for H₂S grain loading and SO₂.

THEREFORE, pursuant to the authority granted to the ACHD by Article XXI Sections 2109.03(a)(1) and 2109.05(a) and the Local Health Administration Law, 19 P.S. Section 12010, it is hereby **ORDERED** as follows:

- 1) U.S. Steel shall provide a written plan within 24 hours of the issuance of this Emergency Order that will demonstrate how it will bring its Clairton, Edgar Thomson and Irvin facilities within their permit and regulatory limits for H₂S grain loading and SO₂, no more than 21 days after the issuance of this Emergency Order. Said demonstration shall not contemplate any measure that will result in the venting or combustion of raw coke oven gas at any of U.S. Steel's Mon-Valley Works facilities.

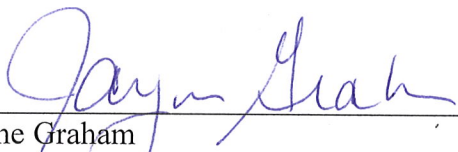
- 2) If U.S. Steel a) fails to make said demonstration or b) said demonstration fails to show an ability, on the part of U.S. Steel, to comply with its regulatory and permit emission limits, for H₂S grain loading and SO₂ or c) fails to subsequently achieve compliance with its regulatory and permit emission limits, for H₂S grain loading and SO₂, within the time afforded, U.S. Steel shall immediately cease all coke-making operations at its Clairton facility.
- 3) Coke-making operations may resume immediately following a supplemental demonstration by U.S. Steel that all repairs have been completed as to any parts or components needed for the desulfurization process and that resumption of operations will not result in further exceedances to U.S. Steel's permit or regulatory limits for H₂S grain loading and SO₂.
- 4) U.S. Steel shall inform the Department of any events or situations which will cause or have caused a delay in the restarting of the facility's Nos. 2 and 5 Control Rooms or that have or will otherwise hinder the restarting of the Nos. 2 and 5 Control Rooms.
- 5) Pursuant to Article XI, Allegheny County Rules and Regulations, Hearings and Appeals, you are notified that if you are aggrieved by this Order you have thirty (30) days from the date of receipt of this Order in which to file an appeal. Such Notice of Appeal shall be filed in the Office of the Director at 542 Fourth Avenue, Pittsburgh, PA 15219. In the absence of a timely appeal, the terms of this Order shall become final.
- 6) This Order is enforceable upon issuance and any appeal of this Order shall not act as a stay pursuant to Article XXI, Section 2109.05(c).

- 7) Failure to comply with this Order within the times specified herein shall constitute a violation of Article XXI, giving rise to the remedies provided by Article XXI, Section 2109.02 including civil penalties of up to \$25,000 per violation, per day.
- 8) The provision of this Order shall apply to, be binding upon and inure to the benefit of the Allegheny County Health Department, and the United States Steel Corporation as well as upon their respective officers, directors, agents, contractors, employees, servants, successors and assigns.

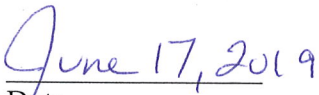
SO ENTERED, this 17th day of June, 2019, Allegheny County, Pennsylvania.

For:

ALLEGHENY COUNTY HEALTH DEPARTMENT



Jayme Graham
Air Quality Manager



Date