

**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 #180601

ENFORCEMENT ORDER

AND NOW, this 28th day of June, 2018 (hereinafter “Effective Date”), the Allegheny County Health Department (hereinafter “ACHD” or “Department”) has found as a factual matter and has legally concluded the following:

1. The Director of the ACHD 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 ACHD 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 ACHD’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. In March 2018, ACHD conducted a comprehensive review of U.S. Steel's compliance with the provisions of Article XXI, the March 24, 2016 consent decree (as issued by the Allegheny Court of Common Pleas and agreed upon by the parties) and its Title V Operating Permit as issued on March 27, 2012.

6. Although the 2016 Consent Decree was intended to provide an avenue for U.S. Steel to lower its emission profile, it continues to experience ever-increasing visible emissions and unexplained exceedance.

ONGOING AND DETERIORATING ISSUES

7. "Charging emissions" is defined under Article XXI, Section 2101.20 as follows:

"Charging emissions" means any emissions occurring during the introduction of coal into the coke oven from the time that the gate(s) on the larry car coal hopper is opened or mechanical feeders start the flow of coal into the oven until the last charging port seal is replaced. Charging emissions include any air contaminant emitted from one or more charging ports, spaces between the charging port rings

and the oven refractory, drop sleeves, larry car hoppers and any associated air pollution control equipment, but shall not include emissions occurring during the temporary removal of a charging port seal for the purpose of sweeping excess coal spillage into the oven just charged, after such seal has been firmly seated over the charging port following the removal of the larry car.

8. Battery B rate of compliance has worsened since 2013, where it achieved 100% observed compliance, to 2017, where its compliance rate dropped to 61% (with 16 violations). As of April 2018, it maintains a compliance rate of 78%.

9. Battery 13 performance has likewise deteriorated over the years. Specifically, compliance decreased from 100% to 70% in 2017 and as of April 2018, compliance is only 50%.

10. Battery 3 emission performance had declined from 100% compliance in 2015 to 81% in 2016 and 86% in 2017.

11. Battery 14 performance has declined from 100% compliance in 2014 to 81% in 2017 and as of April 2018 in compliance during 73% of the observations.

12. For the calendar years 2015 through 2017, Batter C has failed to achieve an observed compliance percentage greater than 83%.

13. From 2014 to 2017, the Clairton Coke Works facility-wide compliance percentage has gone from 94.4% to 84.0% and is 75% as of April 2018.

DOOR AREA EMISSIONS

14. Article XXI also regulates emissions from door areas surrounding each coke oven in a battery. "Door Areas" is defined under Article XXI, Section 2101.20 as follows:

"Door area" means the vertical face of a coke oven between the bench and the top of the battery and between two adjacent buckstays, including but not limited to, the door, chuck door, door seal, jamb, and refractory.

15. The door areas around Battery 1 has experienced increased emissions since 2014 when there was 100% compliance. In 2017, Battery 1 was in compliance across 88% of the observations.

16. Similarly, the door areas around Battery 3 has experienced an increase of emissions since 2014 when it was in 100% compliance. In 2017, Battery 3 was in compliance across 86% of the observations.

HIGH OPACITY DOOR AREA EMISSIONS

17. The annual number of high opacity door violations has increase since 2014. Specifically, violations increased from 33 to 295 in 2017.

18. Battery 1 had no high opacity door violations in 2014 but had 84 violations in 2017.

19. Battery 2 had two high opacity door violations in 2014 but had 59 violations in 2017.

20. Battery 3 had one high opacity door violation in 2014 but had 84 violations as of April 2017.

21. As of April 2018, there have been 92 violations facility wide in 2018.

CHARGING PORTS EMISSIONS

22. Article XXI regulates emissions coming from the charging port at the top of the battery. "Charging ports" is defined under Article XXI, Section 2101.20 as "any opening through which coal is, or may be, introduced into a coke oven, whether or not such opening is regularly used for such purpose."

23. In 2016, Battery B was in violation of Article XXI no fewer than nine times in 2016. Similarly, Battery 20 was in violation of Article XXI 6 times in 2016.

PUSHING EMISSIONS

24. Article XXI further regulates the pushing of coke from the coke oven to rail cars for cooling via water, a process known as quenching. Specifically, Article XXI, Section 2101.20 defines “pushing” as follows:

"Pushing" means the operation by which coke is removed from a coke oven and transported to a quench station, beginning, for the coke oven batteries designated 13, 14, 15, 20, and B at the USX Corporation Clairton Works, at the time the coke mass starts to move and ending at the time the coke transfer car enters the coke quenching system, and for all other coke oven batteries, beginning when the coke side door is first removed from a coke oven and continuing until the quenching operation is commenced.

25. From 2014 to 2017, U.S. Steel has experienced low compliance with respect to pushing emissions from the Clairton Coke Works. In particular, annual compliance over that period has gone between 91.7%, 91.9%, 87.2% and 92.9%, respectively.

26. Batteries 1, 2, and 3 have not achieved a compliance rate above 90%, on an annual basis, from 2015 to 2017.

27. With respect to observations of visible emissions during the travel between the transfer cars to the coke quenching system, Batteries 1 and 2 have been below 90% compliance in 2016 and 2017.

28. Travel compliance across the plant is generally low thus as of April 2018 with batteries 1, 2, 3, 13, and 15, all having a compliance rate at or below 90%.

SOAKING EMISSIONS

29. Article XXI further regulates the soaking of coke. Insofar as Article XXI incorporates federal regulations with respect to source categories, the Environmental Protection Agency defines soaking as “that period in the coking cycle that starts when an oven is damped off the collecting main and vented to the atmosphere through an open standpipe prior to pushing and ends when the coke begins to be pushed from the oven.” *See* 40 C.F.R. § 63.7352

30. In 2014, U. S. Steel managed to achieve a facility-wide compliance rate of 99.1% with respect to emissions emanating from the soaking process.

31. Since 2014, compliance has deteriorated. In particular, Batteries 13, 14, and 15 had poor compliance in both 2016 and 2017 with no battery achieving compliance of greater than 87%.

32. Battery C has been the worst performing battery in 2014 through 2017 and as of April 2018, with a compliance rate of 67%.

**ASSESSMENT OF PENALTIES FOR VIOLATION OF ARTICLE XXI
OF THE ALLEGHENY COUNTY HEALTH DEPARTMENT RULES AND
REGULATIONS
(§2101.11 PROHIBITION OF AIR POLLUTION)**

33. Article XXI, Section 2105.11 prohibits broadly a source from operating a source of air contaminants in such a manner as to constitute a violation of Article XXI. Section 2101.11 sets forth, in its entirety, the following:

§2101.11 PROHIBITION OF AIR POLLUTION

a. It shall be a violation of this Article to fail to comply with, or to cause or assist in the violation of, any requirement of this Article, or any order or permit issued pursuant to authority granted by this Article. No person shall 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:

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

b. It shall be a violation of this Article for any person to:

4. Operate, or allow to be operated, any source in such manner as to allow the release of air contaminants into the open air or to cause air pollution as defined in this Article, except as is explicitly permitted by this Article;
5. In any manner hinder, obstruct, delay, resist, prevent, or in any way interfere or attempt to interfere with the Department or its personnel in the performance of any duty hereunder, including the Department's inspection of any source;
6. Violate the provisions of 18 Pa.C.S. §4903 (relating to false swearing) or §4904 (relating to unsworn falsification to authorities) in regard to any submittals to the Department under this Article; or
7. Submit any application form, report, compliance certification, or any other submittal to the Department under this Article which is, in whole or in part, false, inaccurate, or incomplete.

c. It shall be a violation of this Article for any person to cause a public nuisance, or to cause air, soil, or water pollution resulting from any air pollution emission. No person who operates, or allows to be operated, any air contaminant source shall allow pollution of the air, water, or other natural resources of the Commonwealth and the County resulting from such source.

34. U.S. Steel has chronically failed to comply with the requirements of Article XXI and its Title V permit. Their failure to prevent the numerous emissions constitute violations of Article XXI and its Title V permit.

35. In addition to its decreased rate of compliance, U.S. Steel employees have taken actions which skews or disrupts inspector observations. Specifically, the following conduct has been experienced:

- a) U.S. Steel employees have engaged in a practice wherein an employee will walk a few paces in advance of inspectors and apply a mud-like mixture to emission points in such a manner as to obscure the emission. Subsequent walkthroughs revealed that the patches were merely temporary in nature and not reasonable corrective action to prevent future emissions;
- b) U.S. Steel employees have operated coke oven door removal machines in such a manner so as to obscure ACHD emission observations while not obscuring attempts by employees to apply a temporary patch to door leaks;
- c) U.S. Steel employees have failed to properly seat charging lids on top of charging ports. Lids are either not seated on the ports, seated too high above the sealing material or the ports are obscured by the placement of coal on top of the ports. All three actions or inactions compromise inspectors' ability to properly assess visible emissions emanating from the charging ports;
- d) ACHD inspectors routinely observe high opacity emissions from the coke side of the battery and readily surmise that based on their observations, emissions from ovens in Batteries One, Two and Three may be observed at any time of day;
- e) Inspectors have observed "short" or incomplete charging of coal into the coke oven;
- f) ACHD inspectors have observed partial pushing of coke from ovens to avoid the potential violations otherwise associated with a complete pushing of coke. Any

emissions that should have been observed as part of a complete push is circumvented by a partial push;

- g) Inspectors have noted an issue with respect to charges beyond the fifth charge otherwise observed for Method 303 compliance. Although Method 303 observation are complete following a fifth charge of a battery, it is often during subsequent charges (not otherwise part of the Method 303 observations) when battery emissions visibly increase. Moreover, ACHD inspectors have observed emission for a duration longer than otherwise anticipated;
- h) ACHD inspectors have observed the removal of flue caps thereby diverting emissions that would have otherwise traveled to the combustion stack. By removing the flue caps in this manner, U.S. Steel effectively avoided violations attributable to stack emissions; and,
- i) ACHD inspectors have observed offtake pipe caps being cracked open on a sealed oven. By doing so, emissions that would have been released by the door areas are diverted away from inspectors conducting a door inspection; thereby avoiding potential door inspection violations.

36. U.S. Steel shall ensure consistent operation in conformity with Article XXI and its Title V Operating Permit; such operations shall be consistent at all times irrespective of whether Method 303 or any other compliance observations are taking place. Any observed deviation from normal practices or any other methods employed by on-site personnel to hinder inspections will be considered a hindrance under 2101.11.b.2. and shall constitute a separate violation.

**ASSESSMENT OF PENALTIES FOR VIOLATION OF ARTICLE XXI
OF THE ALLEGHENY COUNTY HEALTH DEPARTMENT RULES AND
REGULATIONS AND TITLE V PERMIT CONDITIONS
3RD QUARTER 2017 VIOLATIONS FOR VISIBLE EMISSIONS**

37. During the third quarter of 2017, specifically July 1, 2017, through September 30, 2017, both the Department's Coke Oven Process Technicians and Method 303 contractor (retained to perform onsite inspections), observed numerous violations to provisions of Article XXI, Rules and Regulations of the Allegheny County Health Department, Air Pollution Control ("Article XXI") at the Clairton Works.

38. The Department has determined that United States Steel Corporation is in violation of Article XXI, Section 2102.03.c and various provisions of Section 2105.21, of the ACHD's Rules and Regulations by failing to meet the applicable requirements stated in Article XXI, Section 2105.21. Specifically, Section 2102.03 provides, in relevant part, as follows:

§ 2102.03 Permits Generally

c. Conditions

It shall be a violation of this Article giving rise to the remedies provided by Part I of this Article for any person to fail to comply with any terms or conditions set forth in any permit issued pursuant to this Part.

39. Article XXI, Section 2105.21 specifically regulates the operation of coke oven in Allegheny County and provides, in part, as follows:

§2105.21 COKE OVENS AND COKE OVEN GAS

{portions effective August 15, 1997, the remainder effective February 1, 1994; Paragraph e.6 added June 22, 1995, effective July 11, 1995 and amended May 14, 2010 effective May 24, 2010; §2105.21.b, e, and h amended effective August 15, 1997; Subsection f amended February 12, 2007 effective April 1, 2007. Subsection i added August 29, 2013, effective September 23, 2013. Paragraph e.6 amended November 13, 2014, effective January 1, 2015.}

a. Charging. No person shall operate, or allow to be operated:

1. Any battery of coke ovens installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978, in such manner that the aggregate of visible charging emissions exceeds a total of 55 seconds during any five (5) consecutive charges on such battery; or
- b. **Door Areas.** No person shall operate, or allow to be operated, any battery of coke ovens in such manner that:
 1. For any batteries installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978, at any time, there are visible emissions from more than five percent (5%) of the door areas of the operating coke ovens in such battery, excluding the two door areas of the last oven charged and any door areas obstructed from view;

* * *

- d. **Offtake Piping.** No person shall operate, or allow to be operated:
 1. Any battery of coke ovens installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978, in such manner that, at any time, there are visible emissions from more than four percent (4%) of the offtake piping on the operating coke ovens of such battery; or

40. By this Order, the Department is not taking any action specifically regarding any alleged failures to meet any requirements regarding pushing or combustion stacks (as determined by a continuous opacity monitoring system (“COMs”)), or soaking on Batteries 1, 2, and 3. Such actions are taken separately through provisions of the March 24, 2016 Consent Judgment.

41. As a consequence of its violation of Article XXI, Section 2105.21.a, specifically, with regards to excessive visible emissions from the charging of coke ovens at Batteries 13, 14, 15, B, and C, the Department has assessed against U.S. Steel, a civil penalty in the amount of \$42,500.00.

42. As a consequence of its violation of Article XXI, Section 2105.21.b, specifically with respect to excessive visible emissions from the door areas at Battery 15, the Department has assessed a civil penalty in the amount of \$6,450.00.

43. As a consequence of its violation of Article XXI, Section 2105.21.d, specifically with regards to excessive visible emissions from the offtake piping at Batteries 15 and 19, the Department has assessed a civil penalty in the amount of \$3,750.00.

44. Accordingly, for the violations noted above to Article XXI observed during the third quarter of 2017, the Department has assessed a civil penalty in the amount of \$52,700.00.

**ASSESSMENT OF PENALTIES FOR VIOLATION OF ARTICLE XXI
OF THE ALLEGHENY COUNTY HEALTH DEPARTMENT RULES AND
REGULATIONS AND TITLE V PERMIT CONDITIONS
4TH QUARTER 2017 VIOLATIONS FOR VISIBLE EMISSIONS**

45. During the fourth quarter of 2017, specifically October 1, 2017, through December 31, 2017, both the Department's Coke Oven Process Technicians and Method 303 contractor (retained to perform onsite inspections), observed numerous violations to provisions of Article XXI, Rules and Regulations of the Allegheny County Health Department, Air Pollution Control ("Article XXI") and Installation Permit #0052-I011, at the Clairton Works.

46. The Department has determined that United States Steel Corporation is in violation of Article XXI, Section 2102.03.c and various provisions of Section 2105.21, of the ACHD's Rules and Regulations by failing to meet the applicable requirements stated in Article XXI, Section 2105.21 and ACHD Installation Permit #0025-I011. Specifically, Section 2102.03 provides, in relevant part, as follows:

§ 2102.03 Permits Generally

c. Conditions

It shall be a violation of this Article giving rise to the remedies provided by Part I of this Article for any person to fail to comply with any terms or conditions set forth in any permit issued pursuant to this Part.

47. Article XXI, Section 2105.21 specifically regulates the operation of coke oven in

Allegheny County and provides, in part, as follows:

§2105.21 COKE OVENS AND COKE OVEN GAS

{portions effective August 15, 1997, the remainder effective February 1, 1994; Paragraph e.6 added June 22, 1995, effective July 11, 1995 and amended May 14, 2010 effective May 24, 2010; §2105.21.b, e, and h amended effective August 15, 1997; Subsection f amended February 12, 2007 effective April 1, 2007. Subsection i added August 29, 2013, effective September 23, 2013. Paragraph e.6 amended November 13, 2014, effective January 1, 2015.}

* * *

a. Charging. No person shall operate, or allow to be operated:

1. Any battery of coke ovens installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978, in such manner that the aggregate of visible charging emissions exceeds a total of 55 seconds during any five (5) consecutive charges on such battery; or
2. Any other battery of coke ovens in such manner that the aggregate of visible charging emissions exceeds a total of 75 seconds during any four (4) consecutive charges on such battery.

b. Door Areas. No person shall operate, or allow to be operated, any battery of coke ovens in such manner that:

1. For any batteries installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978, at any time, there are visible emissions from more than five percent (5%) of the door areas of the operating coke ovens in such battery, excluding the two door areas of the last oven charged and any door areas obstructed from view;
2. For any other batteries, other than those subject to Paragraph b.3 of this Section, at any time, there are visible emissions from more than ten percent (10%) of the door areas of the operating coke ovens in such

battery, excluding the two door areas of the last oven charged and any door areas obstructed from view;

3. For any of the following batteries, at any time, there are visible emissions from more than eight percent (8%) of the door areas of the operating coke ovens in such battery, excluding the two door areas of the last oven charged and any door areas obstructed from view:

SPECIFIC COKE OVEN BATTERIES

Source Name Location

- A. Coke Battery #1 USX Corp. Clairton, PA
- B. Coke Battery #2 USX Corp. Clairton, PA
- C. Coke Battery #3 USX Corp. Clairton, PA

- D. Coke Battery #7 USX Corp. Clairton, PA
- E. Coke Battery #8 USX Corp. Clairton, PA
- F. Coke Battery #9 USX Corp. Clairton, PA

- G. Coke Battery #19 USX Corp. Clairton, PA; or

4. Emissions from the door areas of any coke oven exceed an opacity of 40% at any time 15 or more minutes after such oven has been charged.
5. Unless for any of the following batteries at the USX Clairton Coke Works, Clairton, Pennsylvania, there is installed big plug doors on the coke side of each oven by January 1, 2000. Any replacement doors on these batteries, replaced after January 1, 2000, will also be big plug doors. A big plug door is a door that, when installed, contains a plug with minimum dimensions as listed below:

SPECIFIC COKE OVEN BATTERIES

Source Name Minimum Width Minimum Depth

A. Coke Battery #1	18 1/4"	14 1/2"
B. Coke Battery #2	18 1/4"	14 1/2"
C. Coke Battery #3	18 1/4"	14 1/2"
D. Coke Battery #7	17"	16 3/16"
E. Coke Battery #8	17"	16 3/16"
F. Coke Battery #9	17"	16 3/16"
G. Coke Battery #19	17"	16 1/4"
H. Coke Battery #20	17"	16 1/4"

- c. **Charging Ports.** No person shall operate, or allow to be operated:

1. Any battery of coke ovens installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978, in such manner that, at any time, there are visible emissions from more than one percent (1%) of the charging ports or charging port seals on the operating coke ovens of such battery; or
2. Any other battery of coke ovens in such manner that, at any time, there are visible emissions from more than two percent (2%) of the charging ports or charging port seals on the operating coke ovens of such battery.

d. Offtake Piping. No person shall operate, or allow to be operated:

1. Any battery of coke ovens installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978, in such manner that, at any time, there are visible emissions from more than four percent (4%) of the offtake piping on the operating coke ovens of such battery; or
2. Any other battery of coke ovens in such manner that, at any time, there are visible emissions from more than five percent (5%) of the offtake piping on the operating coke ovens of such battery.

* * *

- i. **Soaking.** At no time shall soaking emissions from a standpipe cap opening exceed twenty percent (20%) opacity. An exclusion from this opacity limit shall be allowed for two (2) minutes after a standpipe cap is opened. Compliance with this standard shall be determined through observing the standpipe from a position where the observer can note the time the oven is dampered off and, following the two minute exclusion, read the soaking emissions from the open standpipe in accordance with Method 9.

48. By this Order, the Department is not taking any action specifically regarding any alleged failures to meet any requirements regarding pushing or combustion stacks (as determined by a continuous opacity monitoring system), or soaking on Batteries 1, 2, and 3. Such actions are taken separately through provisions of the March 24, 2016 Consent Judgment.

49. As a consequence of its violation of Article XXI, Section 2105.21.a, specifically, with regards to excessive visible emissions from the charging of coke ovens at Batteries 1, 2, 3,

13, 14, 15, B, and C, the Department has assessed against U.S. Steel, a civil penalty in the amount of \$168,350.00.

50. As a consequence of its violation of Article XXI, Section 2105.21.b, specifically with respect to excessive visible emissions from the door areas at Batteries 2, 13, 15, B, and C insofar as the emissions are in violation of Section V.A.1.c of Installation Permit #0052-I011, with a civil penalty in the amount of \$17,500.00.

51. As a consequence of its violation of Article XXI, Section 2105.21.b.4 (40% opacity std.), specifically with respect to excessive visible emissions from the door areas at Batteries 1, 2, 3, 13, 14, 15, B, and as a further consequence of its violation of Section V.A.1.d of Installation Permit #0052-I011 regarding emissions from Battery C the Department has assessed a penalty against U.S. Steel in the amount of \$124,950.00.

52. As a consequence of its violation of Article XXI, Section 2105.21.c, specifically with regards to excessive visible emissions from the charging ports at Batteries 2, 13, 15, 20, B, and, as a further consequence of its violation of Section V.A.1.e of Installation Permit #0052-I011 regarding emissions from Battery C the Department has assessed a civil penalty in the amount of \$33,975.00.

53. As a consequence of its violation of Article XXI, Section 2105.21.d, specifically with regards to excessive visible emissions from the offtake piping at Batteries 1, 3, 13, 14, 15, and 19, the Department has assessed a civil penalty in the amount of \$27,650.00.

54. As a consequence of its violation of Article XXI, Section 2105.21.i, specifically with regards to excessive visible emissions from soaking at Batteries 13, 14, 15, 19, 20, and C

insofar as the emissions are violation of V.A.1.g of Installation Permit #0052-I011, the Department has assessed a civil penalty in the amount of \$65,525.00.

55. Accordingly, and in summary, for the aforementioned violations to both Article XXI and U.S. Steel's Installation Permit observed during the fourth quarter of 2017, the Department has assessed a civil penalty (attributable to the fourth quarter of 2017) in the amount of \$437,950.00.

**ASSESSMENT OF PENALTIES FOR VIOLATION OF ARTICLE XXI
OF THE ALLEGHENY COUNTY HEALTH DEPARTMENT RULES AND
REGULATIONS AND TITLE V PERMIT CONDITIONS
1ST QUARTER 2018 VIOLATIONS FOR VISIBLE EMISSIONS**

56. During the first quarter of 2018, specifically January 1, 2018, through March 31, 2018, both the Department's Coke Oven Process Technicians and Method 303 contractor (retained to perform onsite inspections), observed numerous violations to provisions of Article XXI, Rules and Regulations of the Allegheny County Health Department, Air Pollution Control ("Article XXI") and Installation Permit #0052-I011, at the Clairton Works.

57. The Department has determined that United States Steel Corporation is in violation of Article XXI, § 2102.03.c and various provisions of § 2105.21, of the ACHD's Rules and Regulations by failing to meet the applicable requirements stated in Article XXI, § 2105.21 and ACHD Installation Permit #0025-I011. Specifically, Section 2102.03 provides, in relevant part, as follows:

58. Notably, the Department has observed that the number and severity of the violations continues to increase from those established above for the fourth quarter of 2017.

59. By this Order, the Department is not taking any action specifically regarding any alleged failures to meet any requirements regarding pushing or combustion stacks (as determined by a continuous opacity monitoring system), or soaking on Batteries 1, 2, and 3. Such actions are taken separately through provisions of the March 24, 2016 Consent Judgment.

60. As a consequence of its violation of Article XXI, Section 2105.21.a, specifically, with regards to excessive visible emissions from the charging of coke ovens at Batteries 1, 2, 3, 13, 14, 15, 19, 20, B, and C, the Department has assessed against U.S. Steel, a civil penalty in the amount of \$267,250.00.

61. As a consequence of its violation of Article XXI, Section 2105.21.b, specifically with respect to excessive visible emissions from the door areas at Batteries 1, 14, 15, B, and C insofar as the emissions are in violation of Section V.A.1.c of Installation Permit #0052-I011, with a civil penalty in the amount of \$37,500.00.

62. As a consequence of its violation of Article XXI, Section 2105.21.b.4 (40% opacity std.), specifically with respect to excessive visible emissions from the door areas at Batteries 1, 2, 3, 13, 15, 19, 20, and as a further consequence of its violation of Section V.A.1.d of Installation Permit #0052-I011 regarding emissions from Battery C the Department has assessed a penalty against U.S. Steel in the amount of \$115,525.00.

63. As a consequence of its violation of Article XXI, Section 2105.21.c, specifically with regards to excessive visible emissions from the charging ports at Batteries 15 and B, the Department has assessed a civil penalty in the amount of \$33,375.00.

64. As a consequence of its violation of Article XXI, Section 2105.21.d, specifically with regards to excessive visible emissions from the offtake piping at Batteries 13, 14, 15, 19 and 20, the Department has assessed a civil penalty in the amount of \$46,375.00.

65. As a consequence of its violation of Article XXI, Section 2105.21.i, specifically with regards to excessive visible emissions from soaking at Batteries 2, 13, 14, 15, 19, 20, and C and Battery C insofar as the emissions are violation of V.A.1.g of Installation Permit #0052-I011, the Department has assessed a civil penalty in the amount of \$101,275.00.

66. Accordingly, and in summary, for the aforementioned violations to both Article XXI and U.S. Steel's Installation Permit observed during the first quarter of 2018, the Department has assessed a civil penalty (attributable to the first quarter of 2018) in the amount of \$601,300.00.

ASSESSMENT OF PENALTY FOR VIOLATION OF ADMINISTRATIVE ORDER No. 180202 (EXCEEDENCE OF THE SO₂ HOURLY LIMIT IN INSTALLATION PERMIT No. 0052-I017

67. On February 27, 2018, the Department issued its Administrative Order No. 180202 against U.S. Steel for exceeding the hourly limit for SO₂ emission found in its Installation Permit No. 0052-I017.

68. Specifically, Permit No. 0052-I017 maintains a hourly limit for the emission of SO₂ of 5.00 pounds per hour. *See* Installation Permit No. 0052-I017, Condition V.B.1.c.

69. The results of a stack test performed at the C Battery Quench Tower revealed emissions of 8.28 pounds per hour.

70. The Department afforded U.S. Steel 30 days in which to “submit to the ACHD what corrective actions have been, and will be, taken to bring the C Battery Quench Tower Exhaust into

compliance with the emission limits indicated in Installation Permit No. 0052-I017, Condition V.B.1.c.” *See* Administrative Order No. 180202.

71. U.S. Steel transmitted a “response” to the Department, on two separate occasions, failing to explain the cause of the exceedance and it failed to provide any corrective action that has, or will be taken to bring C Battery Quench Tower Exhaust into compliance.

72. Notwithstanding the requirement that U.S. Steel submit corrective actions to the Department, four months later, U.S. Steel still has failed to suggest any actions it would take to correct a violation of this permit limit.

73. To the extent that U.S. Steel has failed to comply with Administrative Order No. 180202, such constitutes a violation of Article XXI, Section 2109.03.e.

74. As a consequence of its violation of Article XXI, the Department hereby orders and directs U.S. Steel to conduct, within sixty (60) days of the date of this Order, a stack test of the C Battery Quench Tower exhaust in order to demonstrate compliance with the SO₂ limit set forth in Condition V.B.1.c. of its Installation Permit. No. 0052-I017.

75. Within, but no greater than, forty-five (45) days following the completion of the stack test, U.S. Steel shall present the Department with its proposed corrective action which would preclude further exceedances. In the event that U.S. Steel fails to present the Department with its proposed corrective actions within the time afforded, U.S. Steel will be subject to, and the Department shall impose, a civil penalty commensurate with the violation.

**ASSESSMENT OF PENALTIES FOR VIOLATION OF THE TITLE V PERMIT
ISSUED PURSUANT TO ARTICLE XXI**

76. As a permittee of a major source of air pollution under Title V of the Clean Air Act, U.S. Steel is obliged to comply with the terms of its operating permit, and to operate its facility in such a manner as to avoid exceedance of its permit limits and to avoid the emission of pollutants in the air in violation of Article XXI.

77. Specifically, Article XXI, Section 2103.12.f.1 requires as follows:

1. The permittee shall comply with all permit conditions and all other applicable requirements at all times. Any permit noncompliance constitutes a violation of the Clean Air Act, the Air Pollution Control Act, and Article XXI and is grounds for any and all enforcement action, including, but not limited to, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

78. Subsection 2103.12.f.2 goes further to make clear:

1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit;

79. Similarly, Section §2103.22.g, specifically concerning additional requirements for major sources of air pollution requires:

- g. **Standard General Requirements.** All permits issued under this Subpart shall include the following provision: The permittee shall comply with all permit conditions at all times. Any permit noncompliance constitutes a violation of the Clean Air Act, the Air Pollution Control Act, and this Article and is grounds for any and all enforcement action, including, but not limited to, permit termination, revocation and reissuance, or modification, and denial of a permit renewal application.

80. Article XXI contemplates further the Department's broad authority to take a wide array of actions as deemed necessary to aid in the enforcement of its provisions. Specifically, Article XXI, Section 2109.03 permits the following, in relevant part:

§2109.03 ENFORCEMENT ORDERS

{Paragraph b.5 amended September 6, 1995, effective October 20, 1995. Subsection d, and Paragraphs b.1 and d.1 amended August 29, 2013, effective September 23, 2013.}

- a. **General.** Whenever the Department finds, on the basis of any information available to it, that any source is being operated in violation of any provision of this Article, including any provision of any permit or license issued pursuant to this Article, it may order the person responsible for the source to comply with this Article or it may order the immediate shutdown of the source or any part thereof. The issuance of an order to address any violations, including of permit conditions, need not be preceded by the revocation of a permit.
 - 1. The Department may also issue any such other orders as are necessary to aid in the enforcement of the provisions of this Article. These orders shall include, but shall not be limited to, orders modifying, suspending, terminating or revoking any permits, orders requiring persons to cease unlawful activities or cease operation of a facility or air contaminant source which, in the course of its operation, is in violation of any provision of this Article, or any permit, orders to take corrective action or to abate a public nuisance or to allow access to a source by the Department or a third party to take such action, orders requiring the testing, sampling, or monitoring of any air contaminant source, and orders requiring production of information. Such an order may be issued if the Department finds that any condition existing in or on the facility or source involved is causing, contributing to, or creating danger of air pollution, or if it finds that the permittee or any person is in violation of any provision of this Article.
 - 2. The Department may, in its order, require compliance with such conditions as are necessary to prevent or abate air pollution or effect the purposes of this Article.

81. As a consequence of its violation of Article XXI and conditions contained in it Title V operating permit, the Department hereby order U.S. Steel to perform as follows:

- a. Within sixty (60) days of receipt of this Order, U.S. Steel shall deliver to the Department an assessment of all emissions points existing at the Clairton facility, as of the date of this Order. Multiple emissions points of the same type [e.g. all flue caps] may be grouped together. The assessment shall include all measures U.S. Steel would propose to reduce its emissions of sulfur oxides, PM_{2.5} and visible emissions. Said measures will be subject to ACHD approval and must sufficiently demonstrate reduction of sulfur oxides, PM_{2.5}, and visible emissions. Implementation of any proposed measures must begin within thirty (30) days of ACHD approval.

- b. U.S. Steel shall demonstrate compliance with the terms of this Enforcement Order upon the completion of two successive calendar quarters wherein U.S. Steel has shown a reduction in visible emissions, sulfur oxides and PM_{2.5} emissions across all operating coke batteries at the Clairton facility. Reduction of visible emissions shall be quantified by an increase in the rate of compliance with both inspections and continuous opacity monitors. The quarterly compliance metric for the first consecutive quarter shall be measured by comparison against the rate of compliance (as observed by ACHD and Method 303 inspectors) during the first quarter of 2018 using the number of plantwide hourly exceedances of the 20% opacity standard and the compliance rate as based on the coke batteries' total compliance rate for the first quarter of 2018. The second consecutive quarter compliance metric shall be compared against that of the first of the consecutive quarters as a measure of further

emission reductions. Standards for determining all rates of compliance shall be based on relevant regulations effective as of the date of this Order.

- c. Door leaks originating from the coke side of Battery B shall be reduced to be no more than ten leaks per month based on the yard-equivalent reading from the Department's Method 303 contractor's inspections;

- d. In the event, U.S. Steel fails to meet any of the requirements set forth above in the time and manner required, U.S. Steel shall place its two worst performing batteries on hot idle until such time ACHD has determined that U.S. Steel has complied with the requirements of this Order. "Worst Performing Batteries" shall be determined by calculating the inspection compliance rate from inspections conducted by ACHD and its Method 303 contractor [excluding high opacity door inspections] and the 20% opacity clock-hour exceedance compliance rate from the combustion stack COMs. These two rates will then be summed on a per battery basis for each of the two quarters used. The two batteries with the lowest two-quarter compliance rate sum constitute the worst performing batteries for purposes of this Order. In order to determine compliance with this provision of this Order, any subsequent quarterly compliance metric for future quarters shall be measured by comparison against the rate of compliance (as observed by ACHD and Method 303 inspectors) during the first quarter of 2018 using the number of hourly exceedance of the 20% opacity standard attributable solely to the remaining eight (8) batteries and the compliance rate based on the remaining coke batteries' total compliance rate for

the first quarter of 2018. Any successive quarter compliance metric shall be compared against that of the prior quarter as a measure of further emission reductions. For purposes of enforcing the terms of this Order, the term “hot idle” is to be understood as the cessation of all charging, soaking and pushing of metallurgical coke the worst performing batteries. Underfiring of coke ovens may continue until such time as the Department has made a final determination that U.S. Steel has reduced its emissions in a manner consistent with this Order.

EVALUATION OF FACTORS EMPLOYED IN PENALTY DETERMINATION

82. Based on the observations of both the Department’s Coke Oven Process Technicians and Method 303 contractors, coke battery emissions had increased over time and across the facility.

83. Recognizing that the batteries at U.S. Steel are capable of reduced emissions, the Department recognizes that there is a need to deter U.S. Steel’s failure to take corrective action in the future.

84. ACHD has estimated that there are more than 1000 people working at U.S. Steel’s Clairton facility at the time of the violations.

85. The civil penalty, as imposed, reflects a balancing of the factors as set forth in Article XXI, Section 2109.06(b). The specific (and more significant) factors unique to U.S. Steel’s Clairton facility and its violations are that they are chronic in nature and its various rates of compliance have gotten worse and that the emissions have the potential to negatively affect communities adjacent to the facility.

TOTAL PENALTY ASSESSMENT

Pursuant to Article XXI §2109.06, the ACHD is assessing a civil penalty of **\$1,091,950.00** against United States Steel Corporation for the violations described in the preceding paragraphs.

NOW THEREFORE, pursuant to the authority granted to the ACHD by Article XXI §2109.03.a.1 and the Local Health Administration Law, 19 P.S. §12010, it is hereby **ORDERED** that:

1. Within thirty (30) days of receipt of this Order, U.S. Steel shall pay the assessed civil penalty of **\$1,091,950.00**. Payment shall be made by corporate or certified check, or the like, made payable to the “Allegheny County Clean Air Fund”, and sent to Air Quality Program Manager, Allegheny County Health Department, 301 39th Street, Bldg. #7, Pittsburgh, PA 15201. The Department has determined the above penalty in accordance with Article XXI § 2109.06(b), reflecting relevant factors including but not limited to: the nature, severity and frequency of the alleged violations; the maximum amount of civil and criminal penalties authorized by law; the willfulness of such violations; the impact of such violations on the public and the environment; the actions taken by U.S. Steel to minimize such violations and to prevent future violations; and U.S. Steel’s compliance history.

2. Within sixty (60) days of receipt of this Order, U.S. Steel shall deliver to the Department an assessment of all emissions points existing at the Clairton facility, as of the date of this Order. Multiple emissions points of the same type [e.g. all flue caps] may be grouped together. The assessment shall include all measures U.S. Steel would propose to reduce its emissions of sulfur oxides, PM_{2.5} and visible emissions. Said measures will be subject to ACHD approval and

must sufficiently demonstrate reduction of sulfur oxides, PM_{2.5}, and visible emissions. Implementation of any proposed measures must begin within thirty (30) days of ACHD approval.

3. U.S. Steel shall demonstrate compliance with the terms of this Enforcement Order upon the completion of two successive calendar quarters wherein U.S. Steel has shown a reduction in visible emissions, sulfur oxides and PM_{2.5} emissions across all operating coke batteries at the Clairton facility. Reduction of visible emissions shall be quantified by an increase in the rate of compliance with both inspections and continuous opacity monitors. The quarterly compliance metric for the first consecutive quarter shall be measured by comparison against the rate of compliance (as observed by ACHD and Method 303 inspectors) during the first quarter of 2018 using the number of plantwide hourly exceedance of the 20% opacity standard and the compliance rate as based on the coke batteries' total compliance rate for the first quarter of 2018. The second consecutive quarter compliance metric shall be compared against that of the first of the consecutive quarters as a measure of further emission reductions. Standards for determining all rates of compliance shall be based on relevant regulations effective as of the date of this Order.

4. Door leaks originating from the coke side of Battery B shall be reduced to be no more than ten leaks per month based on the yard-equivalent reading from the Department's Method 303 contractor's inspections.

5. In the event, U.S. Steel fails to meet any of the requirements set forth above in the time and manner required, U.S. Steel shall place its two worst performing batteries on hot idle until such time ACHD has determined that U.S. Steel has complied with the requirements of this Order. "Worst Performing Batteries" shall be determined by calculating the inspection compliance rate from inspections conducted by ACHD and its Method 303 contractor [excluding high opacity door inspections] and the 20% opacity clock-hour exceedance compliance rate from the

combustion stack COMs. These two rates will then be summed on a per battery basis for each of the two quarters used. The two batteries with the lowest two-quarter compliance rate sum constitute the worst performing batteries for purposes of this Order. In order to determine compliance with this provision of this Order, any subsequent quarterly compliance metric for future quarters shall be measured by comparison against the rate of compliance (as observed by ACHD and Method 303 inspectors) during the first quarter of 2018 using the number of hourly exceedance of the 20% opacity standard attributable solely to the remaining eight (8) batteries and the compliance rate based on the remaining coke batteries' total compliance rate for the first quarter of 2018. Any successive quarter compliance metric shall be compared against that of the prior quarter as a measure of further emission reductions. For purposes of enforcing the terms of this Order, the term "hot idle" is to be understood as the cessation of all charging, soaking and pushing of metallurgical coke the worst performing batteries. Underfiring of coke ovens may continue until such time as the Department has made a final determination that U.S. Steel has reduced its emissions in a manner consistent with this Order.

6. U.S. Steel shall also conduct, within sixty (60) days of the date of this Order, a stack test of the Battery C Quench tower exhaust in order to demonstrate compliance with the SO₂ limit set forth in its Installation Permit.

7. Within, but no greater than, forty-five (45) days following the completion of the stack test, U.S. Steel is hereby ordered to present a corrective action precluding further exceedances. In the event that U.S. Steel fails to present the Department with its proposed corrective actions within the time afforded, it will be subject to and the Department shall impose a civil penalty commensurate with the violation.

8. U.S. Steel shall ensure consistent operation in conformity with Article XXI and its Title V Operating Permit; such operations shall be consistent at all times irrespective of whether Method 303 or any other compliance observations are taking place. Any observed deviation from normal practices or any other methods employed by on-site personnel to hinder inspections will be considered a hindrance under 2101.11.b.2. and shall constitute a separate violation.

9. The requirements of this Order are intended to supplement legal requirements to which U.S. Steel is already subject. If there is a conflict between any requirement of this Order and other statutory or regulatory requirements, the more stringent requirement shall control. If U.S. Steel believes that a conflict between the requirements of this Order and other legal obligations is irreconcilable, such that compliance with this Order will require U.S. Steel to be in non-compliance with other legal obligations, then U.S. Steel shall provide the ACHD with an explanation of such conflict in writing as soon as possible. The ACHD may notify U.S. Steel whether ACHD concurs with its position and whether such provision in this Order is modified, suspended, terminated, or continues in effect.

10. The imposition of the civil penalty or any other requirement of this Enforcement Order is not intended and in no way releases U.S. Steel from any obligations imposed by or to which it is subject under Article XXI or other final determination.

11. The civil penalty payment and any documentation required by this Order and correspondence with the ACHD shall be sent to the following:

Jayne Graham
Air Quality Program Manager
Allegheny County Health Department
301 39th Street, Bldg. No. 7
Pittsburgh, PA 15201-1811
Tel: 412-578-8103
Fax: 412-578-8144
E-Mail: jayne.graham@alleghenycounty.us

12. Pursuant to Article XI, Allegheny County Health Department Rules and Regulations, Hearings and Appeals, you are notified that if you are aggrieved by this Order you have (30) days in which to file an appeal from the receipt of this Order. Such a Notice of Appeal shall be filed in the Office of the Director at 542 4th Avenue, Pittsburgh, PA 15219. In the absence of a timely appeal, the terms of this Order shall become final.

13. This Order is enforceable upon issuance and any appeal of this Order shall not act as a stay unless the Director of the ACHD so orders.

14. Failure to comply with this Order within the time specified herein is a violation of Article XXI giving rise to the remedies provided by Article XXI § 2109.02.

15. The provisions of this Order shall apply to, be binding upon, and inure to the benefit of the ACHD and U.S. Steel and upon their respective officers, directors, agents, contractors, employees, servants, successors, and assigns.

16. The duties and obligations under this Order shall not be modified, diminished, terminated, or otherwise altered by the transfer of any legal or equitable interest in the Facility or any part thereof.

17. The ACHD may, upon U.S. Steel's request, agree to modify or terminate U.S. Steel's duties and obligations under this Order upon transfer of the property. Pursuant to Article XI of the ACHD's Rules and Regulations for Hearings and Appeals, U.S. Steel may challenge any decision made by the ACHD in response to any of U.S. Steel's request for a modification of this Order due to a transfer of all or part of the property.

18. The imposition of this civil penalty shall not, in any manner, prohibit or preclude the Department from exercising its authority to enforce the regulations under Article XXI of the Allegheny County Health Department Rules and Regulations. Moreover, the imposition and any

resolution of this civil penalty shall not, in any manner, prohibit or preclude any other party or governmental agency or entity from pursuing legal action (civil or criminal) against U.S. Steel for conduct that is the subject of this enforcement order.

DONE and **ENTERED** this 28th day of June, 2018, in Allegheny County, Pennsylvania.

For:

ALLEGHENY COUNTY HEALTH DEPARTMENT

s/ Jim Kelly

Jim Kelly
Deputy Director, Environmental Health

6/28/18

Date