

No. 33-22-OR

AN ORDINANCE

An Ordinance of the Council of the County of Allegheny ratifying amendments that revise §2105.21, "Coke Ovens and Coke Oven Gas," §2109.01, "Inspections," and §2101.20, "Definitions," of the Allegheny County Health Department Rules and Regulations, Article XXI, "Air Pollution Control."

Whereas, Allegheny County, pursuant to the Pennsylvania Local Health Administration Law, 16 P.S. §§ 12001 – 12028, created the Allegheny County Health Department, and the Allegheny County Board of Health; and

Whereas, the Allegheny County Health Department regulates air quality under authority granted to it via the Pennsylvania Air Pollution Control Act, 35 P.S. §§ 4001 – 4106, and its implementing regulations; and

Whereas, Section 12011 of the Local Health Administration Law provides for the Board of Health to adopt regulations and submit such regulations to Allegheny County for approval or rejection; and

Whereas, on September 7, 2022 during its regularly scheduled public meeting, the Allegheny County Board of Health adopted by affirmative vote the attached amendments to §2105.21, "Coke Ovens and Coke Oven Gas," §2109.01, "Inspections," and §2101.20, "Definitions," of the Allegheny County Health Department Rules and Regulations, Article XXI, "Air Pollution Control"; and

Whereas, it is the desire of Council to ratify the Allegheny County Health Department regulation amendments as approved by the Board of Health.

The Council of the County of Allegheny hereby resolves as follows:

SECTION 1. Incorporation of Preamble.

The provisions set forth in the preamble to this Ordinance are incorporated by reference in their entirety herein.

SECTION 2. Ratification of Regulations.

Acting pursuant to the Pennsylvania Local Health Administration Law and the Allegheny County Home Rule Charter, County Council hereby ratifies the amendments to the Allegheny

County Health Department Rules and Regulations, Article XXI, "Air Pollution Control," attached hereto as Exhibit "A."

SECTION 3. **Severability.**

If any provision of this Ordinance shall be determined to be unlawful, invalid, void or unenforceable, then that provision shall be considered severable from the remaining provisions of this Resolution which shall be in full force and effect.

SECTION 4. **Repealer.**


Any Resolution or Ordinance or part thereof conflicting with the provisions of this Ordinance is hereby repealed so far as the same affects this Ordinance.

SECTION 5 **Effective Date.**


In accordance with Section 12011(c) of the Local Health Administration Law, this Ordinance shall become effective ten days after it has been approved.

Enacted in Council, this 25th day of October, 2022.

Council Agenda No. 12455-22.




Patrick Catena
President of Council

Attest: 

Jared Barker
Chief Clerk of Council

Chief Executive Office October 18th, 2022

Approved: 

Rich Fitzgerald
Chief Executive

Attest: 

Jennifer Liptak
Chief of Staff

MEMORANDUM
OFFICE OF THE COUNTY MANAGER

TO: Jared E. Barker
Allegheny County Council

FROM: William D. McKain CPA
County Manager

DATE: September 15, 2022

RE: Proposed Ordinance

Attached is an Ordinance of the Council of the County of Allegheny ratifying amendments that revise §2105.21, "Coke Ovens and Coke Oven Gas," §2109.01, "Inspections," and §2101.20, "Definitions," of the Allegheny County Health Department Rules and Regulations, Article XXI, "Air Pollution Control."

The Allegheny County Law Department has reviewed this legislation prior to submitting it to Council.

I am requesting that this item be placed on the agenda at the next Regular Meeting of Council.

**Proposed revisions to Allegheny County Health Department Rules and Regulations,
Article XXI, Air Pollution Control ---**

**§2105.21, Coke Ovens and Coke Oven Gas
with
Related §2101.20, Definitions
and
§2109.01, Inspections**

LEGISLATIVE SUMMARY

The current regulations set forth in Article XXI, Section 2105.21, address the emissions standards for coke ovens and coke oven gas, while the test methods and inspection procedures for coke ovens are provided in the ACHD's Source Testing Manual.

As part of a 2019 settlement agreement with U.S. Steel Corporation relating to violations at its coke oven batteries, the ACHD agreed to amend Article XXI to include the test methods and inspection procedures for coke ovens in the Section 2105.21 regulations. Accordingly, the ACHD is proposing those amendments here.

The ACHD also is proposing to amend its regulations based on issues of stringency with federal and Pennsylvania regulations. The Pennsylvania Air Pollution Control Act states that the ACHD may enact "ordinances with respect to air pollution which will not be less stringent than the provisions of this act, the Clean Air Act or the rules and regulations promulgated under either this act or the Clean Air Act." 35 P.S. § 4012(a). During this regulatory review process, the ACHD determined that there were provisions in the Article XXI regulations pertaining to coke ovens and coke oven gas which were less stringent than the regulations promulgated under the Clean Air Act and Pennsylvania Air Pollution Control Act. As a result, the ACHD is proposing to amend the applicable provisions to be at least as stringent as the Pennsylvania and federal regulations.

Finally, the ACHD is proposing to amend its regulations to include requirements that during an inspection, a source is required to operate in a manner consistent with its normal air pollution control practices. The regulation provides that it is a violation for any person to alter or modify a source's normal air pollution control practices during an ACHD inspection for the purpose of improving compliance with the requirements under Article XXI or any ACHD permit.

The proposed revision was the subject of a public comment period, including a public hearing held on May 11, 2022. The regulation was approved by the Allegheny County Board of Health at their September 7, 2022 meeting.

Finally, the proposed changes to Article XXI §§2105.21.a-h, j, 2109.01, and 2101.20 will be submitted as a revision to the Allegheny County portion of the Pennsylvania State Implementation Plan.

EXHIBIT “A”

PROPOSED REVISION

Allegheny County Health Department Rules and Regulations Article XXI, Air Pollution Control

§2105.21 Coke Ovens and Coke Oven Gas with Related §2101.20 Definitions and §2109.01 Inspections

(Note: The following portions of this proposed revision will also be submitted to the Pennsylvania DEP and U.S. EPA as a revision to Allegheny County’s portion of the Pennsylvania State Implementation Plan for the Attainment and Maintenance of the National Ambient Air Quality Standards, under Revision Tracking No. 87: §2101.20, §2105.21.a-h, j, and §2109.01.)

Proposed Article XXI Revision – Coke Ovens and Coke Oven Gas Regulation

Deletions are shown with strikethroughs.
Additions are shown **bolded and underlined**.

§2101.20 DEFINITIONS {unless specifically indicated, all definitions effective October 20, 1995}

...

“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, **open standpipes of the oven being charged** 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. *{effective Feb. 1, 1994. Amended mm/dd/2022, effective mm/dd/2022.}*

“Pushing emissions” means an air contaminant emitted into the outdoor atmosphere which is generated by or results from the pushing operation. *{Added mm/dd/2022, effective mm/dd/2022.}*

“Pushing operation” 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. *{effective February 1, 1994. Amended mm/dd/2022, effective mm/dd/2022.}*

“Soaking emissions from a standpipe cap” means uncombusted emissions from an open standpipe which has been dampered off in preparation of pushing the coke mass out of the oven and shall end when pushing begins, ~~i.e., when the coke side door is removed.~~ *{Added by August 29, 2013 amendment, effective September 23, 2013. Amended mm/dd/2022, effective mm/dd/2022.}*

§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. Subsections a through i amended and Subsection j added mm/dd/2022, effective mm/dd/2022.}

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) or fewer consecutive valid 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) or fewer consecutive valid charges on such battery.
3. **Inspection Procedures.** The following inspection technique shall be utilized for determining compliance with the coke oven charging standard as defined in this Subsection:
 - A. Observations of visible charging emissions shall be made from any point or points on the topside of a coke oven battery from which an observer can view the majority of any charging emissions which may be created during charging (typically at, but in no way limited to, a distance between 5 to 12 ovens);
 - B. Any U-tube system is part of the charging operation when it is connected during the charging of that oven, while any other offtakes are not included;
 - C. The observer will determine and record the total number of seconds that charging emissions are visibly being emitted. For each charge, the observer shall record the identification number of the oven charged and the approximate beginning time of the charge;
 - D. The observer will time the visible charging emissions with a timepiece (to the nearest half second) while observing the charging operation. Simultaneous emissions from more than one emission point shall be timed and recorded as one emission and shall not be added separately when calculating the total time. Upon observing any visible charging emissions being emitted from any part of the charging system, start the timepiece. Stop the timepiece when visible emissions are no longer being emitted. Restart the timepiece when or if visible emissions reoccur; start and stop the timepiece as often as needed during the same charging period;

- E. Open visible charging emissions shall not include any emissions observed after all the charging port seals have been replaced (i.e., the charging port lid is firmly seated) following the removal of the larry car, such as emissions occurring when a charging port lid is temporarily removed to allow the sweep-in of spilled coal. In addition, visible charging emissions from the coke oven doors or the leveling bar shall not be included, or visible charging emissions which were previously counted;
- F. The total number of seconds of visible charging emissions observed, clock time for the initiation and completion of the charging operation for each oven, battery identification and oven number for each charge shall be recorded by the observer;
- G. In the event that observations of emissions from a charge are interrupted, the data from that charge may be invalidated. If the charge is invalidated, the observer shall note on their observation sheet the reason for invalidating the data and the observer may then resume observation of the next charge or charges;
- H. Compliance is determined by adding the number of seconds of charging emissions observed during a set of charges of either four or five charges, depending on whether the coke oven charging standards set forth in Paragraphs a.1 or a.2 of this Section apply;
- I. An observer may stop the observation when the number of seconds of charging emissions observed exceeds the coke oven charging standard set forth in Paragraphs a.1. and a.2. of this Section even if a full set of four or five charges have not been observed. A subsequent inspection may be conducted starting with the next set of charges; however, if the observer stops an observation, the observer cannot resume observing charging observations until after the original set of ovens are all charged; and
- J. These procedures include some, but not all, aspects of EPA Method 303. In order to ensure a full understanding of the inspection procedures set forth in this Subsection, the observer shall also maintain current certification for Method 303 observations.

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

- 1. For Coke Oven Battery C at the U. S. Steel Corporation Mon Valley Works Clairton Plant, at any time, there are visible emissions from more than three percent (3.0%) 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 as calculated in Subparagraph 8.B of this Subsection;

12. For any batteries installed, replaced, or reconstructed, or at which a major

modification was made ~~on or after~~ between the dates of January 1, 1978, and October 31, 2012, at any time, there are visible emissions from more than five percent (5.0%) 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 (8.0%) 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	<u>U. S. Steel</u> USX Corp. Clairton, PA
B. Coke Battery #2	<u>U. S. Steel</u> USX Corp. Clairton, PA
C. Coke Battery #3	<u>U. S. Steel</u> 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
<u>D G.</u> Coke Battery #19	<u>U. S. Steel</u> USX Corp. Clairton, PA; or

4. For Coke Oven Battery C at the U. S. Steel Corporation Mon Valley Works Clairton Plant, emissions from the door areas of any coke oven exceed an opacity of 30% at any time 15 or more minutes after such oven has been charged;
5. Any batteries installed, replaced, or reconstructed, or at which a major modification was made on or after the effective date of this paragraph shall be subject to the applicable requirements under either Section 2102.06 (relating to installation permits for major sources locating in or impacting a nonattainment area) or Section 2102.07 (relating to installation permits for major sources locating in an attainment or unclassified area) of this Article;
6. For any batteries, other than those subject to Paragraphs b.4 or b.5 of this Section, 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.

57. Unless for any of the following batteries at the U. S. Steel USX Corporation Mon Valley Clairton Coke Works Clairton Plant, Clairton, Pennsylvania, there is installed big plug doors, or better, 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

	<u>Source Name</u>	<u>Minimum Width</u>	<u>Minimum Depth</u>
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"
<u>D. G.</u>	Coke Battery #19	17"	16 1/4"
<u>E. H.</u>	Coke Battery #20	17"	16 1/4"

8. Inspection Procedures.

- A. Compliance with the high opacity limitation as defined in Paragraphs b.4 through b.6 of this Section or source permit for a single door area is determined in accordance with the following method:**
- i. The observer shall place themselves no less than 25 feet from the face of the door in a location where their view of the door area is unobstructed;**
 - ii. The observer's position for high opacity door areas must meet the sun angle requirements of 40 C.F.R. Part 60, Appendix A, Method 9;**
 - iii. The observer shall record the maximum observed opacity of emissions emanating from a point above the top, or at the top of the door, but below the battery top, or at the top of any local door area emission control hood;**
 - iv. For determining compliance with Paragraphs b.4 and b.6, a 15 minute exclusion from the opacity limitation shall be allowed after such oven has been charged. The operator shall provide the observer with the time when the charging period ends on such oven. If the operator does not provide the time the charging period ends, the observer may presume that the 15 minute exclusion has expired at the start of the inspection of such oven;**

- v. The observer shall have a current certification as a qualified observer for EPA Method 9;
- vi. The observer shall, as much as possible, make observations from a position such that their line of vision is approximately perpendicular to the plume direction and a position which provides a clear view of emissions as long as the observation position complies with Section 2.1 of Method 9; and
- vii. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Once the observer notices a potential high opacity door emission, the observer shall momentarily look away from the door emissions before conducting a high opacity door reading. The observer shall look no longer than a few continuous seconds at the plume. If more than a few seconds are needed, the observer shall momentarily look away to recalibrate their eyes before observing the plume again.

B. Compliance with the percent door area leakage standard as defined in Paragraphs b.1 through b.3 of this Section is determined in accordance with the following method:

- i. The intent of this procedure is to determine visible emissions from door areas by carefully observing the door area from a standard distance while walking at a normal pace;
- ii. The observer shall walk the length of the battery at a steady, normal walking pace sufficient to allow the inspector to observe any emissions from the door and differentiate any emissions from steam. The observer shall record the actual traverse time for the battery with a timepiece;
- iii. Each door area should be observed in sequence;
- iv. The observer shall place themselves no less than 25 feet from the face of the door unless readings are being conducted from the bench area in front of the doors;
- v. For purposes of determining compliance with this Subsection, "operating oven" means any oven which is not out of operation for purposes of a rebuild or attributable to maintenance sufficiently extensive so as to require the oven be skipped in the charging sequence;
- vi. Visible emissions from hot coke that has been spilled on the bench as a result of pushing shall not be recorded as a door area visible

emission;

- vii. If the observer's view of a door area(s) is more than momentarily obstructed by, for example, door machinery, pushing machinery, coke guide, or opaque steam plumes, the observer shall record the oven number (s) or door area (s) obstructed and the nature of the obstruction and continue the observations with the next door area in sequence which is not obstructed;
- viii. The observer shall continue as per Subparagraphs B.i. through B.vii. above along the entire length of the battery for any battery side and shall record the battery identification, battery side, and oven door identification number of each door area exhibiting visible emissions. Before completing the traverse or immediately thereafter the observer shall attempt to re-observe the obstructed doors;
- ix. The Department shall determine the last oven charged based on the times provided by the operator. If the operator does not provide the times of the ovens charged, the observer shall indicate a "0" for the "number of door areas with visible emissions from the last oven charged" and a "1" for the "number of door areas from the last oven charged" for each inspected battery side for the formula in Subparagraph B.x or B.xi;
- x. For batteries that have sheds on the coke side that are used to control emissions during pushing or if it is unsafe to observe from the yard, the inspection should be conducted from the bench area in front of the doors. A bench correction factor shall be applied to the number of leaks observed from the bench areas to calculate a yard equivalent reading. The following formula shall be used to calculate the yard equivalent reading:

$$\text{Yard equivalent reading} = \left(\begin{array}{c} \text{Number of door areas} \\ \text{on operating ovens} \\ \text{with visible emissions} \\ \text{observed from the bench} - \\ \text{Number of door areas} \\ \text{with visible emissions} \\ \text{from the last oven charged} \end{array} \right) - \left(\left(\begin{array}{c} \text{Total number of} \\ \text{door areas observed} \\ \text{from the bench} - \\ \text{Number of door} \\ \text{areas from the} \\ \text{last oven charged} \end{array} \right) \times 0.06 \right)$$

- xi. Compliance shall be calculated by application of the following formula rounded to the nearest tenth of one percent. If a bench correction factor was applied under Subparagraph B.x, above, the yard-equivalent reading shall be included in the "number of door areas with visible emissions" in the formula below:

$$\text{Percent leaking} = \frac{\left(\begin{array}{c} \text{number of door areas with visible emissions} \\ \text{on operating ovens} - \text{number of obstructed} \\ \text{door areas with visible emissions} - \\ \text{number of door areas with visible emissions} \\ \text{from the last oven charged} \end{array} \right)}{\left(\begin{array}{c} \text{number of door areas on operating ovens} - \\ \text{number of obstructed door areas} - \\ \text{number of door areas from the last oven charged} \end{array} \right)} \times 100$$

xii. These procedures include some, but not all, aspects of EPA Method 303. In order to ensure a full understanding of the inspection procedures set forth in this Subsection, the observer shall also maintain current certification for Method 303 observations.

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

1. For Coke Oven Battery C at the U. S. Steel Corporation Mon Valley Works Clairton Plant, in such manner that, at any time, there are visible emissions from more than 0.6% of the charging ports or charging port seals on the operating coke ovens of such battery, excluding any charging ports obstructed from view; or
12. Any battery of coke ovens installed, replaced, or reconstructed, or at which a major modification was made ~~on or after~~ between the dates of January 1, 1978, and October 31, 2012, in such manner that, at any time, there are visible emissions from more than one percent (1.0%) of the charging ports or charging port seals on the operating coke ovens of such battery, excluding any charging ports obstructed from view; or
3. Any batteries installed, replaced, or reconstructed, or at which a major modification after the effective date of this paragraph shall be subject to the applicable requirements under either Section 2102.06 (relating to installation permits for major sources locating in or impacting a nonattainment area) or Section 2102.07 (relating to installation permits for major sources locating in an attainment or unclassified area) of this Article.
24. Any other battery of coke ovens, other than those subject to Paragraphs c.1, c.2 or c.3 of this Section, in such manner that, at any time, there are visible emissions from more than two percent (2.0%) of the charging ports or charging port seals on the operating coke ovens of such battery, excluding any charging ports obstructed from view.
5. Inspection Procedures. The following inspection technique shall be utilized for determining compliance with the percent charging port leakage standard as defined in this Subsection:

- A. Observations of any visible emissions from charging ports or charging port seals, other than charging or pushing emissions, shall be made and recorded during the time an observer walks the topside of a battery from one end to the other, walking near the center of the battery but may deviate from this path to avoid visual interferences, safety hazards, and any other obstacles;
- B. Each oven shall be observed in sequence during each of the traverses. The observer shall walk the length of the battery at a steady, normal walking pace sufficient to allow the inspector to observe any emissions from the charging ports or charging port seals and differentiate any emissions from steam and shall record the actual traverse time with an appropriate timepiece (note that charging ports from the last oven charged may be in the process of being sealed);
- C. The observer shall record the battery and lid identification, the oven number, and whether an oven was dampered off or obstructed from view. The number of charging ports from dampered off ovens (not to exceed three ovens) will be excluded as described in the formula in Subparagraph F below;
- D. For purposes of determining compliance with this Subsection, “operating oven” means any oven which is not out of operation for purposes of a rebuild or attributable to maintenance sufficiently extensive so as to require the oven be skipped in the charging sequences;
- E. The observer shall not count the following as charging port or charging port seal visible emissions:
- i. Visible emissions from between the brickwork and oven lid casing or visible emissions from cracks in the oven brickwork. The observer shall make an appropriate notation under “Comments”;
 - ii. Visible emissions from charging ports involved in a charging operation. The observer shall record the oven number, and make an appropriate notation (e.g., not observed because ports open for charging) under “Comments”;
 - iii. Charging ports having maintenance work done. The observer shall record the oven number and make an appropriate notation under “Comments”;
 - iv. Condensing water from wet-sealing material; and
 - v. Visible emissions from the flue inspection ports and caps.
- F. Compliance is determined by application of the following formula rounded to the nearest tenth of one percent; and

$$\text{Percent leaking} = \frac{\left(\begin{array}{l} \text{number of charging ports with visible} \\ \text{emissions on operating ovens} - \\ \text{number of charging ports with visible emissions} \\ \text{from charging ports obstructed from view} - \\ \text{number of charging ports with visible emissions on} \\ \text{dampered off ovens, not to exceed three ovens} \end{array} \right)}{\left(\begin{array}{l} \text{number of charging ports on operating ovens} - \\ \text{number of charging ports obstructed from view} - \\ \text{number of charging ports on dampered off} \\ \text{ovens, not to exceed three ovens} \end{array} \right)} \times 100$$

G. These procedures include some, but not all, aspects of EPA Method 303. In order to ensure a full understanding of the inspection procedures set forth in this Subsection, the observer shall also maintain current certification for Method 303 observations.

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

- 1. For Coke Oven Battery C at the U. S. Steel Corporation Mon Valley Works Clairton Plant, in such manner that, at any time, there are visible emissions from more than three percent (3.0%) of the offtake piping on the operating coke ovens of such battery, excluding any offtake piping obstructed from view;**
- 12. Any battery of coke ovens installed, replaced, or reconstructed, or at which a major modification was made on or after between the dates of January 1, 1978, and October 31, 2012, in such manner that, at any time, there are visible emissions from more than four percent (4.0%) of the offtake piping on the operating coke ovens of such battery, excluding any offtake piping obstructed from view;**
- 3. Any batteries installed, replaced, or reconstructed, or at which a major modification was made on or after the effective date of this paragraph shall be subject to the applicable requirements under either Section 2102.06 (relating to installation permits for major sources locating in or impacting a nonattainment area) or Section 2102.07 (relating to installation permits for major sources locating in an attainment or unclassified area) of this Article; or**
- 24. Any other battery of coke ovens, other than those subject to Paragraphs d.1, d.2 or d.3 of this Section, in such manner that, at any time, there are visible emissions from more than five percent (5.0%) of the offtake piping on the operating coke ovens of such battery, excluding any offtake piping obstructed from view.**
- 5. Inspection Procedures. The following inspection technique shall be utilized for determining compliance with the percent offtake piping leakage standard as defined in this Subsection:**
 - A. Observations of any visible emissions from the offtake piping shall be made by traversing the topside of the battery near the center of the**

battery, but may deviate from this path to avoid visual interferences, safety hazards, and any other obstacles;

- B. During the traverse, the observer may deviate from near the center of the battery and walk as close, or far as possible to the offtake piping to determine whether an observed emission is emanating from the offtake piping. In addition to items specifically listed in the definition for offtake piping in §2101.20 of this Article, the damper used for isolating the oven from the collecting main is also part of the offtake piping;
- C. The observer shall traverse the battery once per each collector main. Therefore, to observe a battery with two collector mains, one observer may traverse the battery in one direction for one offtake system and traverse the battery in one direction for the second offtake system or two observers can traverse the battery in one direction;
- D. Each oven should be observed in sequence. The observer shall walk the length of the battery at a steady, normal walking pace sufficient to allow the inspector to observe any emissions from the offtake piping and differentiate any emissions from steam and shall record the actual traverse time with an appropriate timepiece;
- E. The observer shall record the battery identification, side of the oven, the oven number for all offtake piping visible emissions and whether an oven was dampered off or obstructed from view. The number of offtake piping from dampered off ovens (not to exceed three ovens) will be excluded as described in the formula in Subparagraph I below;
- F. If any part or parts of offtake piping has or have visible emissions, the observer shall count it as one emitting offtake piping;
- G. Offtake piping with open standpipes for decarbonization or closed and sealed standpipes on such oven being charged would be counted as offtake piping obstructed from view in the formula in Subparagraph I below. Offtake piping with open standpipes on such oven being charged would count as charging emissions. All visible emissions from closed standpipe caps, excluding such oven being charged, count as offtake piping leaks;
- H. For purposes of determining compliance with this Subsection, “operating oven” means any oven which is not out of operation for purposes of a rebuild or attributable to maintenance sufficiently extensive so as to require the oven be skipped in the charging sequence;
- I. Compliance is determined by application of the following formula rounded to the nearest tenth of one percent; and

$$\text{Percent leaking} = \frac{\begin{array}{l} \text{number of offtake piping with visible} \\ \text{emissions on operating ovens} - \\ \text{number of offtake piping with visible emissions} \\ \text{from offtake piping obstructed from view} - \\ \text{number of offtake piping with visible emissions} \\ \text{on dampered off ovens, not to exceed three ovens} \end{array}}{\begin{array}{l} \text{number of offtake piping on operating ovens} - \\ \text{number of offtake piping obstructed from view} - \\ \text{number of offtake piping on dampered off} \\ \text{ovens, not to exceed three ovens} \end{array}} \times 100$$

J. These procedures include some, but not all, aspects of EPA Method 303. In order to ensure a full understanding of the inspection procedures set forth in this Subsection, the observer shall also maintain current certification for Method 303 observations.

- e. **Pushing.** No person shall operate, or allow to be operated, any battery of coke ovens unless there is installed on such battery a pushing emission control device which is designed to reduce fugitive emissions from pushing to the minimum attainable through the use of BACT; ~~nor shall any person operate, or allow to be operated any battery of coke ovens in such manner that:~~

No person may permit the pushing of coke from a coke oven unless the pushing operation is enclosed during the removal of coke from a coke oven and pushing emissions are contained, except for the fugitive pushing emissions, that are allowed by Paragraphs 4 and 5 of this Subsection nor shall any person operate, or allow to be operated any battery of coke ovens in such manner that:

1. At any time, the particulate mass emission rate from the pushing emission control device, for any battery other than those subject to Paragraph e.2 or e.3 of this Section, exceeds a rate determined by an outlet concentration of 0.020 grains per dry standard cubic foot, or the rate determined by the following formula, whichever is greater:

$A = 0.76W^{0.42}$ where A = allowable mass emission rate in pounds per hour per battery, and
W = actual coke pushing rate in tons of coke per hour per battery;

2. At any time, the particulate mass emission rate from the pushing emission control device, for any of the following batteries, exceeds a rate determined by an outlet concentration of 0.010 grains per dry standard cubic foot:

SPECIFIC COKE OVEN BATTERIES

Source Name	Location
A. Coke Battery #1	<u>U. S. Steel</u> USX Corp. Clairton, PA
B. Coke Battery #2	<u>U. S. Steel</u> USX Corp. Clairton, PA
C. Coke Battery #3	<u>U. S. Steel</u> 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
<u>D. G.</u> Coke Battery #19	<u>U. S. Steel</u> USX Corp. Clairton, PA
H. Coke Battery #1	Shenango Inc Neville PA

3. At any time, the particulate mass emission rate from the pushing emission control device, for any of the following batteries Coke Oven Battery B at the U. S. Steel Corporation Mon Valley Works Clairton Plant, exceeds a rate determined by an outlet concentration of 0.040 pounds per ton of coke:

SPECIFIC COKE OVEN BATTERIES

Source Name	Location
A. Coke Battery #13	USX Corp. Clairton, PA
B. Coke Battery #14	USX Corp. Clairton, PA
C. Coke Battery #15	USX Corp. Clairton, PA
D. Coke Battery #20	USX Corp. Clairton, PA
<u>E. Coke Battery B</u>	<u>USX Corp. Clairton, PA</u>

4. Fugitive pushing emissions or emissions from the pushing emission control device outlet equal or exceed an opacity of 20% at any time, except if the Department determines in writing, upon written application from the person responsible for the coke ovens setting forth all information needed to make such determination, that such emissions are of only minor significance with respect to causing air pollution and do not prevent or interfere with the attainment or maintenance of any ambient air

quality standard (any such determination shall be submitted as a proposed revision to Allegheny County's portion of the SIP);

5. Visible emissions from the transport of hot coke in the open atmosphere exceed ten percent (10%) opacity at any time; or
6. For any of the following batteries, at any time, the hot coke fails to be held under the hood of the pushing emission control (PEC) device for at least 67 seconds immediately after the pusher ram begins to move and the damper to the PEC device is opened or for at least 15 seconds immediately following the fall of the last of the coke into the hot car, whichever is longer:

SPECIFIC COKE OVEN BATTERIES

Source Name	Location
A. Coke Battery #1	<u>U. S. Steel</u> USX Corp. Clairton, PA
B. Coke Battery #2	<u>U. S. Steel</u> USX Corp. Clairton, PA
C. Coke Battery #3	<u>U. S. Steel</u> 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
<u>D. G.</u> Coke Battery #13	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>E. H.</u> Coke Battery #14	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>F. I.</u> Coke Battery #15	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>G. J.</u> Coke Battery #19	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>H. K.</u> Coke Battery #20	<u>U. S. Steel</u> USX Corp. Clairton, PA

except that this Paragraph shall only be effective during the period from 30 days following the issuance of a written notice by the Department to the owner or operator of such battery that EPA has required the implementation of the contingency measures under the portion of the PM-10 SIP for the Liberty Borough/Clairton area, until issuance of a written notice by the Department that such measures are no longer required.

7. Inspection Procedures. Compliance with the visible emission standards for pushing under this Subsection shall be determined in accordance with the following methods:

- A. Visible emission observers shall be certified in accordance with the procedures specified in 40 C.F.R. Part 60, Appendix A, Method 9;**
- B. In making pushing observations the observer shall be positioned in accordance with the provisions of Section 2.1 of Method 9;**
- C. The provisions of Section 2.2 of Method 9 shall apply based on the**

observer's initial position and the pushing emissions field data sheets shall include all of the items in Section 2.2 of Method 9;

- D. The provisions of Section 2.3 of Method 9 do not apply in that observers are not required to take readings at fifteen second intervals. The observer shall look no longer than a few continuous seconds at the plume. If more than a few seconds is needed, the observer shall momentarily look away to recalibrate their eyes before observing the plume again;
- E. The provisions of Sections 2.4 and 2.5 of Method 9 do not apply except that opacity observations shall be recorded to the nearest 5 percent;
- F. In viewing the pushing operation, the observer shall stand on the coke side of the battery where a clear view of the push can be obtained. This generally should be a location on the ground, in the coke side yard, outside the hot car tracks approximately perpendicular to the observed oven. However, the observer is not restricted to the ground level, but may make observation from an elevated level as long as the observation position complies with Section 2.1 of Method 9. The reader may change locations during a single oven reading but shall not take readings while in transit;
- G. During the pushing operation, the reader shall observe all the pushing emissions. Pushing operation, as defined in §2101.20 of this Article, begins when the coke side door is first removed from a coke oven and continuing until the quenching operation is commenced. Pushing emissions include all fugitive emissions leaving an oven during a push, emissions from the pushing emission control device outlet and, evaluated separately, emissions from open quench cars during the transport of hot coke in the open atmosphere;
- H. Except as provided in Subparagraph I below, compliance is determined by observing any visible emissions with opacity equal to or greater than the opacity limit defined in §2105.21.e.4 or applicable source permit, as determined against any contrasting background. The reader shall independently observe emissions from the pushing emission control device gas cleaning outlet and fugitive emissions from the pushing operation; and
- I. Pushing emissions during the transport of hot coke in the open atmosphere to the quench tower shall be evaluated separately. In this case, the reader shall be positioned in accordance with Subparagraphs B and F above using the opacity limit defined in §2105.21.e.5 or applicable source permit.

f. **Combustion Stacks.** No person shall operate, or allow to be operated, any battery of coke ovens in such manner that, at any time, emissions from the combustion stack serving such

battery:

1. For Coke Oven Battery C at the U. S. Steel Corporation Mon Valley Works Clairton Plant, exceed a total particulate concentration of 0.010 grains per dry standard cubic foot;
- ~~12.~~ For any battery of coke ovens installed, replaced, or reconstructed, or at which a major modification was ~~on or after~~ between the dates of January 1, 1978, and October 31, 2012, exceed a total particulate concentration of 0.015 grains per dry standard cubic foot;
3. Any batteries installed, replaced, or reconstructed, or at which a major modification was made on or after the effective date of this paragraph shall be subject to the applicable requirements under either Section 2102.06 (relating to installation permits for major sources locating in or impacting a nonattainment area) or Section 2102.07 (relating to installation permits for major sources locating in an attainment or unclassified area) of this Article.
- ~~24.~~ For any battery other than those subject to Paragraphs f.1, f.2 or f.3 of this Section, exceed a particulate concentration of 0.030 grains per dry standard cubic foot;
- ~~35.~~ Equal or exceed an opacity of 20% for a period or periods aggregating in excess of three (3) minutes in any 60 minute period; or
- ~~46.~~ Equal or exceed an opacity of 60% at any time.
7. Measurements of ~~opacity~~ visible emissions shall be performed ~~according to the methods for visible emissions established by §2107.11 of this Article.~~ in either of the following two ways:
 - A. Using any continuous opacity monitoring system (COMS) required by regulation, permit, consent agreement, consent decree, or enforcement order. Chapter 2 of the Allegheny County Source Testing Manual, entitled "Continuous Emission Monitoring," provides requirements for certification and ongoing verification of continuous opacity monitoring systems; or
 - B. In determining compliance with the visible emission standards, 40 C.F.R. Part 60, Appendix A, Method 9, shall be used except that the provisions of Section 2.5 of Method 9 do not apply. Rather than applying the provisions of Section 2.5 of Method 9, each observation that is recorded to be equal to or greater than the opacity standard in §2104.01.a.1 or applicable source permit shall be counted in determining the hourly aggregated period.

g. **Quenching.** No person shall quench, or allow the quenching of, coke unless the emissions from such quenching are vented through a baffled quench tower and the water used for such quenching meets the requirements of 40 CFR 63 Subpart CCCCC. Make-up water for quenching shall be equivalent to, or better than, the water quality standards established for the nearest stream or river by regulations promulgated by the DEP under the Pennsylvania Clean Streams Law, Act of June 22, 1937, PL. 1987, as amended, 35 P.S. 691.1 et seq., except that water from the nearest stream or river may be used for make-up water for the quenching of coke. The nearest stream or river to the U. S. Steel USX Corporation Mon Valley Works Clairton Plant facility in Clairton, PA, shall be the Monongahela River. Measurements of water quality shall be performed according to procedures established or approved by the Commonwealth.

h. **Coke oven gas.** Except as provided for in this Section, no person shall operate, or allow to be operated, any source in such manner that unburned coke oven gas is emitted into the open air. In addition, no person shall 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 the following concentrations:

1. Where the rated production capacity of the coke plant producing such gas is less than 70 million standard cubic feet of coke oven gas per day, a concentration of 70 grains per hundred dry standard cubic feet of coke oven gas or the concentration determined by the following formula whichever is less:

$$A = 156E^{-0.27} \text{ where } A = \text{allowable hydrogen sulfide content in grains per hundred dry standard cubic feet of coke oven gas, and}$$

$$E = \text{maximum coke oven gas production rate in millions of cubic feet per day;}$$

2. For all coke batteries installed, replaced, or reconstructed, or at which a major modification was made on or after January 1, 1978, where the rated production capacity of the coke plant producing such gas is equal to or more than 70 million standard cubic feet of coke oven gas per day, ~~other than those subject to Paragraph h.3 of this Section,~~ a concentration of ten (10) grains per hundred dry standard cubic feet of coke oven gas;
3. ~~For the following battery, on and before December 31, 1996, a concentration of 45 grains per hundred dry cubic feet of coke oven gas, and after December 31, 1996, a concentration of 34 grains per hundred dry cubic feet of coke oven gas:~~

~~SPECIFIC COKE OVEN BATTERIES~~

Source Name	Location
A. Coke Battery #1	Shenango Inc Neville PA

The standard set forth in Paragraph h.2 of this Section for the following coke oven batteries designated 13, 14, 15, 20, and B at the U. S. Steel USX Corporation Mon Valley Works Clairton Plant Works shall be deemed satisfied for such batteries if the coke oven gas from the following batteries and treated by the Clairton Plant Works coke oven gas desulfurization system in existence as of June 24, 1993, has a sulfur compound concentration, measured as H₂S, of no greater than 35 40 grains per hundred dry standard cubic feet of coke oven gas produced by the Clairton Works, when all sulfur emissions from its Claus Sulfur Recovery Plant and the tail gas cleaning equipment thereon, expressed as equivalent H₂S, are added to the measured H₂S.

SPECIFIC COKE OVEN BATTERIES

Source Name	Location
A. Coke Battery #1	<u>U. S. Steel</u> USX Corp. Clairton, PA
B. Coke Battery #2	<u>U. S. Steel</u> USX Corp. Clairton, PA
C. Coke Battery #3	<u>U. S. Steel</u> 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
<u>D. G.</u> Coke Battery #13	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>E. H.</u> Coke Battery #14	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>F. I.</u> Coke Battery #15	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>G. J.</u> Coke Battery #19	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>H. K.</u> Coke Battery #20	<u>U. S. Steel</u> USX Corp. Clairton, PA
<u>I. L.</u> Coke Battery B	<u>U. S. Steel</u> USX Corp. Clairton, PA

- 4 5. For all other coke batteries, where the rated production capacity of the coke plant producing such gas is equal to or more than 70 million standard cubic feet of coke oven gas per day, other than those subject to Paragraph h.2 ~~or h.3~~ of this Section, a concentration of fifty (50) grains per hundred dry standard cubic feet of coke oven gas.

The concentration of sulfur compounds specified by this Subsection shall include tail-gas sulfur, measured as hydrogen sulfide, emitted from sulfur removal equipment.

- i. Soaking. No person shall operate, or allow to be operated, any battery of coke ovens in such manner that:

1. For Coke Oven Battery C at the U. S. Steel Corporation Mon Valley Works Clairton Plant, at no time shall soaking emissions from a standpipe cap opening exceed ten percent (10%) opacity.

2. Any batteries installed, replaced, or reconstructed, or at which a major modification was made on or after the effective date of this paragraph, shall be subject to the applicable requirements under either Section 2102.06 (relating to installation permits for major sources locating in or impacting a nonattainment area) or Section 2102.07 (relating to installation permits for major sources locating in an attainment or unclassified area) of this Article.
3. For any batteries, other than those subject to Paragraphs i.1 or i.2 of this Section, ~~At~~ no time shall soaking emissions from a standpipe cap opening exceed twenty percent (20%) opacity.

An exclusion from this ~~the~~ opacity limits of Paragraphs i.1 and i.3 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.~~ During the two (2) minute exclusion, all air pollution control equipment and control techniques shall be operated consistent with good air pollution control practices. For purposes of this Subsection, good air pollution control practices may include, but are not limited to, lighting or attempting to light the standpipe immediately following the opening of the standpipe.

4. Inspection Procedures. Compliance with the visible emission standard for soaking shall be determined in accordance with the following method:
 - A. The observer records the time the standpipe cap is initially opened or observed open and note if the observer did not observe the opening of the standpipe cap;
 - B. The observer shall read the soaking emissions from the open standpipe in accordance with 40 C.F.R. Part 60, Appendix A, Method 9;
 - C. The observer continues to conduct readings per Method 9 except the provisions of Method 9 Sections 2.4 and 2.5 shall not apply in that observers need not record a minimum of 24 observations; and
 - D. For determining compliance with this Subsection, a two (2) minute exclusion from the opacity limit shall be allowed after the time the standpipe cap is initially opened. If the observer did not observe the opening of the standpipe cap, the observer may presume that the standpipe cap has been open for more than two (2) minutes unless the operator provides the time the standpipe cap was opened.

j. Miscellaneous Topside Emissions

- 1. At no time may there be topside emissions from any point on the topside other than allowed emissions from charging port seals under Subsection c, offtake piping under Subsection d and soaking under Subsection i.**
- 2. At no time may there be visible emissions from the coke oven gas collector main.**

§2109.01 INSPECTIONS

{Subsection d added by May 7, 1998 amendment, effective May 15, 1998. Subsection e added mm/dd/2022, effective mm/dd/2022.}

...

- e. During an inspection by the Department, a source shall operate in a manner consistent with its normal air pollution control practices unless an alternative method or procedure is requested by the Department or if necessary for the protection of worker or public safety. It shall be a violation of this Article for any person to alter or modify a source's normal air pollution control practices during a Department inspection for the purpose of improving compliance with the requirements under this Article or any Department permit. Any person who deviates from a source's normal air pollution control practices during a Department inspection shall have the burden of demonstrating why the alternative or modified practices were required.**

End of Regulation Changes