



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

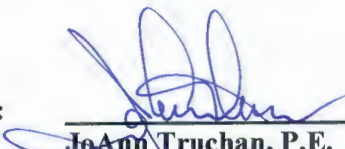
**Federally Enforceable Installation Permit  
For 1-Hour SO<sub>2</sub> NAAQS**

**Issued To:** U. S. Steel Mon Valley Works  
Irvin Plant  
Camp Hollow Road  
West Mifflin, PA 15212

**ACHD Permit#:** 0050-I008

**Date of Issuance:** September 14, 2017

**Expiration Date:** (See Section III.12)

**Issued By:**   
JoAnn Truchan, P.E.  
Section Chief, Engineering

**Prepared By:**   
Hafeez A. Ajenifuja  
Air Quality Engineer

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### *AMENDMENTS:*

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

**Facility Location:** U. S. Steel Mon Valley Works  
**Irvin Plant**  
Camp Hollow Road  
West Mifflin, PA 15122

**Permittee/Owner:** U. S. Steel Mon Valley Works  
**Irvin Plant**  
Camp Hollow Road  
West Mifflin, PA 15122

**Responsible Official:** **Kurt Barshick**  
Title: General Manager  
Company: U. S. Steel Mon Valley Works  
Address: P.O. Box 878  
Dravosburg, PA 15122  
Telephone Number: (412) 675-2600  
Fax Number: (412) 675-5407

**Facility Contact:** **Dan Belack**  
Title: Environmental Engineer  
Telephone Number: (412) 675-7382  
Fax Number: (412) 675-7822  
E-mail Address: [dbelack@uss.com](mailto:dbelack@uss.com)

### AGENCY ADDRESSES:

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

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

**II. FACILITY DESCRIPTION****FACILITY DESCRIPTION**

The U. S. Steel Mon Valley Works Irvin Plant is a secondary steel processing facility located in West Mifflin Borough, Allegheny County, Pennsylvania. The Irvin Plant receives steel slabs and performs one of several finishing processes on the steel slabs. The finishing processes commonly referred to as secondary steel processes, include hot and cold rolling, continuous pickling, annealing, and galvanizing. The facility is composed of an 80" hot strip mill, 64" & 84" continuous hydrochloric acid pickle lines, a cold reduction mill, HPH annealing furnaces, open coil annealing furnaces, a continuous annealing furnace, continuous galvanizing line no. 1, continuous galvanizing and aluminum coating line no. 2, four coke oven gas flares, and four natural gas/coke oven gas fired boilers.

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

**TABLE II-1: Emission Unit Identification**

I.D.	SOURCE DESCRIPTION	SO <sub>2</sub> CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
P001-P005	80-Inch Hot Strip Mill Reheat Furnaces No. 1 to No. 5	NA	140 MMBtu/Hr	Coke Oven Gas and Natural Gas	SP1-SP6
P011	Continuous Annealing	NA	45 MMBtu/hr	Coke Oven Gas and Natural Gas	SP13
P009	HPH Batch Annealing Furnaces (31 individual furnaces)	NA	4.9 MMBtu/hr, each furnace	Coke Oven Gas and Natural Gas	SP10
P010	Open Coil Annealing Furnaces No. 1 to 9	NA	7.2 MMBtu/hr, each furnace	Coke Oven Gas and Natural Gas	SP12
P010	Open Coil Annealing Furnaces No. 10 to 13	NA	9.0 MMBtu/hr, each furnace	Coke Oven Gas and Natural Gas	SP12
P010	Open Coil Annealing Furnaces No. 14	NA	5.4 MMBtu/hr	Coke Oven Gas and Natural Gas	SP12
P010	Open Coil Annealing Furnaces No. 15 to 16	NA	7.47 MMBtu/hr, each furnace	Coke Oven Gas and Natural Gas	SP12

I.D.	SOURCE DESCRIPTION	SO <sub>2</sub> CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
B001	Boiler No. 1	NA	79.8 MMBtu/hr	Coke Oven Gas and Natural Gas	SB1
B002	Boiler No. 2	NA	84.6 MMBtu/hr	Coke Oven Gas and Natural Gas	SB2
B003	Boiler No. 3	NA	41.6 MMBtu/hr	Coke Oven Gas and Natural Gas	SB3
B004	Boiler No. 4	NA	41.6 MMBtu/hr	Coke Oven Gas and Natural Gas	SB3

*DECLARATION OF POLICY*

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**III. GENERAL CONDITIONS**

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**15. Reporting Requirements (§2103.12.k)**

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

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**25. SO<sub>2</sub> Compliance Monitoring**

- a. The permittee shall not flare, mix or combust coke oven gas, or allow such gas to be flared, mixed, or combusted as a fuel for or at any source unless the concentration of sulfur compounds, measured as hydrogen sulfide, in such gas is less than or equal to 35 grains per hundred dry standard cubic feet of coke oven gas. (§2105.21.h)
- b. For sources listed in Table V.A.1, the permittee shall determine the H<sub>2</sub>S grain loading and flow rate of the fuel as combusted. The permittee shall record the output of each system for measuring sulfur dioxide emissions discharged to the atmosphere.

**26. SO<sub>2</sub> Compliance**

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

**V. EMISSION UNIT LEVEL TERMS AND CONDITIONS**

**A. SO<sub>2</sub> Limits**

The permittee is subject to the following conditions:

**1. Restrictions:**

- a. The combustion units listed in Table V-A-1 shall only combust natural gas and coke oven gas. [§2102.04.b.6]
- b. SO<sub>2</sub> emissions from the following sources shall not exceed the limitations in Table V-A-1 below: [§2102.04.b.6, §2105.21.h]

**TABLE V-A-1: SO<sub>2</sub> Emission Limitations**

Process	30 day Rolling Average Limit* (lb/hr)	Supplementary 24-hr Limit** (lb/hr)
Boiler #1	7.88	8.92
Boiler #2	8.36	9.46
Boilers #3-4 (aggregate)	8.21	9.30
80" Hot Strip Mill (aggregate)	108.63	118.75
HPH Annealing Furnaces (aggregate)	12.00	13.58
Open Coil Annealing (aggregate)	11.50	13.02
Continuous Annealing	8.07	9.14

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

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

**2. Testing Requirements:**

- a. The permittee shall have sulfur dioxide (SO<sub>2</sub>) emissions stack tests performed on emission units listed in Table V-A-1 at least once every two years as required by Article XXI §2108.02.b. SO<sub>2</sub> emission tests shall be conducted according to Method 6, 6A, 6B, or 6C as specified in 40 CFR 60, Appendix A. The permittee shall submit a stack test protocol to the Department for approval at least 45 days prior to the test date(s). [§2108.02.b; §2108.02.e]
- b. Emissions of SO<sub>2</sub> shall be determined by converting the H<sub>2</sub>S grain loading of the fuel burned and the fuel flow rate, to pounds per hour to determine compliance with the emission limitations of Table V-A-1 above. [§2103.12.h]



**3. Monitoring Requirements:**

Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), the permittee shall continuously monitor and record the H<sub>2</sub>S concentration (in grains(gr)/100 dscf) of the COG combusted and the fuel flow rate required in Site Level Condition IV.25.b. Continuously shall be defined as at least once every 15 minutes. [§2102.04.b.6; §2103.12.i]

**4. Record Keeping Requirements:**

- a. The permittee shall keep records of hourly fuel use (COG and natural gas) and hourly H<sub>2</sub>S concentration in grains per 100 dscf. [§2102.04.b.6; §2103.12.j]
- b. The permittee shall record all instances of non-compliance with the conditions of this permit upon occurrence along with corrective action taken to restore compliance. [§2102.04.b.6; §2103.12.j]

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**5. Reporting Requirements:**

- a. The permittee shall report the concentration of H<sub>2</sub>S per 100 dscf of COG averaged over a calendar day to the Department on a quarterly basis, in accordance with General Condition III.15.e. All instances of non-compliance with the conditions of this permit along with all corrective action taken to restore the subject equipment to compliance shall be reported. [§2103.12.k]
- b. Reporting instances of non-compliance does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [§2103.12.k]

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