



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

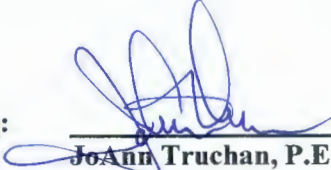
Federally Enforceable Installation Permit
For 1-Hour SO₂ NAAQS

Issued To: **Braddock Recovery, Inc.**
A Subsidiary of Harsco Corp.
1300 Braddock Avenue
Braddock, PA 15104

ACHD Permit#: **0265-I001**

Date of Issuance: September 14, 2017

Expiration Date: (See Section III.12)

Issued By: 
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Section Chief, Engineering

Prepared By: 
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Air Quality Engineer

II. FACILITY DESCRIPTION

FACILITY DESCRIPTION

Braddock Recovery, Inc. (Braddock Recovery), a subsidiary of Harsco Corporation, is located on the U. S. Steel Edgar Thomson site. This facility receives by-products from U. S. Steel, including furnace flue dust, slag and sludge, mill scale, and coke fines, dries them in a rotary kiln fired with coke oven gas, combines them with lime, cement, sodium silicate, water, bentonite and molasses in a wet mixing process in two pugmills, and forms the moist mix into briquettes. These finished briquettes are piled on-site with a radial stacker and then loaded onto railcars and sent back to U. S. Steel Edgar Thomson to be used in the furnaces. The raw materials are loaded into the first stage of the process with a front-end loader. The front-end loader loads finished briquettes onto a conveyor and then into the railcars. Materials are moved through the entire process by a series of conveyors. The rotary kiln is controlled by a cyclone and a fabric filter. The particulate removed with these control devices is sent back to screw conveyor (S008). A vibrating screen is used just after the kiln to remove particles that are too large. Another vibrating screen is used at the end of the process to separate fine particles from the finished briquettes. These fines are then re-directed via conveyor to the mixers. The front-end loader loads finished briquettes onto a conveyor and then into the railcars. There are paved roadways and storage piles on-site. Fugitive particulate emissions from the storage piles are controlled by watering. Fugitive particulate emissions from the unpaved roadways are controlled with watering for dust control. Most operations occur in enclosed spaces.

The facility, which is located in Braddock, Pennsylvania, is a minor source of all criteria pollutants and Hazardous Air Pollutant (HAPs), as defined in Section 2101.20 of Article XXI. However, the facility is considered a major source based on operating, managing or supporting the U. S. Steel Edgar Thomson Plant "Waste Product Recycling and Briquetting Process.

INSTALLATION DESCRIPTION

This permit revises emission limits of equipment such that the permit conditions limit the emissions of SO₂ sufficiently to ensure the 1- hour standard for the SO₂ National Ambient Air Quality Standard (NAAQS) is being met.

Only the equipment and processes with revisions to sulfur dioxide limits necessary to meet the 1-hour SO₂ NAAQS are summarized in Table II-1. In addition, this permit is federally enforceable.

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

TABLE II-1: Emission Unit Identification

I.D.	SOURCE DESCRIPTION	SO ₂ CONTROL DEVICE(S)	MAXIMUM CAPACITY	FUEL/RAW MATERIAL	STACK I.D.
P005	Rotary Kiln Dryer	NA	50 tons/hr	Sludge, Mill Scale, Coke Breeze, Flue Dust, Coke Oven Gas	Stack 01

V. EMISSION UNIT LEVEL TERMS AND CONDITIONS

A. Process P005: Rotary Dryer

Process Description: Rotary Kiln Dryer
 Facility ID: S004
 Max. Design Rate/Units: 24.59 MMBTU/hr
 Fuel: Coke Oven Gas
 Raw Materials: Briquettes for Blast Furnace and BOP Shop
 Control Device(s): One (1) Cyclone and One (1) Baghouse

1. Restrictions

- a. Emissions of SO₂ from the rotary kiln (S004) shall not exceed the emissions limitations in Table V-A-1 below. [§2102.04.b.6, §2105.21.h-4]

TABLE V-A-1: Rotary Kiln Emission Limitations

POLLUTANT	Hourly Emission Limit (lbs/hr)	Annual Emission Limit (tons/year)*
SO ₂	1.80	7.88

* A year is defined as any consecutive 12-month period.

2. Testing Requirements

- a. Emissions of SO₂ shall be determined by stack testing or converting the H₂S concentration (grains/100 dscf) of the fuel burned and the fuel flow rate, to pounds per hour of SO₂. [§2102.04.b.6; §2103.12.h]
- b. The Department reserves the right to require additional emissions testing sufficient to assure compliance with the terms and conditions of this permit. Such testing shall be performed in accordance with §2108.02. [§2103.12.h.1]

3. Monitoring Requirements

The permittee may determine the hourly H₂S concentrations (grains/100 dscf) of the fuel burned, or the permittee may obtain the hourly H₂S concentrations from U.S. Steel. [§2103.12.i]

4. Record Keeping Requirements

- a. The permittee shall keep records of hourly fuel use and hourly H₂S concentration (grains/100 dscf) to be used for SO₂ emission calculations. [§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]
- c. All records shall be retained by the facility for at least five (5) years. These records shall be made available to the Department upon request for inspection and/or copying. [§2103.12.j.2]

5. Reporting Requirements

- a. The permittee shall report all instances of non-compliance with the conditions of this permit along with all corrective action taken to restore the subject equipment to compliance to the Department semiannually in accordance with General Condition III.15.d. [§2103.12.k]
- b. Reporting instances of non-compliance in accordance with condition V.A.5.a above, does not relieve the permittee of the requirement to report breakdowns in accordance with Site Level Condition IV.8, if appropriate. [§2103.12.k]

6. Work Practice Standards

None except as otherwise provided.

7. Additional Requirements

None except as otherwise provided.