

**REGULATION 9
INORGANIC GASEOUS POLLUTANTS
RULE 14
PETROLEUM COKE CALCINING OPERATIONS**

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**REGULATION 9
INORGANIC GASEOUS POLLUTANTS
RULE 14
PETROLEUM COKE CALCINING OPERATIONS**

9-14-100 GENERAL

9-14-101 Description: The purpose of this rule is to limit sulfur dioxide (SO₂) emissions from the thermal processing of petroleum coke.

9-14-200 DEFINITIONS

9-14-201 Petroleum Coke Calcining Kiln: A refractory lined cylindrical device that that rotates on its own axis to drive off contaminants from green petroleum coke by bringing the coke into contact with heated gas.

9-14-202 Petroleum Coke: A carbonaceous solid derived from the thermal processing of petroleum products.

9-14-203 Petroleum Coke Calcining: The thermal processing of petroleum coke through a kiln.

9-14-204 Average SO₂ Emission Factor: Average unabated SO₂ emission factor in units of pounds of SO₂ per ton of green coke processed as determined by the APCO. The initial Average SO₂ Emission Factor is equal to 12.81 pounds of SO₂ per ton of green coke processed. The emission factor may be updated by the APCO using additional inlet source test data; the APCO shall base calculation of any such updated emission factor on the average of the available and representative inlet SO₂ source test data, in pounds per hour basis divided by the green coke feed rate in tons per hour.

9-14-205 80 Percent Control Level: The 80 percent control level shall be based on the owner/operator's green coke throughput records, and shall be calculated by using the following equations:

For One Kiln:

80 percent control level (tons SO₂ per year) = Annual Green Coke Processed by Kiln (tons per year) x Average SO₂ Emission Factor x (1 - 0.8) x 1/2000.

For All Kilns:

80 percent control level (tons SO₂ per year) = Annual Green Coke Processed by All Kilns (tons per year) x Average SO₂ Emission Factor x (1 - 0.8) x 1/2000.

9-14-300 STANDARDS

9-14-301 Emission Limit: The owner/operator of a petroleum coke calcining operation subject to this rule shall comply with all of the following:

301.1 Effective January 1, 2019, operate at least one Petroleum Coke Calcining Kiln subject to this standard such that the Petroleum Coke Calcining Kiln does not emit SO₂ at a rate that exceeds 144 pounds per hour, averaged over any consecutive 24 hours; and one of the following:

1.1 Operate at least one Petroleum Coke Calcining Kiln such that the total SO₂ emitted from the kiln does not exceed 385 tons per calendar year; or

1.2 Demonstrate that actual SO₂ emissions from one of the two kilns is less than or equal to the 80 percent Control Level.

301.2 Effective January 1, 2020, operate all Petroleum Coke Calcining Kilns such that each kiln does not emit SO₂ at a rate that exceeds 144 pounds per hour, averaged over any consecutive 24 hours; and one of the following:

2.1 Operate all Petroleum Coke Calcining Kilns such that the SO₂ emitted from the Kilns does not exceed an average of 385 tons per Kiln, per calendar year; or

- 2.2 Demonstrate that actual SO₂ emissions from any kiln are less than or equal to the 80 percent Control Level.

9-14-400 ADMINISTRATIVE REQUIREMENTS

9-14-401 Schedule for SO₂ Control Upgrade Study: The owner/operator of a Petroleum Coke Calcining Operation subject to this standard shall conduct a study, using an independent engineering firm, to determine the changes required to meet the 80 percent Control Level for All Kilns. The study shall also quantify the total initial capital costs and recurring operating costs required meet the 80percent Control Level. The owner/operator shall complete the study and submit it to the APCO no later than December 31, 2017.

9-14-402 Schedule for Injection System Upgrades: No later than January 1, 2019, the owner/operator of a Petroleum Coke Calcining Operation subject to this standard shall upgrade the dry sorbent injection system of at least one Petroleum Coke Calcining Kiln to comply with the requirements of Section 9-14-301. No later than January 1, 2020, the owner or operator of any Petroleum Coke Calcining Kiln subject to this standard shall upgrade the dry sorbent injection system for all Petroleum Coke Calcining Kilns to comply with the requirements of Section 9-14-301.

9-14-403 Identify Kiln Upgrade Sequence: No later than 180 days after this rule is adopted, the owner/operator shall notify the APCO, in writing, to identify which Petroleum Coke Calcining Kiln will be upgraded first to comply with 9-14-301.1 requirements.

9-14-500 MONITORING AND RECORDS

9-14-501 Continuous Emission Monitoring and Recordkeeping Requirements: The owner/operator shall use Continuous Emission Monitors to measure SO₂ emissions from each Petroleum Coke Calcining Kiln. The owner/operator shall be subject to the applicable Continuous Emission Monitor requirements in Regulation 1. Effective one year from the date of adoption of this rule, the owner/operator shall maintain emission monitoring records for a period of 5 years and make them available to the APCO upon request.

9-14-502 General Monitoring and Recordkeeping Requirements: Effective January 1, 2019, the owner/operator of a petroleum coke calcining operation subject to this rule shall comply with all of the following:

502.1 Effective January 1, 2019:

- 1.1 Maintain records of the annual green coke processed in each kiln and all emissions data used to develop the APCO approved average SO₂ emission factor.
- 1.2 monitor the dry sorbent injection rate on an hourly basis for each kiln using an APCO approved methodology.
- 1.3 Use a calibrated APCO-approved load cell to monitor the mass of sorbent injected per hour for the first kiln to comply with the requirements of Section 9-14-301.

502.2 Effective January 1, 2020:

- 2.1 Use a calibrated APCO-approved load cell to monitor the mass of sorbent injected per hour for each kiln.
- 2.2 calibrate the dry sorbent injection system on an annual basis using an APCO-approved methodology.
- 2.3 Maintain records of the dry sorbent injection rate on an hourly basis.
- 2.4 Prepare monthly summaries for the amount of sorbent material purchased, the amount of spent sorbent hauled away on a daily basis and the amount of sorbent material injected on hourly basis.

All records and summaries subject to this provision shall be retained for 5 years and shall be submitted to the APCO upon request.

9-14-503 Annual Demonstration of 80 Percent Control Recordkeeping Requirements: When using the annual demonstration of 80 Percent Control Level to comply with Section 9-14-301 requirements, the owner/operator shall prepare the annual demonstration by February 1st of the subsequent calendar year. The owner/operator shall maintain records of the annual demonstrations prepared to comply with the requirements of Section 9-14-301 for a period of 5 years and make them available to the APCO upon request.

9-14-600 MANUAL OF PROCEDURES

9-14-601 Emissions Monitoring: Any facility that operates a petroleum coke calcining facility subject to Section 9-14-301 shall provide, properly install, maintain in good working order, and operate the following emission monitoring equipment:

601.1 Continuous Emissions Monitoring: A continuous emission monitoring system (CEMS) for each kiln, to demonstrate compliance with the provision of this rule for sulfur dioxide (SO_x) emissions. The CEMS shall meet the requirements of the District Manual of Procedures, Volume V, Continuous Emission Monitoring, Policy and Procedures. Each CEMS shall complete a minimum of one cycle of operation sampling, analyzing, and data recording for each successive fifteen (15) minute period.