

10 CSR 10-6.261 Control of Sulfur Dioxide Emissions

PURPOSE: This rule establishes requirements for emission units emitting sulfur dioxide (SO₂). These requirements are necessary to comply with the one (1)-hour SO₂ National Ambient Air Quality Standard (NAAQS) and to maintain existing SO₂ regulatory requirements previously found in 10 CSR 10-6.260 that were in place prior to the establishment of the one (1)-hour SO₂ NAAQS. The rule consolidates, streamlines, and updates existing regulatory requirements in accordance with 536.175, RSMo. The evidence supporting the need for this proposed rulemaking, per 536.016, RSMo, is a June 22, 2010, Federal Register rule that established a new one (1)-hour SO₂ standard and an August 5, 2013, Federal Register rule that established one (1)-hour SO₂ nonattainment areas.

- (1) Applicability. This rule applies to any source that emits sulfur dioxide (SO₂), except—
 - (A) Units fueled exclusively with natural gas (as defined in 40 CFR 72.2) or liquefied petroleum gas as defined by ASTM International or any combination of these fuels as of December 31, 2016, including those units identified in Table I as such, are subject only to the reporting and recordkeeping and test methods requirements in sections (4) and (5) of this rule, excluding paragraph (4)(A)1., as well as the requirement to use natural gas or liquefied petroleum gas;
 - (B) Units with a rated capacity less than or equal to three hundred fifty thousand British thermal units (350,000 Btus) per hour actual heat input; or
 - (C) Units subject to a more restrictive SO₂ emission limit or fuel sulfur content limit under 10 CSR 10-6.070 or any federally enforceable permit.
- (2) Definitions. Definitions of certain terms specified in this rule may be found in 10 CSR 10-6.020.
- (3) General Provisions.
 - (A) SO₂ Emission Limits. No later than January 1, 2017, sources and units listed in Table I of this rule shall limit their SO₂ emissions as specified. As of the effective date of this rule, sources listed in Table II of this rule shall limit their SO₂ emissions as specified.

Table I – Sources with SO₂ emission limits necessary to address the one (1)-hour SO₂ National Ambient Air Quality Standard*

Source	Source ID	Emission Limit per Source/Unit (Pounds SO ₂ per Hour)	Averaging Time
Ameren Missouri — Labadie Plant	0740003	40,837	24 hour block average
Ameren Missouri — Meramec Plant	1890010	7,371	24 hour block average
Ameren Missouri — Rush Island Plant	0990016	13,600	24 hour block average
Independence Power and Light	0950050		

— Blue Valley Station Unit 1 Unit 2 Unit 3		Natural gas Natural gas Natural gas	N.A. N.A. N.A.
Kansas City Power and Light Co. — Hawthorn Station Boiler #5 Combustion turbine 7 Combustion turbine 8 Combustion turbine 9	0950022	785 ULSD** ULSD** ULSD**	30 day rolling N.A. N.A. N.A.
Kansas City Power and Light Co. — Sibley Generating Station Boiler #1 Boiler #2 Boiler #3	0950031	1,468.17 1,447.01 10,632.02	30 day rolling 30 day rolling 30 day rolling
Veolia Energy Kansas City Inc. — Grand Ave. Station Boiler 1A Boiler 6 & 8 Boiler 7	0950021	0.5 351.8 0.5	1 hour 1 hour 1 hour

*Any Table I source/unit fueled by coal, diesel or fuel oil shall require a SO₂ Continuous Emission Monitoring System (CEMS) and shall follow all applicable requirements per subparagraph (3)(C)1.B. of this rule. Any source/unit that is fueled by natural gas (or changes fuels to natural gas no later than January 1, 2017) shall no longer require SO₂ CEMS for such units beginning with the completion date of the fuel change to natural gas.

**Ultra Low Sulfur Diesel (maximum 15 parts per million sulfur content) required for all fuel deliveries (for Table I sources/units using diesel fuel or fuel oil) after January 1, 2014.

Table II – Sources subject to SO₂ emission limits in place prior to 2010

Source	Source ID	Emission Limit per Source (Pounds SO ₂ per Million Btus Actual Heat Input)	Averaging Time
Associated Electric Coop, Inc. — Chamois Plant	1510002	6.7	3 hours
Empire District Electric Company — Asbury Plant	0970001	12.0	3 hours
New Madrid Power Plant — Marston	1430004	10.0	3 hours
Thomas Hill Energy Center Power Division — Thomas Hill	1750001	8.0	3 hours
University of Missouri (MU) — Columbia Power Plant	0190004	8.0	3 hours
Kansas City Power and Light Co. — Montrose Generating Station	0830001	3.9	24 hours
Ameren Missouri — Sioux Plant	1830001	4.8	Daily average, 00:01 to 24:00
Doe Run Company — Buick Resource Recycling Facility	0930009	8,650 pounds SO ₂ /hr	1 hour test repeated 3 times

(B) Sources with a total capacity, excluding exempt units, greater than three hundred

fifty thousand British thermal units (350,000 Btus) per hour actual heat input shall limit their SO₂ emissions as follows:

1. For sources located in Missouri, other than in Franklin, Jefferson, St. Louis, St. Charles Counties, or City of St. Louis, no more than eight pounds (8 lbs.) of SO₂ per million Btus actual heat input averaged on any consecutive three (3)-hour time period unless that source is listed in Table I or II of this rule; and
 2. For sources located in Franklin, Jefferson, St. Louis, St. Charles Counties, or City of St. Louis, no more than two and three-tenths pounds (2.3 lbs.) of SO₂ per million Btus actual heat input averaged on any consecutive three (3)-hour time period unless —
 - A. The source is listed in Table I or II of this rule; or
 - B. The source has a total rated capacity of less than two thousand (2,000) million Btus per hour and then the following restrictions apply.
 - (I) During the months of October, November, December, January, February, and March of every year, no person shall burn or permit the burning of any coal containing more than two percent (2%) sulfur or of any fuel oil containing more than two percent (2%) sulfur. Otherwise, no person shall burn or permit the burning of any coal or fuel oil containing more than four percent (4%) sulfur.
 - (II) Part (3)(B)2.B.(I) of this rule shall not apply to any source if it can be shown that emissions of SO₂ from the source into the atmosphere will not exceed two and three-tenths pounds (2.3 lbs.) per million Btus actual heat input to the source.
- (C) Compliance Determination. Compliance shall be determined as follows:
1. For sources and/or units listed in Table I of this rule, SO₂ Continuous Emission Monitoring System (CEMS) data.
 - A. SO₂ CEMS are not required for the following cases:
 - (I) Units fueled exclusively by natural gas and not using any secondary fuel; or
 - (II) Units fueled by natural gas and only using fuel oil for less than forty-eight (48)-hours annually and only for qualifying situations (e.g., testing, maintenance or operator training). The forty-eight (48)-hour annual limit for the use of fuel oil as a secondary fuel shall not include qualifying curtailment events and compliance shall be demonstrated using paragraph (3)(C)3. of this rule;
 - B. SO₂ CEMS shall follow the requirements in 40 CFR 75 and/or 40 CFR 60, Appendices B and F, as incorporated by reference in subsection (5)(B) of this rule;
 2. For sources listed in Table II of this rule already subject to a SO₂ CEMS requirement, SO₂ CEMS data; and

3. For sources subject to subsection (3)(B) of this rule not required to use SO₂ CEMS for compliance and for sources listed in Table II of this rule not required to use SO₂ CEMS for compliance—
 - A. Fuel delivery records;
 - B. Fuel sampling and analysis;
 - C. Performance tests;
 - D. Continuous emission monitoring; or
 - E. Other compliance methods approved by the staff director and the U.S. Environmental Protection Agency and incorporated into the state implementation plan.

(4) Reporting and Record Keeping.

- (A) All sources subject to this rule shall—
 1. Report any excess emissions other than startup, shutdown, and malfunction excess emissions already required to be reported under 10 CSR 10-6.050 to the staff director for each calendar quarter within thirty (30) days following the end of the quarter. In all cases, the notification shall be a written report and shall include, at a minimum, the following:
 - A. Name and location of source;
 - B. Name and telephone number of person responsible for the source;
 - C. Identity and description of the equipment involved;
 - D. Time and duration of the period of SO₂ excess emissions;
 - E. Type of activity;
 - F. Estimate of the magnitude of the SO₂ excess emissions expressed in the units of the applicable emission control regulation and the operating data and calculations used in estimating the magnitude;
 - G. Measures taken to mitigate the extent and duration of the SO₂ excess emissions; and
 - H. Measures taken to remedy the situation which caused the SO₂ excess emissions and the measures taken or planned to prevent the recurrence of these situations;
 2. Maintain a list of modifications to the source's operating procedures or other routine procedures instituted to prevent or minimize the occurrence of any excess SO₂ emissions;
 3. Maintain a record of data, calculations, results, records, and reports from any SO₂ emissions performance test, SO₂ continuous emission monitoring, fuel deliveries, and/or fuel sampling tests; and
 4. Maintain a record of any applicable SO₂ monitoring data, performance evaluations, calibration checks, monitoring system and device performance tests, and any adjustments and maintenance performed on these systems or devices.
- (B) Sources using SO₂ CEMS for compliance, shall also—
 1. If SO₂ CEMS is already used to satisfy other requirements (other than only to demonstrate compliance with this rule), continue to follow all correlating SO₂ CEMS requirements; or

2. If SO₂ CEMS is used only to demonstrate compliance with this rule, the SO₂ CEMS and any necessary auxiliary monitoring equipment shall follow the requirements in subsection (5)(B) of this rule.
- (C) Sources using fuel delivery records for compliance shall also maintain the following fuel supplier certification information to certify the fuel sulfur content by weight or parts per million sulfur of all fuel deliveries. Bills of lading and/or other fuel delivery documentation containing this information for all fuel purchases or deliveries are deemed acceptable to comply with the requirements of this rule:
1. The name, address, and contact information of the fuel supplier;
 2. The type of coal (bituminous, sub-bituminous, etc.);
 3. The moisture content of the coal;
 4. The sulfur content or maximum sulfur content expressed in percent sulfur by weight; and
 5. The heating value of the fuel.
- (D) Sources using fuel sampling and analysis for compliance shall also follow the requirements in subsection (5)(D) of this rule.
- (E) Sources using SO₂ emissions performance tests for compliance shall also follow the requirements in subsection (5)(A) of this rule.
- (F) All required reports and records shall be retained on-site for a minimum of five (5) years and made available within five (5) business days upon written or electronic request by the director.
- (G) Owners or operators of sources subject to this rule shall furnish the director all data necessary to determine compliance status.
- (5) Test Methods.
- (A) Sources shall use one (1) or more of the following test methods contained in 40 CFR 60, Appendix A, published as of July 1, 2014, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408, to determine compliance with SO₂ emission limits in this rule. This rule does not incorporate any subsequent amendments or additions.
1. Method 1: Sample and velocity traverses for stationary sources;
 2. Method 2: Determination of stack gas velocity and volumetric flow rate (Type S pitot tube);
 3. Method 3: Gas analysis for the determination of dry molecular weight;
 4. Method 4: Determination of moisture content in stack gases;
 5. Method 6: Determination of Sulfur Dioxide Emissions from Stationary Sources;
 6. Method 6A: Determination of Sulfur Dioxide, Moisture, and Carbon Dioxide from Fuel Combustion Sources;
 7. Method 6B: Determination of Sulfur Dioxide and Carbon Dioxide Daily Average Emissions from Fossil Fuel Combustion Sources;
 8. Method 6C: Determination of Sulfur Dioxide Emissions from Stationary Sources (Instrumental Analyzer Procedure); and/or

9. Method 8: Determination of sulfuric acid mist and sulfur dioxide emissions from stationary sources;
- (B) Sources using a SO₂ CEMS for demonstrating compliance with this rule shall follow the requirements in 40 CFR 75 and/or 40 CFR 60, Appendices B and F, published as of July 1, 2014, which are hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions;
- (C) Secondary lead smelters shall operate a SO₂ CEMS as follows:
1. The SO₂ CEMS shall be certified by the owner or operator in accordance with 40 CFR 60 Appendix B, Performance Specification 2 and Section 60.13 as is pertinent to SO₂ continuous emission monitors as adopted by reference in 10 CSR 10-6.070.
 2. The span of SO₂ continuous emission monitors shall be set at an SO₂ concentration of one-fifth percent (0.20%) by volume.
- (D) Sources shall use fuel sampling and analysis to determine sulfur weight percent, or equivalent, of fuels(s) used to operate fuel emission sources and/or units regulated by this rule in accordance with 10 CSR 10-6.040;
- (E) The heating value of the fuel shall be determined as specified in 10 CSR 10-6.040. The actual heat input shall be determined by multiplying the heating value of the fuel by the amount of fuel burned during the source test period; or
- (F) Sources may use an alternative test method that provides results at least the same accuracy and precision as the replaced method, and is approved in advance by the staff director, the EPA, and incorporated into the state implementation plan.

DRAFT