§ 60.106a Monitoring of emissions and operations for sulfur recovery plants.

(a) The owner or operator of a sulfur recovery plant that is subject to the emissions limits in §60.102a(f)(1) or §60.102a(f)(2) shall:

(1) For sulfur recovery plants subject to the SO\(_2\) emission limit in §60.102a(f)(1)(i) or §60.102a(f)(2)(i), the owner or operator shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of any SO\(_2\) emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air.

(i) The span values for this monitor are two times the applicable SO\(_2\) emission limit and between 10 and 25 percent O\(_2\), inclusive.

(ii) The owner or operator shall install, operate, and maintain each SO\(_2\) CEMS according to Performance Specification 2 of appendix B to part 60.

(iii) The owner or operator shall conduct performance evaluations of each SO\(_2\) monitor according to the requirements in §60.13(c) and Performance Specification 2 of appendix B to part 60. The owner or operator shall use Methods 6 or 6C of appendix A–4 to part 60 and Method 3 or 3A of appendix A–2 of part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 6.

(2) For sulfur recovery plants that are subject to the reduced sulfur compound and H\(_2\)S emission limit in §60.102a(f)(1)(ii) or §60.102a(f)(2)(ii), the owner or operator shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration of reduced sulfur, H\(_2\)S, and O\(_2\) emissions into the atmosphere. The reduced sulfur emissions shall be calculated as SO\(_2\) (dry basis, zero percent excess air).

(i) The span values for this monitor are two times the applicable reduced sulfur emission limit, two times the H\(_2\)S emission limit, and between 10 and 25 percent O\(_2\), inclusive.

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(ii) The owner or operator shall install, operate, and maintain each reduced sulfur CEMS according to Performance Specification 5 of appendix B to part 60.

(iii) The owner or operator shall conduct performance evaluations of each reduced sulfur monitor according to the requirements in §60.13(c) and Performance Specification 5 of appendix B to part 60. The owner or operator shall use Methods 15 or 15A of appendix A–5 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of appendix A–5 to part 60.

(iv) The owner or operator shall install, operate, and maintain each H₂S CEMS according to Performance Specification 7 of appendix B to part 60.

(v) The owner or operator shall conduct performance evaluations of each reduced sulfur monitor according to the requirements in §60.13(c) and Performance Specification 5 of appendix B to part 60. The owner or operator shall use Methods 11, 15, or 15A of appendix A–5 to part 60 or Method 16 of appendix A–6 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of appendix A–5 to part 60.

(vi) The owner or operator shall install, operate, and maintain each O₂ monitor according to Performance Specification 3 of appendix B to part 60.

(vii) The span value for the O₂ monitor must be selected between 10 and 25 percent, inclusive.

(viii) The owner or operator shall conduct performance evaluations for the O₂ monitor according to the requirements of §60.13(c) and Performance Specification 3 of appendix B to part 60. The owner or operator shall use Methods 3, 3A, or 3B of appendix A–2 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 3B of appendix A–2 to part 60.

(ix) The owner or operator shall comply with the applicable quality assurance procedures of appendix F to part 60 for each monitor, including annual accuracy determinations for each O₂ monitor, and daily calibration drift determinations.

(3) In place of the reduced sulfur monitor required in paragraph (a)(2) of this section, the owner or operator shall install, calibrate, operate, and maintain an instrument using an air or O₂ dilution and oxidation system to convert any reduced sulfur to SO₂ for continuously monitoring and recording the concentration (dry basis, 0 percent excess air) of the total resultant SO₂. The monitor must include an O₂ monitor for correcting the data for excess O₂.

(i) The span value for this monitor is two times the applicable SO₂ emission limit.

(ii) The owner or operator shall conduct performance evaluations of each SO₂ monitor according to the requirements in §60.13(c) and Performance Specification 5 of appendix B to part 60. The owner or operator shall use Methods 15 or 15A of appendix A–5 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 15A of appendix A–5 to part 60.

(iii) The owner or operator shall install, operate, and maintain each O₂ monitor according to Performance Specification 3 of appendix B to part 60.

(iv) The span value for the O₂ monitor must be selected between 10 and 25 percent, inclusive.

(v) The owner or operator shall conduct performance evaluations for the O₂ monitor according to the requirements of §60.13(c) and Performance Specification 3 of appendix B to part 60. The owner or operator shall use Methods 3, 3A, or 3B of appendix A–2 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 3B of appendix A–2 to part 60.
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(vi) The owner or operator shall comply with the applicable quality assurance procedures of appendix F to part 60 for each monitor, including quarterly accuracy determinations for each SO$_2$ monitor, annual accuracy determinations for each O$_2$ monitor, and daily calibration drift determinations.

(b) Excess emissions. For the purpose of reports required by §60.7(c), periods of excess emissions for sulfur recovery plants subject to the emissions limitations in §60.102a(f) are defined as specified in paragraphs (b)(1) through (3) of this section.

NOTE: Determine all averages as the arithmetic average of the applicable 1-hour averages, e.g., determine the rolling 12-hour average as the arithmetic average of 12 contiguous 1-hour averages.

(1) All 12-hour periods during which the average concentration of SO$_2$ as measured by the SO$_2$ continuous monitoring system required under paragraph (a)(1) of this section exceeds the applicable emission limit (dry basis, zero percent excess air); or

(2) All 12-hour periods during which the average concentration of reduced sulfur (as SO$_2$) as measured by the reduced sulfur continuous monitoring system required under paragraph (a)(2) of this section exceeds the applicable emission limit; or

(3) All 12-hour periods during which the average concentration of H$_2$S as measured by the H$_2$S continuous monitoring system required under paragraph (a)(2) of this section exceeds the applicable emission limit (dry basis, 0 percent excess air).

§ 60.107a Monitoring of emissions and operations for fuel gas combustion devices and flares.

(a) Fuel gas combustion devices subject to SO$_2$ or H$_2$S limit and flares subject to H$_2$S concentration requirements. The owner or operator of a fuel gas combustion device that is subject to §60.102a(g)(1) and elects to comply with the SO$_2$ emission limits in §60.102a(g)(1)(i) shall comply with the requirements in paragraph (a)(1) of this section. The owner or operator of a fuel gas combustion device that is subject to §60.102a(g)(1) and elects to comply with the H$_2$S concentration limits in §60.102a(g)(1)(ii) or a flare that is subject to the H$_2$S concentration requirement in §60.103a(h) shall comply with paragraph (a)(2) of this section.

(i) The owner or operator of a fuel gas combustion device that elects to comply with the SO$_2$ emissions limits in §60.102a(g)(1)(i) shall install, operate, and maintain an instrument for continuously monitoring and recording the concentration (dry basis, 0-percent excess air) of SO$_2$ emissions into the atmosphere. The monitor must include an O$_2$ monitor for correcting the data for excess air.

(ii) The owner or operator shall conduct performance evaluations for the SO$_2$ monitor according to the requirements of §60.13(c) and Performance Specification 2 of appendix B to part 60. The span value for the SO$_2$ monitor is 50 ppm SO$_2$.

(iii) The owner or operator shall install, operate, and maintain each O$_2$ monitor according to Performance Specification 3 of appendix B to part 60. The span value for the O$_2$ monitor must be selected between 10 and 25 percent, inclusive.

(iv) The owner or operator shall conduct performance evaluations for the O$_2$ monitor according to the requirements of §60.13(c) and Performance Specification 3 of appendix B to part 60. The owner or operator shall use Methods 3, 3A, or 3B of appendix A–2 to part 60 for conducting the relative accuracy evaluations. The method ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” (incorporated by reference—see §60.17) is an acceptable alternative to EPA Method 6 or 6A of appendix A–4 to part 60. Samples taken by Method 6 of appendix A–4 to part 60 shall be taken at a flow rate of approximately 2 liters/min for at least 30 minutes. The relative accuracy limit shall be 20 percent or 4 ppm, whichever is greater, and the calibration drift limit shall be 5 percent of the established span value.

(v) The owner or operator shall install, operate, and maintain each O$_2$ monitor according to Performance Specification 3 of appendix B to part 60. The span value for the O$_2$ monitor must be selected between 10 and 25 percent, inclusive.

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