**Terms Last Revised: 5/31/2016**

**J.6 Continuous SO2 Monitoring - existing systems (including lb/hr limit)**

***These terms and conditions are for the operation of existing certified continuous SO2 monitoring and recording equipment meeting the requirements of 40 CFR Part 60 and 40 CFR Part 75, if applicable.***

**Note: *This emissions unit is subject to provisions requiring continuous monitoring of sulfur dioxide in units of the applicable standard(s) including lb/hr. If you have an emissions unit with an applicable limit or a combination of applicable limits excluding lb/hr, use the terms and conditions in section J.4.***

**Note: *Where there is a choice of two or three terms (“OR”), select the appropriate term depending on the applicability of 40 CFR Part 75, the Acid Rain Program***, ***and the method of determining the pound per hour emissions, i.e., if using the fuel flow rate to stoichiometrically calculate the lb/hr emissions of SO2 or Specification 6.***

**J.6.a Additional Terms and Conditions, Quality assurance / Quality control** **for Continuous SO2 Monitoring Systems** **[40 CFR 60.13] and [40 CFR Part 60, Appendix F]**

***Use this term if the emissions unit is NOT subject to 40 CFR 75, the Acid Rain Program***

* + - * 1. The permittee shall maintain a written quality assurance/quality control plan for the continuous SO2 monitoring system, designed to ensure continuous valid and representative readings of SO2 emissions in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendix F]

***OR***

***Use this term if the emissions unit IS subject to 40 CFR 75, the Acid Rain Program, and using Specification 6 to determine the pounds per hour SO2 emissions.***

* + - * 1. The permittee shall maintain a written quality assurance/quality control plan for the continuous SO2 monitoring system, designed to ensure continuous valid and representative readings of SO2 emissions in units of the applicable standard(s). Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous SO2 monitoring system in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits pursuant to 40 CFR Part 60, and linearity checks pursuant to 40 CFR Part 75; however, linearity checks completed pursuant to 40 CFR Part 75, Appendix B, may be substituted for the quarterly cylinder gas or relative accuracy audits required per 40 CFR Part 60.

[40 CFR 60.13]; [40 CFR Part 60, Appendix F]; and [40 CFR Part 75]

***OR***

***Use this term in place of the above terms for units subject to 40 CFR 75, the Acid Rain Program, and using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of SO2, in place of Specification 6 requirements for the emissions rate.***

**Note: *This option is available to natural gas or oil fired sources using fuel flow meter(s) to meet 40 CFR Part 75 monitoring requirements for another pollutant and must be approved by Ohio EPA.***

* + - * 1. The permittee shall maintain a written quality assurance/quality control plan for the continuous SO2 monitoring system, designed to ensure continuous valid and representative readings of SO2 emissions in units of the applicable standard(s). The fuel flow monitor/meter shall be maintained as required in Part 75, Appendix D. Except as allowed below, the plan shall follow the requirements of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous SO2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct relative accuracy test audits for the continuous SO2 monitoring system in accordance with the frequencies required pursuant to 40 CFR Part 60 and 40 CFR Part 75; or may follow relative accuracy test audit frequency requirements for monitoring systems subject to 40 CFR 75, Appendix B, in lieu of frequencies required in 40 CFR Part 60. In either case, results shall be recorded and reported in units of the applicable standard(s) in accordance with 40 CFR Part 60.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits pursuant to 40 CFR Part 60, and linearity checks pursuant to 40 CFR Part 75; however, linearity checks completed pursuant to 40 CFR Part 75, Appendix B, may be substituted for the quarterly cylinder gas or relative accuracy audits required per 40 CFR Part 60.

[40 CFR 60.13]; [40 CFR Part 60, Appendix F]; and [40 CFR Part 75]

**J.1.a Additional Terms and Conditions, Continuous Emission Monitoring System**

* + - * 1. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

[40 CFR 60.2] and/or [40 CFR 63.2] and [Appendix F to 40 CFR Part 60]

**J.6.b Monitoring and Record keeping Requirements, Certified Systems / Statement of Certification** **for Continuous SO2 Monitoring Systems** **[40 CFR 60.13] and [40 CFR Part 60, Appendix B]**

***Continuous SO2 Monitoring - Certified Systems/Statement of Certification for units NOT subject to the Acid Rain Program***

* + - 1. The permittee shall maintain on‑site, the document(s) of certification received from the U.S. EPA or the Ohio EPA’s Central Office documenting that the continuous SO2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[40 CFR 60.13] and [40 CFR Part 60, Appendix B]

***OR***

***Continuous SO2 Monitoring - Certified Systems/Statement of Certification for units subject to 40 CFR 75, the Acid Rain Program and using Specification 6 to determine the pound per hour emissions***

* + - 1. The permittee shall maintain on‑site, the document(s) of certification received from the U.S. EPA or the Ohio EPA’s Central Office documenting that the continuous SO2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and has been certified by U.S. EPA or recommended for certification by Ohio EPA to U.S. EPA under 40 CFR Part 75. The letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[40 CFR 60.13]; [40 CFR Part 60, Appendix B]; and [40 CFR Part 75]

***OR***

***Continuous SO2 Monitoring - Certified Systems/Statement of Certification for units subject to 40 CFR 75, the Acid Rain Program, and using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of SO2, in place of Specification 6 requirements for the emissions rate.***

**Note: *This option is available to natural gas or oil fired sources using fuel flow meter(s) to meet 40 CFR Part 75 monitoring requirements.***

* + - 1. The permittee shall maintain on‑site, the document(s) of certification received from the U.S. EPA or the Ohio EPA’s Central Office documenting that the continuous SO2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2; the accuracy requirements of Performance Specification 6; and has been certified by U.S. EPA or recommended for certification by Ohio EPA to U.S. EPA under 40 CFR Part 75. The permittee shall document that the fuel flow monitor/meter meets 40 CFR 75 certification requirements prior to the performance specification test, and shall demonstrate how the pound per hour emissions of SO2 is being calculated stoichiometrically. The letter(s)/document(s) of certification under Part 60 and certification or recommendation for certification under Part 75 shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[40 CFR 60.13]; [40 CFR Part 60, Appendix B]; and [40 CFR Part 75]

**J.6.c Monitoring and Record keeping Requirements** **for Continuous SO2 Monitoring Systems** **[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]**

**Note: *Term (b) may be changed to show the actual emission limit(s), in the appropriate averaging period(s) (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, 12-month rolling etc.).***

***Use this term if the emissions unit is NOT subject to 40 CFR 75, the Acid Rain Program.***

* + - 1. The permittee shall operate and maintain equipment to continuously monitor and record SO2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to:

* + - * 1. emissions of SO2 in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
        2. emissions of SO2 in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
        3. results of quarterly cylinder gas audits;
        4. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
        5. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
        6. hours of operation of the emissions unit, continuous SO2 monitoring system, and control equipment;
        7. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO2 monitoring system;
        8. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO2 monitoring system; as well as,
        9. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

**OR**

***Use this term if the emissions unit IS subject to 40 CFR 75, the Acid Rain Program***

* + - 1. The permittee shall operate and maintain equipment to continuously monitor and record SO2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to:

* + - * 1. emissions of SO2 in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
        2. emissions of SO2 in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
        3. results of quarterly cylinder gas audits or linearity checks;
        4. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
        5. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
        6. hours of operation of the emissions unit, continuous SO2 monitoring system, and control equipment;
        7. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO2 monitoring system;
        8. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO2 monitoring system; as well as,
        9. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[40 CFR 60.13]; [40 CFR Part 60, Appendices B & F]; and [40 CFR Part 75]

***Additional monitoring and record keeping requirement for units subject to 40 CFR 75, the Acid Rain Program, and using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of SO2, in place of Specification 6 requirements for the emissions rate.***

**Note: *This option is available to natural gas or oil fired sources using fuel flow meter(s) to meet 40 CFR Part 75 monitoring requirements.***

* + - 1. The permittee may operate and maintain equipment to continuously monitor and record the fuel flow rate in order to stoichiometrically calculate emissions of SO2, in pounds per hour, as an alternative to conducting Specification 6. Fuel heat content values for each fuel burned, as applied in the stoichiometric calculations, shall also be recorded. The permittee shall maintain records of data obtained by the fuel flow monitor/meter, including the dates and results of each calibration check and the magnitude of calibration adjustments; periods of downtime and malfunction of the fuel flow monitor/meter; as well as, the reason (if known) and the corrective actions taken (if any) for each such event.

[40 CFR Part 75]

**J.6.d Reporting Requirements, Data reporting requirements for Continuous SO2 Monitoring Systems** **[40 CFR 60.7]**

***Use this term if the emissions unit is NOT subject to 40 CFR 75, the Acid Rain Program.***

* + - 1. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO2 monitoring system:
         1. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
         2. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

the facility name and address;

the manufacturer and model number of the continuous SO2 and other associated monitors;

a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

the excess emissions report (EER)\*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

the total SO2 emissions for the calendar quarter (tons);

the total operating time (hours) of the emissions unit;

the total operating time of the continuous SO2 monitoring system while the emissions unit was in operation;

results and dates of quarterly cylinder gas audits;

unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

unless previously submitted, the results of any relative accuracy test audit showing the continuous SO2 monitor out-of-control and the compliant results following any corrective actions;

the date, time, and duration of any/each malfunction\*\* of the continuous SO2 monitoring system, emissions unit, and/or control equipment;

the date, time, and duration of any downtime\*\* of the continuous SO2 monitoring system and/or control equipment while the emissions unit was in operation; and

the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

\* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

\*\* each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

[40 CFR 60.7]

**OR**

***Use this term if the emissions unit IS subject to 40 CFR 75, the Acid Rain Program***

* + - 1. The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO2 monitoring system:
         1. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, 40 CFR Part 75, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
         2. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

the facility name and address;

the manufacturer and model number of the continuous SO2 and other associated monitors;

a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

the excess emissions report (EER)\*, i.e., a summary of any exeedances during the calendar quarter, as specified above;

the total SO2 emissions for the calendar quarter (tons);

the total operating time (hours) of the emissions unit;

the total operating time of the continuous SO2 monitoring system while the emissions unit was in operation;

results and dates of quarterly cylinder gas audits or linearity checks;

unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

unless previously submitted, the results of any relative accuracy test audit showing the continuous SO2 monitor out-of-control and the compliant results following any corrective actions;

the date, time, and duration of any/each malfunction\*\* of the continuous SO2 monitoring system, emissions unit, and/or control equipment;

xii. the date, time, and duration of any downtime\*\* of the continuous SO2 monitoring system and/or control equipment while the emissions unit was in operation; and

the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter. Data substitution procedures from 40 CFR 75 are not to be used for showing compliance with the short term OAC 3745-31-05(A)(3) rule-based or NSPS-based limitation(s) in this permit.

\* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

\*\* each downtime and malfunction event shall be reported regardless of whether there is an exceedance of any applicable limit

[40 CFR 60.7] and [40 CFR Part 75]

***Additional reporting requirement for units subject to 40 CFR 75, the Acid Rain Program, and using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of SO2, in place of Specification 6 requirements for the emissions rate.***

**Note: *This option is available to natural gas or oil fired sources using fuel flow meter(s) to meet 40 CFR Part 75 monitoring requirements***

* + - 1. If using the fuel flow rate to stoichiometrically calculate the pound per hour emissions of SO2, in place of Specification 6 requirements, the permittee shall submit quarterly reports, to the appropriate Ohio EPA District Office or local air agency, that document the date, time, and duration of each malfunction and/or period of downtime of the continuous fuel flow monitoring system, while the emissions unit was in operation, and the reason (if known) and the corrective actions taken (if any) for each such event. If there was no downtime or malfunction of the continuous fuel flow monitoring system during any calendar quarter, the report shall be submitted so stating it. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year.

[40 CFR Part 75]

***Add this term if the emissions unit IS subject to 40 CFR Part 75, the Acid Rain Program***

* + - 1. The permittee shall collect, record, and maintain measurements, data, records, and reports required per 40 CFR Part 75; and shall submit certification, recertification, notifications, applications, monitoring plans, petitions for alternative monitoring systems, electronic quarterly reports, and any other pertinent record and/or report to the Administrator (U.S. EPA), as required by this Part.

[40 CFR Part 75]

**J.6.e Testing Requirements for Continuous SO2 Monitoring Systems** **[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]**

***Use this term if the emissions unit is NOT subject to 40 CFR 75, the Acid Rain Program***

* + - 1. Ongoing compliance with the SO2 emission limitations contained in this permit, 40 CFR Part 60 and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

**OR*Use this term if the emissions unit IS subject to 40 CFR 75, the Acid Rain Program***

* + - 1. Ongoing compliance with the SO2 emission limitations contained in this permit, 40 CFR Parts 60 and 75, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60 and 40 CFR Part 75.

[40 CFR 60.13]; [40 CFR Part 60, Appendices B & F]; and [40 CFR Part 75]