

# **Western Backstop SO<sub>2</sub> Trading Program**

## **Model Rule Supplement**

**August 13, 2003**  
**(Final Draft)**

**The Model Rule Supplement is available through the Western Regional Air Partnership (WRAP) at [www.wrapair.org](http://www.wrapair.org)**

**This Model Rule Supplement was developed through a broad stakeholder process of the WRAP as a template to facilitate consistent, multi-jurisdictional implementation of the SO<sub>2</sub> Milestones and Backstop Trading Program Section 309 of the Regional Haze Rule.**

## H. Establishment of Accounts

***Add following sentence after first sentence in section H1 (or in reorganized section based on Lee's comments):***

In addition, if a WEB source conducts monitoring under Section I1.(b) of this Rule, the WEB source shall open a special reserve compliance account for allowances associated with units monitored under those provisions. The WEB source and Account Representative shall have no rights to transfer allowances in or out of such special reserve compliance account. The [state or tribe] shall allocate allowances to the account in accordance with Section I1.(b)(5) of this Rule and all such allowances for each control period shall be retired each year for compliance in accordance with Section L of this Rule.

## I. Monitoring, Recordkeeping and Reporting

### 1. General Requirements on Monitoring Methods

(a) For each SO<sub>2</sub> emitting unit at a WEB source the WEB source shall comply with the following, as applicable, to monitor and record SO<sub>2</sub> mass emissions:

(1) If a unit is subject to 40 CFR Part 75 under a requirement separate from the WEB Trading Program, the unit shall meet the requirements contained in Part 75 with respect to monitoring, recording and reporting SO<sub>2</sub> mass emissions.

(2) If a unit is not subject to 40 CFR Part 75 under a requirement separate from the WEB Trading Program, a unit shall use one of the following monitoring methods, as applicable:

(A) A continuous emission monitoring system (CEMS) for SO<sub>2</sub> and flow that complies with all applicable monitoring provisions in 40 CFR Part 75;

(B) If the unit is a gas- or oil-fired combustion device, the excepted monitoring methodology in Appendix D to 40 CFR Part 75, or, if applicable, the low mass emissions (LME) provisions (with respect to SO<sub>2</sub> mass emissions only) of section 75.19 of 40 CFR Part 75;

(C) One of the optional WEB protocols, if applicable, in Appendix A to this Rule; or

(D) A petition for site-specific monitoring that the source submits for approval by [state or tribe], and approval by the U.S.

Environmental Protection Agency in accordance with Section 18(e) of this Rule (relating to petitions).

(3) A permanently retired unit shall not be required to monitor under this Section if such unit was permanently retired and had no emissions for the entire period for which the WEB source implements this paragraph (3) and the Account Representative certifies in accordance with Section L2 of this Rule that these conditions were met. In the event that a permanently retired unit recommences operation, the WEB source shall meet the requirements of this Section I in the same manner as if the unit was a new unit.

(b) Notwithstanding paragraph (a) of this Section, the WEB source with a unit that meets one of the conditions of paragraph (b)(1) may elect to have the provisions of this paragraph (b) apply to that unit.

(1) Any of the following units may implement this paragraph (b):

(A) Any smelting operation where all of the emissions from the operation are not ducted to a stack; or

(B) Any flare, except to the extent such flares are used as a fuel gas combustion device at a petroleum refinery.

(C) Any other type of unit without add-on SO<sub>2</sub> control equipment, if no control level was assumed for the WEB source in establishing the floor level (and reducible allocation) provided in Section C1 of the Implementation Plan.

(2) For each unit covered by this paragraph (b), the Account Representative shall submit a notice to request that this paragraph (b) apply to one or more SO<sub>2</sub> emitting units at a WEB source. The notice shall be submitted in accordance with the compliance dates specified in Section I6(a) of this Rule, and shall include the following information (in a format specified by [state or tribe] with such additional, related information as may be requested):

(A) A notice of all units at the applicable source, specifying which of the units are to be covered by this paragraph (b);

(B) Consistent with the emission estimation methodology used to determine the floor level (and reducible allocation) for the source in accordance with Section C1 of the Implementation Plan, the portion of the WEB source's overall allowance allocation that is attributable to any unit(s) covered by this paragraph; and

(C) An identification of any such units that are permanently retired.

(3) For each new unit at an existing WEB source for which the WEB source seeks to comply with this paragraph (b) and for which the Account Representative applies for an allocation under the new source set-aside provisions of Section G6 of this Rule, the Account Representative shall submit a modified notice under paragraph (b)(2) that includes such new SO<sub>2</sub> emitting unit(s). The modified notice shall be submitted in accordance with the compliance dates in Section I6(a) of this Rule, but no later than the date on which a request is submitted under Section G6 of this Rule for allocations from the set-aside.

(4) [State or tribe] shall evaluate the information submitted by the WEB source in paragraphs (b)(2) and (b)(3), and may issue a notice to the source to exclude any units that do not qualify under this paragraph (b) or to adjust the portion of allowances attributable to units that do qualify to be consistent with the emission estimation methodology used to establish the floor level (and reducible allocation) for the source.

(5) [State or tribe] shall allocate allowances equal to the adjusted portion of the WEB source's allowances under paragraphs (b)(2), (b)(3), and (b)(4) in a special reserve compliance account, provided that no such treatment of the WEB source's allocation will be required for any unit that is permanently retired and had no emissions for the entire period for which the WEB source implements this paragraph (b) and the Account Representative certifies in accordance with Section L of this Rule that these conditions were met. In the event that a permanently retired unit recommences operation, the WEB source shall meet the requirements of this Section I in the same manner as if the unit was a new unit.

(6) The Account Representative for a WEB source shall submit an annual emissions statement for each unit under this paragraph (b) in accordance with Section I8 of this Rule. The WEB source shall maintain operating records sufficient to estimate annual emissions in a manner consistent with the emission estimation methodology used to establish the floor level (and reducible allocation) for the source. In addition, if the estimated emissions from all such units at the WEB source are greater than the allowances for the current control year held in the special reserve compliance account under paragraph (b)(5) for the WEB source, the Account Representative will report the excess amount as part of the annual report for the WEB source under Section L of this Rule and be required to use other allowances in the standard

compliance account for the WEB source to account for such emissions, in accordance with Section L of this Rule.

(7) The remaining provisions of this Section I shall not apply to units covered by this paragraph except where otherwise noted.

(8) A WEB source may opt to modify the monitoring for an SO<sub>2</sub> emitting unit to use monitoring under Section I1(a) of this Rule, but any such monitoring change must take effect on January 1 of the next compliance year. In addition, the Account Representative must submit an initial monitoring plan at least 180 days prior to the date on which the new monitoring will take effect and a detailed monitoring plan in accordance with Section I2 of this Rule. The Account Representative shall also submit a revised notice under paragraph (b)(2) at the same time that the initial monitoring plan is submitted.

(c) For any monitoring that the WEB source uses under this Section (including paragraph (b)), the WEB source (and, as applicable, the Account Representative) shall implement, certify, and use such monitoring in accordance with this Section, and record and report the data from such monitoring as required in this Section. In addition, the WEB source (and, as applicable, the Account Representative) may not:

(1) Except for an alternative approved by the U.S. EPA Administrator for a WEB source that implements monitoring under Section I1.(a)(1), use an alternative monitoring system, alternative reference method or another alternative for the required monitoring method without having obtained prior written approval in accordance with Section I8(e) of this Rule (relating to petitions);

(2) Operate an SO<sub>2</sub> emitting unit so as to discharge, or allow to be discharged, SO<sub>2</sub> emissions to the atmosphere without accounting for these emissions in accordance with the applicable provisions of this Section;

(3) Disrupt the approved monitoring method or any portion thereof, and thereby avoid monitoring and recording SO<sub>2</sub> mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing or maintenance is performed in accordance with the applicable provisions of this Section; or

(4) Retire or permanently discontinue use of an approved monitoring method, except under one of the following circumstances:

(A) During a period when the unit is exempt from the requirements of this Section, including retirement of a unit as addressed in Section I1(a)(3);

(B) The WEB source is monitoring emissions from the unit with another certified monitoring method approved under this Section for use at the unit that provides data for the same parameter as the retired or discontinued monitoring method; or

(C) The Account Representative submits notification of the date of certification testing of a replacement monitoring system in accordance with this Section, and the WEB source recertifies thereafter a replacement monitoring system in accordance with the applicable provisions of this Section.

## 2. Monitoring Plan

(a) General Provisions. A WEB source with an SO<sub>2</sub> emitting unit that uses a monitoring method under Section I1(a)(2) of this Rule shall meet the following requirements:

(1) Prepare and submit to [state or tribe] an initial monitoring plan for each monitoring method that the WEB source uses to comply with this Section. In accordance with paragraph I2(c) of this Rule, the plan shall contain sufficient information on the units involved, the applicable method, and the use of data derived from that method to demonstrate that all unit SO<sub>2</sub> emissions are monitored and reported. The plan shall be submitted in accordance with the compliance deadlines specified in Section I6 of this Rule.

(2) Prepare, maintain and submit to [state or tribe] a detailed monitoring plan prior to the first day of certification testing, in accordance with the compliance deadline specified in Section I5 of this Rule. The plan will contain the applicable information required by Section I2(d) of this Rule. [State or tribe] may require that the monitoring plan (or portions thereof) be submitted electronically. The [state or tribe] also may require that the plan be submitted on an ongoing basis in electronic format as part of the quarterly report submitted under Section I8(a) of this Rule or resubmitted separately after any change is made to the plan in accordance with the following paragraph (a)(3).

(3) Whenever the WEB source makes a replacement, modification, or change in one of the systems or methodologies provided for in Section I1(a)(2), including a change in the automated data acquisition and handling system or in the flue gas handling system, that affects

information reported in the monitoring plan (e.g., a change to serial number for a component of a monitoring system), then the WEB source shall update the monitoring plan in accordance with the compliance deadline specified in Section I5 of this Rule.

(b) A WEB source with an SO<sub>2</sub> emitting unit that uses a method under Section I1(a)(1) of this Rule (a unit subject to 40 CFR Part 75 under a program other than this WEB Trading Program) shall meet the requirements of Section I2(a)-(f) by preparing, maintaining and submitting a monitoring plan in accordance with the requirements of 40 CFR Part 75, provided that the WEB source also shall submit the entire monitoring plan to [state or tribe] upon request.

(c) Initial Monitoring Plan. The Account Representative shall submit an initial monitoring plan for each SO<sub>2</sub> emitting unit (or group of units sharing a common methodology) that, except as otherwise specified in an applicable provision in Appendix A, contains the following information:

- (1) For all SO<sub>2</sub> emitting units involved in the monitoring plan:
  - (A) Plant name and location;
  - (B) Plant and unit identification numbers assigned by [state or tribe];
  - (C) Type of unit (or units for a group of units using a common monitoring methodology);
  - (D) Identification of all stacks or pipes associated with the monitoring plan;
  - (E) Types of fuel(s) fired (or sulfur containing process materials used in the SO<sub>2</sub> emitting unit), and the fuel classification of the unit if combusting more than one type of fuel and using a 40 CFR Part 75 methodology;
  - (F) Type(s) of emissions controls for SO<sub>2</sub> installed or to be installed, including specifications of whether such controls are pre-combustion, post-combustion, or integral to the combustion process;
  - (G) Maximum hourly heat input capacity, or process throughput capacity, if applicable;
  - (H) Identification of all units using a common stack; and

(l) Indicator of whether any stack identified in the plan is a bypass stack.

(2) For each unit and parameter required to be monitored, identification of monitoring methodology information, consisting of monitoring methodology, monitor locations, substitute data approach for the methodology, and general identification of quality assurance procedures. If the proposed methodology is a site-specific methodology submitted pursuant to Section I1(a)(2)(D) of this Rule, the description under this paragraph shall describe fully all aspects of the monitoring equipment, installation locations, operating characteristics, certification testing, ongoing quality assurance and maintenance procedures, and substitute data procedures.

(3) If the WEB source intends to petition for a change to any specific monitoring requirement otherwise required under this Section, such petition may be submitted as part of the initial monitoring plan.

(4) [State or tribe] may issue a notice of approval or disapproval of the initial monitoring plan based on the compliance of the proposed methodology with the requirements for monitoring in this Section.

(d) Detailed Monitoring Plan. The Account Representative shall submit a detailed monitoring plan that, except as otherwise specified in an applicable provision in Appendix A, shall contain the following information:

(1) Identification and description of each monitoring component (including each monitor and its identifiable components, such as analyzer or probe) in a CEMS (e.g., SO<sub>2</sub> pollutant concentration monitor, flow monitor, moisture monitor), a 40 CFR Part 75, Appendix D monitoring system (e.g., fuel flowmeter, data acquisition and handling system), or a protocol in Appendix A, including:

(A) Manufacturer, model number and serial number;

(B) Component or system identification code assigned by the facility to each identifiable monitoring component, such as the analyzer or probe;

(C) Designation of the component type and method of sample acquisition or operation (e.g., in situ pollutant concentration monitor or thermal flow monitor);

(D) Designation of the system as a primary or backup system;

(E) First and last dates the system reported data;

(F) Status of the monitoring component; and

(G) Parameter monitored.

(2) Identification and description of all major hardware and software components of the automated data acquisition and handling system, including:

(A) Hardware components that perform emission calculations or store data for quarterly reporting purposes (provide the manufacturer and model number); and

(B) Software components (provide the identification of the provider and model or version number).

(3) Explicit formulas for each measured emissions parameter, using component or system identification codes for the monitoring system used to measure the parameter that links the system observations with the reported concentrations and mass emissions. The formulas must contain all constants and factors required to derive mass emissions from component or system code observations and an indication of whether the formula is being added, corrected, deleted, or is unchanged. The WEB source with a low mass emissions unit for which the WEB source is using the optional low mass emissions excepted methodology in section 75.19(c) of 40 CFR Part 75 is not required to report such formulas.

(4) Inside cross-sectional area (ft<sup>2</sup>) at flow monitoring location (for units with flow monitors, only).

(5) If using CEMS for SO<sub>2</sub> and flow, for each parameter monitored: scale, maximum potential concentration (and method of calculation), maximum expected concentration (if applicable) (and method of calculation), maximum potential flow rate (and method of calculations), span value, full-scale range, daily calibration units of measure, span effective date and hour, span inactivation date and hour, indication of whether dual spans are required, default high range value, flow rate span, and flow rate span value and full scale value (in standard cubic feet per hour (scfh)) for each unit or stack using SO<sub>2</sub> or flow component monitors.

(6) If the monitoring system or excepted methodology provides for use of a constant, assumed, or default value for a parameter under specific circumstances, then include the following information for each value of such parameter:

- (A) Identification of the parameter;
- (B) Default, maximum, minimum, or constant value, and units of measure for the value;
- (C) Purpose of the value;
- (D) Indicator of use during controlled or uncontrolled hours;
- (E) Types of fuel;
- (F) Source of the value;
- (G) Value effective date and hour;
- (H) Date and hour value is no longer effective (if applicable);  
and
- (I) For units using the excepted methodology under section 75.19 of 40 CFR Part 75, the applicable SO<sub>2</sub> emission factor.

(7) Unless otherwise specified in section 6.5.2.1 of Appendix A to 40 CFR Part 75, for each unit or common stack on which hardware CEMS are installed:

- (A) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of Appendix A to 40 CFR Part 75), or thousand of pounds per hour (lb/hr) of steam, or feet per second (ft/sec) (as applicable);
- (B) The load or operating level(s) designated as normal in section 6.5.2.1 of Appendix A to 40 CFR Part 75, or thousands of lb/hr of steam, or ft/sec (as applicable);
- (C) The two load or operating levels (i.e., low, mid, or high) identified in section 6.5.2.1 of Appendix A to 40 CFR Part 75 as the most frequently used;
- (D) The date of the data analysis used to determine the normal load (or operating) level(s) and the two most frequently-used load (or operating) levels; and
- (E) Activation and deactivation dates when the normal load or operating level(s) change and are updated.

(8) For each unit that is complying with 40 CFR Part 75 for which the optional fuel flow-to-load test in section 2.1.7 of appendix D to 40 CFR Part 75 is used:

(A) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of Appendix A to 40 CFR Part 75), expressed in thousand of lb/hr of steam;

(B) The load level designated as normal, pursuant to section 6.5.2.1 of Appendix A to 40 CFR Part 75, expressed in thousands of lb/hr of steam; and

(C) The date of the load analysis used to determine the normal load level.

(9) Information related to quality assurance testing, including (as applicable): identification of the test strategy; protocol for the relative accuracy test audit; other relevant test information; calibration gas levels (percent of span) for the calibration error test and linearity check; calculations for determining maximum potential concentration, maximum expected concentration (if applicable), maximum potential flow rate, and span;

(10) If applicable, apportionment strategies under sections 75.10 through 75.18 of 40 CFR Part 75.

(11) Description of site locations for each monitoring component in a monitoring system, including schematic diagrams and engineering drawings and any other documentation that demonstrates each monitor location meets the appropriate siting criteria. For units monitored by a continuous emission monitoring system, diagrams shall include:

(A) A schematic diagram identifying entire gas handling system from unit to stack for all units, using identification numbers for units, monitor components, and stacks corresponding to the identification numbers provided in the initial monitoring plan and paragraphs (d)(1) and (3). The schematic diagram must depict the height of any monitor locations. Comprehensive or separate schematic diagrams shall be used to describe groups of units using a common stack.

(B) Stack and duct engineering diagrams showing the dimensions and locations of fans, turning vanes, air preheaters, monitor components, probes, reference method sampling

ports, and other equipment that affects the monitoring system location, performance, or quality control checks.

(12) A data flow diagram denoting the complete information handling path from output signals of CEMS components to final reports.

(e) In addition to supplying the information in paragraphs (c) and (d) above, the WEB source with an SO<sub>2</sub> emitting unit using either of the methodologies in paragraph I.1(a)(2)(B) of this Section shall include the following information in its monitoring plan for the specific situations described:

(1) For each gas-fired or oil-fired SO<sub>2</sub> emitting unit for which the WEB source uses the optional protocol in appendix D to 40 CFR Part 75 for SO<sub>2</sub> mass emissions, the WEB source shall include the following information in the monitoring plan:

(A) Parameter monitored;

(B) Type of fuel measured, maximum fuel flow rate, units of measure, and basis of maximum fuel flow rate (i.e., upper range value or unit maximum) for each fuel flowmeter;

(C) Test method used to check the accuracy of each fuel flowmeter;

(D) Submission status of the data;

(E) Monitoring system identification code;

(F) The method used to demonstrate that the unit qualifies for monthly gross calorific value (GCV) sampling or for daily or annual fuel sampling for sulfur content, as applicable;

(G) A schematic diagram identifying the relationship between the unit, all fuel supply lines, the fuel flowmeter(s), and the stack(s). The schematic diagram must depict the installation location of each fuel flowmeter and the fuel sampling location(s). Comprehensive or separate schematic diagrams shall be used to describe groups of units using a common pipe;

(H) For units using the optional default SO<sub>2</sub> emission rate for "pipeline natural gas" or "natural gas" in appendix D to 40 CFR Part 75, the information on the sulfur content of the gaseous fuel used to demonstrate compliance with either section 2.3.1.4 or 2.3.2.4 of appendix D to 40 CFR Part 75;

(I) For units using the 720 hour test under section 2.3.6 of appendix D to 40 CFR Part 75 to determine the required sulfur sampling requirements, report the procedures and results of the test; and

(J) For units using the 720 hour test under section 2.3.5 of appendix D to 40 CFR Part 75 to determine the appropriate fuel GCV sampling frequency, report the procedures used and the results of the test.

(2) For each SO<sub>2</sub> emitting unit for which the WEB source uses the low mass emission excepted methodology of section 75.19 to 40 CFR Part 75, the WEB source shall include the following information in the monitoring plan that accompanies the initial certification application:

(A) The results of the analysis performed to qualify as a low mass emissions unit under section 75.19(c) to 40 CFR Part 75. This report will include either the previous three years actual or projected emissions. The following items should be included:

(i) Current calendar year of application;

(ii) Type of qualification;

(iii) Years one, two, and three;

(iv) Annual measured, estimated or projected SO<sub>2</sub> mass emissions for years one, two, and three; and

(v) Annual operating hours for years one, two, and three.

(B) A schematic diagram identifying the relationship between the unit, all fuel supply lines and tanks, any fuel flowmeter(s), and the stack(s). Comprehensive or separate schematic diagrams shall be used to describe groups of units using a common pipe;

(C) For units which use the long term fuel flow methodology under section 75.19(c)(3) to 40 CFR Part 75, a diagram of the fuel flow to each unit or group of units and a detailed description of the procedures used to determine the long term fuel flow for a unit or group of units for each fuel combusted by the unit or group of units;

(D) A statement that the unit burns only gaseous fuel(s) or fuel oil and a list of the fuels that are burned or a statement that the

unit is projected to burn only gaseous fuel(s) or fuel oil and a list of the fuels that are projected to be burned;

(E) A statement that the unit meets the applicability requirements in sections 75.19(a) and (b) to 40 CFR Part 75 with respect to SO<sub>2</sub> emissions; and

(F) Any unit historical actual, estimated and projected SO<sub>2</sub> emissions data and calculated SO<sub>2</sub> emissions data demonstrating that the unit qualifies as a low mass emissions unit under sections 75.19(a) and (b) to 40 CFR Part 75.

(3) For each gas-fired unit the WEB source shall include the following in the monitoring plan: current calendar year, fuel usage data as specified in the definition of gas-fired in section 72.2 of 40 CFR Part 72, and an indication of whether the data are actual or projected data.

(f) The specific elements of a monitoring plan under this Section I2. shall not be part of an operating permit for a WEB source issued in accordance with Title V of the Clean Air Act, and modifications to the elements of the plan shall not require a permit modification.

### 3. Certification and Recertification

(a) All monitoring systems are subject to initial certification and recertification testing as specified in 40 CFR Part 75 or Appendix A to this Rule, as applicable. Certification or recertification of a monitoring system by the U.S. Environmental Protection Agency for a WEB source that is subject to 40 CFR Part 75 under a requirement separate from this Rule shall constitute certification under the WEB Trading Program.

(b) The WEB source with an SO<sub>2</sub> emitting unit not otherwise subject to 40 CFR Part 75 that monitors SO<sub>2</sub> mass emissions in accordance with 40 CFR Part 75 to satisfy the requirements of this Section shall perform all of the tests required by that regulation and shall submit the following:

(1) A test notice, not later than 21 days before the certification testing of the monitoring system, provided that [state or tribe] may establish additional requirements for adjusting test dates after this notice as part of the approval of the initial monitoring plan under paragraph I2(c) of this Rule; and

(2) An initial certification application within 45 days after testing is complete.

(c) A monitoring system will be considered provisionally certified while the application is pending, and the system shall be deemed certified if [state or tribe] does not approve or disapprove the system within six months after the date on which the application is submitted.

(d) Whenever an audit of any monitoring certified under this Rule, and a review of the initial certification or recertification application, reveal that any system or component should not have been certified or recertified because it did not meet a particular performance specification or other requirement of this Rule, both at the time of the initial certification or recertification application submission and at the time of the audit, the [state or tribe] will issue a notice of disapproval of the certification status of such system or component. For the purposes of this paragraph, an audit shall be either a field audit of the facility or an audit of any information submitted to the [state or tribe] regarding the facility. By issuing the notice of disapproval, the certification status is revoked prospectively, and the data measured and recorded shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the WEB source completes subsequently approved initial certification or recertification tests in accordance with the procedures in this Section I3. The WEB source shall apply the substitute data procedures in Section I5.(b) of this Rule to replace, prospectively, all of the invalid, non-quality-assured data for each disapproved system or component.

#### 4. Ongoing Quality Assurance and Quality Control

The WEB source shall satisfy the applicable quality assurance and quality control requirements of Part 75 or, if the WEB source is subject to a WEB protocol in Appendix A, the applicable quality assurance and quality control requirements in Appendix A on and after the date that certification testing commences.

#### 5. Substitute Data Procedures

(a) For any period after certification testing is complete in which quality assured, valid data are not being recorded by a monitoring system certified and operating in accordance with this Rule, missing or invalid data shall be replaced with substitute data in accordance with 40 CFR Part 75 or, if the WEB source is subject to a WEB protocol in Appendix A, with substitute data in accordance with Appendix A.

(b) For an SO<sub>2</sub> emitting unit that does not have a certified (or provisionally certified) monitoring system in place as of the beginning of the first control period for which the unit is subject to the WEB Trading Program, the WEB source shall:

- (1) If the WEB source will use a CEMS to comply with this Section, substitute the maximum potential concentration of SO<sub>2</sub> for the unit and the maximum potential flow rate, as determined in accordance with 40 CFR Part 75. The procedures for conditional data validation under section 75.20(b)(3) may be used for any monitoring system under this Rule that uses these 40 CFR Part 75 procedures, as applicable;
- (2) If the WEB source will use the 40 CFR Part 75 Appendix D methodology, substitute the maximum potential sulfur content, density or gross calorific value for the fuel and the maximum potential fuel flow rate, in accordance with section 2.4 of Appendix D to 40 CFR Part 75;
- (3) If the WEB source will use the 40 CFR Part 75 methodology for low mass emissions units, substitute the SO<sub>2</sub> emission factor required for the unit as specified in 40 CFR 75.19 and the maximum rated hourly heat input, as defined in 40 CFR 72.2; or
- (4) If using a protocol in Appendix A to this Rule, follow the procedures in the applicable protocol.

## 6. Compliance Deadlines

- (a) The initial monitoring plan shall be submitted by the following dates:
  - (1) For each source that is a WEB source on or before the Program Trigger Date, the monitoring plan shall be submitted 180 days after such Program Trigger Date.
  - (2) For any existing source that becomes a WEB source after the Program Trigger Date, the monitoring plan shall be submitted by September 30 of the year following the inventory year in which the source exceeded the emissions threshold.
  - (3) For any new WEB source, the monitoring plan shall be included with the permit application for [State or tribe shall include appropriate reference for preconstruction permit program under Title I of the Clean Air Act, including both minor and major new source review programs.]
- (b) A detailed monitoring plan under Section I2.(b) shall be submitted no later than 45 days prior to commencing certification testing in accordance with the following paragraph (c).
- (c) Emission monitoring systems shall be installed, operational and shall have met all of the certification testing requirements of this Section I (including any referenced in Appendix A) by the following dates:

- (1) For each source that is a WEB source on or before the Program Trigger Date, two years prior to the start of the first control period as described in Section L of this Rule.
  - (2) For any existing source that becomes a WEB source after the Program Trigger Date, one year after the due date for the monitoring plan under I6(a)(2) of this Rule.
  - (3) For any new WEB source (or any new unit at a WEB source under paragraphs (c)(1) or (c)(2)), the earlier of 90 unit operating days or 180 calendar days after the date the new source commences operation.
- (d) The WEB source shall submit test notices and certification applications in accordance with the deadlines set forth in Section I4.(b).
- (e) For each applicable control period, the WEB source shall submit each quarterly report under Section I8 by no later than 30 days after the end of each calendar quarter and shall submit the annual report under Section I8 no later than 60 days after the end of each calendar year.

## 7. Recordkeeping

- (a) Except as provided in Section I7(b), the WEB source shall keep copies of all reports, registration materials, compliance certifications, sulfur dioxide emissions data, quality assurance data, and other submissions under this Rule for a period of five years. In addition, the WEB source shall keep a copy of all Account Certificates of Representation. Unless otherwise requested by the WEB source and approved by [state or tribe], the copies shall be kept on site.
- (b) The WEB source shall keep records of all operating hours, quality assurance activities, fuel sampling measurements, hourly averages for SO<sub>2</sub>, stack flow, fuel flow, or other continuous measurements, as applicable, and any other applicable data elements specified in this Section or in Appendix A to this Rule. The WEB source shall maintain the applicable records specified in 40 CFR Part 75 for any SO<sub>2</sub> emitting unit that uses a Part 75 monitoring method to meet the requirements of this Section.

## 8. Reporting

- (a) Quarterly Reports. For each SO<sub>2</sub> emitting unit, the Account Representative shall submit a quarterly report within thirty days after the end of each calendar quarter. The report shall be in a format specified by [state or tribe] to include hourly and quality assurance activity information and shall be submitted in a manner compatible with the emissions tracking database designed for the WEB Trading Program. If the WEB source submits a

quarterly report under 40 CFR Part 75 to the U.S. EPA Administrator, no additional report under this paragraph (a) shall be required, provided, however, that [state or tribe] may require that a copy of that report (or a separate statement of quarterly and cumulative annual SO<sub>2</sub> mass emissions) be submitted separately to [state or tribe].

(b) Annual Report. Based on the quarterly reports, each WEB source shall submit an annual statement of total annual SO<sub>2</sub> emissions for all SO<sub>2</sub> emitting units at the source. The annual report shall identify the total emissions for all units monitored in accordance with Section I1(a) of this Rule and the total emissions for all units with emissions estimated in accordance with Section I1(b) of this Rule. The annual report shall be submitted within 60 days after the end of a control period.

(c) If the [State or tribe] so directs, that any monitoring plan, report, certification, recertification, or emissions data required to be submitted under this Section shall be submitted to the Tracking System Administrator.

(d) [State or tribe] may review and reject any report submitted under this Section I7 that contains errors or fails to satisfy the requirements of this Section, and the Account Representative shall resubmit the report to correct any deficiencies.

## 9. Petitions

(a) A WEB source may petition for an alternative to any requirement specified in Section I1(a)(2). The petition shall require approval of [state or tribe] and the U.S. EPA Administrator. Any petition submitted under this paragraph shall include sufficient information for the evaluation of the petition, including, at a minimum, the following information:

- (1) Identification of the WEB source and applicable SO<sub>2</sub> emitting unit(s);
- (2) A detailed explanation of why the proposed alternative is being suggested in lieu of the requirement;
- (3) A description and diagram of any equipment and procedures used in the proposed alternative, if applicable;
- (4) A demonstration that the proposed alternative is consistent with the purposes of the requirement for which the alternative is proposed and is consistent with the purposes of this Rule and that any adverse effect of approving such alternative will be *de minimis*; and
- (5) Any other relevant information that [state or tribe] may require.

## 10. Consistency of Identifying Information

For any monitoring plans, reports, or other information submitted under Section I of this Rule, the WEB source shall ensure that, where applicable, identifying information is consistent with the identifying information provided in the most recent certificate of representation for the WEB source submitted under Section E of this Rule.

## K. Use of Allowances from a Previous Year

### ***Add following sentence to Section K2:***

Because all allowances held in a special reserve compliance account for a WEB source that monitors certain units in accordance with Section I1.(b) of this Rule will be deducted for compliance for each control period, no banking of such allowances for use in a subsequent year is permitted by this Rule.

## L. Compliance

### ***Insert paragraph such as the following, based on changes made in response to Lee' redline/strikeout of section L:***

(c) Compliance with allowance limitations shall be determined as follows:

(1) The total annual SO<sub>2</sub> emissions for all SO<sub>2</sub> emitting units at the source that are monitored under Section I1.(b) of this Rule, as reported by the source in Section I8(b) or (d) of this Rule, and recorded in the emissions tracking database shall be compared to the allowances held in the source's special reserve compliance account as of the allowance transfer deadline for the current control period, adjusted in accordance with Section K of this Rule. If the emissions are equal to or less than the allowances in such account, all such allowances shall be retired to satisfy the obligation to hold allowances for such emissions. If the total emissions from such units exceeds the allowances in such special reserve account, the WEB source shall account for such excess emissions in the following paragraph (2).

(2) The total annual SO<sub>2</sub> emissions for all SO<sub>2</sub> emitting units at the source that are monitored under Section I1.(a) of this Rule, as reported by the source in Section I8(b) or (d) of this Rule, and recorded in the emissions tracking database, together with any excess emissions as calculated in the preceding paragraph (1), shall be compared to the allowances held in the source's compliance account as of the

allowance transfer deadline for the current control period, adjusted in accordance with Section K of this Rule.

(d) Other than allowances in a special reserve compliance account for units monitored under Section I1(b) of this Rule, to the extent consistent with Section K of this Rule, allowances shall be deducted for a WEB source for compliance with the allowance limitation as directed by the WEB source's Account Representative. Deduction of any other allowances as necessary for compliance with the allowance limitation shall be on a first-in, first-out accounting basis in the order of the date and time of their recording in the WEB source's compliance account, beginning with the allowances allocated to the WEB source and continuing with the allowances transferred to the WEB source's compliance account from another compliance account or general account. The allowances held in a special reserve compliance account pursuant to Section I1.(b) of this Rule shall be deducted as specified in paragraph (c)(1) of this Section L.

## APPENDIX A: WEB MODEL RULE MONITORING PROTOCOLS

### Protocol WEB-1: SO<sub>2</sub> Monitoring of Fuel Gas Combustion Devices

#### 1. Applicability

- (a) The provisions of this protocol are applicable to fuel gas combustion devices at petroleum refineries.
- (b) Fuel gas combustion devices include boilers, process heaters, and flares used to burn fuel gas generated at a petroleum refinery.
- (c) Fuel gas means any gas which is generated and combusted at a petroleum refinery. Fuel gas does not include (1) natural gas, unless combined with other gases generated at a petroleum refinery, (2) gases generated by a catalytic cracking unit catalyst regenerator, (3) gases generated by fluid coking burners, (4) gases combusted to produce sulfur or sulfuric acid, or (5) process upset gases generated due to startup, shutdown, or malfunctions.

#### 2. Monitoring Requirements

- (a) Except as provided in paragraphs (b) and (c) of this Section 2, fuel gas combustion devices shall use a continuous fuel gas monitoring system (CFGMS) to determine the total sulfur content (reported as H<sub>2</sub>S) of the fuel gas mixture prior to combustion, and continuous fuel flow meters to determine the amount of fuel gas burned.
  - (1) Fuel gas combustion devices having a common source of fuel gas may be monitored for sulfur content at one location, if monitoring at that location is representative of the sulfur content of the fuel gas being burned in any fuel gas combustion device.
  - (2) The CFGMS shall meet the performance requirements in Performance Specification 2 in Appendix B to 40 CFR Part 60, and the following:
    - (i) Continuously monitor and record the concentration by volume of total sulfur compounds in the gaseous fuel reported as ppmv H<sub>2</sub>S.
    - (ii) Have the span value set so that the majority of readings fall between 10 and 95% of the range.

- (iii) Record negative values of zero drift.
  - (iv) Calibration drift shall be # 5.0% of the span, for initial certification and daily calibration error tests.
  - (v) Methods 15A, 16, or approved alternatives for total sulfur, are the reference methods for the relative accuracy test. The relative accuracy test shall include a bias test in accordance with paragraph 4.(c) of this section.
- (3) All continuous fuel flow meters shall comply with the provisions of section 2.1.5 of Appendix D to 40 CFR Part 75.
  - (4) The hourly mass SO<sub>2</sub> emissions rate for all the fuel gas combustion devices monitored by this approach shall be calculated using the following equation:

$$E_t = (C_S)(Q_t)(K)$$

where:  $E_t$  = Total SO<sub>2</sub> emissions in lb/hr from applicable fuel gas combustion devices

$C_S$  = Sulfur content of the fuel gas as H<sub>2</sub>S(ppmv)

$Q_t$  = Fuel gas flow rate to the applicable fuel gas combustion devices (scf/hr)

$K = 1.660 \times 10^{-7}$  (lb/scf)/ppmv

- (b) In place of a CFGMS in paragraph (a) of this Section 2, fuel gas combustion devices having a common source of fuel gas may be monitored with an SO<sub>2</sub> CEMS, a flow CEMS, and (if necessary) a moisture monitoring system at only one location, if the CEMS monitoring at that location is representative of the SO<sub>2</sub> emission rate (lb SO<sub>2</sub>/scf fuel gas burned) of all applicable fuel gas combustion devices. Continuous fuel flow meters shall be used in accordance with paragraph (a), and the fuel gas combustion device monitored by a CEMS shall have separate fuel metering.
- (1) Each CEMS for SO<sub>2</sub>, flow, and (if applicable) moisture, shall comply with the operating requirements, performance specifications, and quality assurance requirements of 40 CFR Part 75.
  - (2) All continuous fuel flow meters shall comply with the provisions of section 2.1.5 of Appendix D to 40 CFR Part 75.
  - (3) The SO<sub>2</sub> hourly mass emissions rate for all the fuel gas combustion devices monitored by this approach shall be

determined by the ratio of the amount of fuel gas burned by the CEMS-monitored fuel gas combustion device to the total fuel gas burned by all applicable fuel gas combustion devices using the following equation:

$$E_t = (E_m)(Q_t)/(Q_m)$$

where:  $E_t$  = Total SO<sub>2</sub> emissions in lb/hr from applicable fuel gas combustion devices  
 $E_m$  = SO<sub>2</sub> emissions in lb/hr from the CEMS-monitored fuel gas combustion device, calculated using Equation F-1 or (if applicable) F-2 in Appendix F to 40 CFR Part 75  
 $Q_t$  = Fuel gas flow rate (scf/hr) to the applicable fuel gas combustion devices  
 $Q_m$  = Fuel gas flow rate (scf/hr) to the CEMS-monitored fuel gas combustion device

(c) In place of a CFGMS in paragraph (a) of this section, fuel gas combustion devices having a common source of fuel gas may be monitored with an SO<sub>2</sub> - diluent CEMS at only one location, if the CEMS monitoring at that location is representative of the SO<sub>2</sub> emission rate (lb SO<sub>2</sub>/mmBtu) of all applicable fuel gas combustion devices. If this option is selected, the owner or operator shall conduct fuel gas sampling and analysis for gross calorific value (GCV), and shall use continuous fuel flow metering in accordance with paragraph (a) of this Section 2, with separate fuel metering for the CEMS-monitored fuel gas combustion device.

- (1) Each SO<sub>2</sub>-diluent CEMS shall comply with the applicable provisions for SO<sub>2</sub> monitors and diluent monitors in 40 CFR Part 75, and shall use the procedures in section 3 of Appendix F to Part 75 for determining SO<sub>2</sub> emission rate (lb/mmBtu) by substituting the term SO<sub>2</sub> for NO<sub>x</sub> in that section, and using a K factor of  $1.660 \times 10^{-7}$  (lb/scf)/ppmv instead of the NO<sub>x</sub> K factor.
- (2) All continuous fuel flow meters and fuel gas sampling and analysis for GCV to determine the heat input rate from the fuel gas shall comply with the applicable provisions in sections 2.1.5 and 2.3.4 of Appendix D to 40 CFR Part 75.
- (3) The SO<sub>2</sub> hourly mass emissions rate for all the fuel gas combustion devices monitored by this approach shall be calculated by using the following equation:

$$E_t = (E_m) (Q_t)(GCV)/10^6$$

where:

$E_t$  = Total hourly  $\text{SO}_2$  mass emissions in lb/hr from the applicable fuel gas combustion devices

$E_m$  =  $\text{SO}_2$  emission rate in lb/mmBtu from the CEMS-monitored fuel gas combustion device

$Q_t$  = Fuel gas flow rate (scf/hr) to the applicable fuel gas combustion devices

GCV = Fuel Gross Calorific Value (Btu/scf)

$10^6$  = Conversion  
from Btu to million Btu

(d) Calculate total  $\text{SO}_2$  mass emissions for each calendar quarter and each calendar year based on the emissions in lb/hr and Equations F-3 and F-4 in Appendix F to 40 CFR Part 75, Appendix F.

### 3. Certification/Recertification Requirements

All monitoring systems are subject to initial certification and recertification testing as follows:

- (a) The owner or operator shall comply with the initial testing and calibration requirements in Performance Specification 2 in Appendix B to 40 CFR Part 60 and paragraph 2 (a)(2) of this section for each CFGMS.
- (b) Each CEMS for  $\text{SO}_2$  and flow or each  $\text{SO}_2$ -diluent CEMS shall comply with the testing and calibration requirements specified in 40 CFR Part 75, section 75.20 and Appendices A and B, except that each  $\text{SO}_2$ -diluent CEMS shall meet the relative accuracy requirements for a  $\text{NO}_x$ -diluent CEMS (lb/mmBtu).
- (c) A continuous fuel flow meter shall comply with the certification and quality-assurance requirements in sections 2.1.5 and 2.1.6 to Appendix D to 40 CFR Part 75.

### 4. Quality Assurance/Quality Control Requirements

- (a) A quality assurance/quality control (QA/QC) plan shall be developed and implemented for each CEMS for  $\text{SO}_2$  and flow or the  $\text{SO}_2$ -diluent CEMS in compliance with sections 1, 1.1, and 1.2 of Appendix B to Part 75.
- (b) A QA/QC plan shall be developed and implemented for each continuous fuel flow meter and fuel sampling and analysis in

compliance with sections 1, 1.1, and 1.3 of Appendix B to 40 CFR Part 75.

- (c) A QA/QC plan shall be developed and implemented for each CFGMS in compliance with sections 1 and 1.1 of Appendix B to 40 CFR Part 75, and the following:
  - (i) Perform a daily calibration error test of each CFGMS at two gas concentrations, one low level and one high level. Calculate the calibration error as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the error is greater than 5.0% of the span value.
  - (ii) In addition to the daily calibration error test, an additional calibration error test shall be performed whenever a daily calibration error test is failed, whenever a monitoring system is returned to service following repairs or corrective actions that may affect the monitor measurements, or after making manual calibration adjustments.
  - (iii) Perform a linearity test once every operating quarter. Calculate the linearity as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the linearity error is greater than 5.0 percent of a reference value, and the absolute value of the difference between average monitor response values and a reference value is greater than 5.0 ppm.
  - (iv) Perform a relative accuracy test audit once every four operating quarters. Calculate the relative accuracy as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the relative accuracy is greater than 20.0% of the mean value of the reference method measurements.
  - (v) Using the results of the relative accuracy test audit, conduct a bias test in accordance with Appendix A to 40 CFR Part 75, and calculate and apply a bias adjustment factor if required.

## 5. Missing Data Procedures

- (a) For any period in which valid data are not being recorded by an SO<sub>2</sub> CEMS or flow CEMS specified in this section, missing or invalid data shall be replaced with substitute data in accordance with the requirements in Subpart D of 40 CFR Part 75.

- (b) For any period in which valid data are not being recorded by an SO<sub>2</sub>-diluent CEMS specified in this section, missing or invalid data shall be replaced with substitute data on a rate basis (lb/mmBtu) in accordance with the requirements for SO<sub>2</sub> monitors in Subpart D of 40 CFR Part 75.
- (c) For any period in which valid data are not being recorded by a continuous fuel flow meter or for fuel gas GCV sampling and analysis specified in this section, missing or invalid data shall be replaced with substitute data in accordance with missing data requirements in Appendix D to 40 CFR Part 75.
- (d) For any period in which valid data are not being recorded by the CFGMS specified in this section, hourly missing or invalid data shall be replaced with substitute data in accordance with the missing data requirements for units performing hourly gaseous fuel sulfur sampling in section 2.4 of Appendix D to 40 CFR Part 75.

## 6. Monitoring Plan and Reporting Requirements

In addition to the general monitoring plan and reporting requirements of Section I of this Rule, the owner or operator shall meet the following additional requirements:

- (a) The monitoring plan shall identify each group of units that are monitored by a single monitoring system under this Protocol WEB-1, and the plan shall designate an identifier for the group of units for emissions reporting purposes. For purpose of submitting emissions reports, no apportionment of emissions to the individual units within the group is required.
- (b) If the provisions of paragraphs 2.(b) or (c) are used, provide documentation and an explanation to demonstrate that the SO<sub>2</sub> emission rate from the monitored unit is representative of the rate from non-monitored units.

## **Protocol WEB-2: Predictive Flow Monitoring Systems for Kilns with Positive Pressure Fabric Filter**

### 1. Applicability

The provisions of this protocol are applicable to cement kilns or lime kilns that (1) are controlled by a positive pressure fabric filter, (2) combust only a single fuel, no fuel blends, and (3) have operating conditions upstream of the fabric filter that the WEB source documents would reasonably prevent reliable flow monitor measurements. This protocol does not modify the SO<sub>2</sub> monitoring requirements in section I of this Rule.

### 2. Monitoring Requirements

(a) A cement or lime kiln with a positive pressure fabric filter shall use a predictive flow monitoring system (PFMS) to determine the hourly kiln exhaust gas flow.

(b) A PFMS is the total equipment necessary for the determination of exhaust gas flow using process or control device operating parameter measurements and a conversion equation, a graph, or computer program to produce results in cubic feet per hour.

(c) The PFMS shall meet the following performance specifications:

(1) Sensors readings and conversion of sensor data to flow in cubic feet per hour must be automated.

(2) The PFMS must allow for the automatic or manual determination of failed monitors. At a minimum a daily determination must be performed.

(3) The PFMS shall have provisions to check the calibration error of each parameter that is individually measured. The owner or operator shall propose appropriate performance specifications in the initial monitoring plan for all parameters used in the PFMS comparable to the degree of accuracy required for other monitoring systems used to comply with this Rule. The parameters shall be tested at two levels, low: 0 to 20% of full scale, and high: 50 to 100% of full scale. The reference value need not be certified.

(4) The relative accuracy of the PFMS must be  $\leq 10.0\%$  of the reference method average value, and include a bias test in accordance with paragraph 4(c) of this section.

### 3. Certification Requirements

The PFMS is subject to initial certification testing as follows:

- (a) Demonstrate the ability of the PFMS to identify automatically or manually a failed monitor.
- (b) Provide evidence of calibration testing of all monitoring equipment. Any tests conducted within the previous 12 months of operation that are consistent with the QA/QC plan for the PFMS are acceptable for initial certification purposes.
- (c) Perform an initial relative accuracy test over the normal range of operating conditions of the kiln. Using the results of the relative accuracy test audit, conduct a bias test in accordance with Appendix A to 40 CFR Part 75, and calculate and apply a bias adjustment factor if required.

#### 4. Quality Assurance/Quality Control Requirements

A QA/QC plan shall be developed and implemented for each PFMS in compliance with sections 1 and 1.1 of Appendix B of 40 CFR Part 75, and the following:

- (a) Perform a daily monitor failure check.
- (b) Perform calibration tests of all monitors for each parameter included in the PFMS. At a minimum, calibrations shall be conducted prior to each relative accuracy test audit.
- (c) Perform a relative accuracy test audit and accompanying bias test once every four operating quarters. Calculate the relative accuracy (and bias adjustment factor) as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the flow relative accuracy is greater than 10.0% of the mean value of the reference method.

#### 5. Missing Data

For any period in which valid data are not being recorded by the PFMS specified in this section, hourly missing or invalid data shall be replaced with substitute data in accordance with the flow monitor missing data requirements for non-load based units in Subpart D of 40 CFR Part 75.

#### 6. Monitoring Plan Requirements

In addition to the general monitoring plan requirements of Section I of this Rule, the owner or operator shall meet the following additional requirements:

(a) The monitoring plan shall document the reasons why stack flow measurements upstream of the fabric filter are unlikely to provide reliable flow measurements over time.

(b) The initial monitoring plan shall explain the relationship of the proposed parameters and stack flow, and discuss other parameters considered and the reasons for not using those parameters in the PFMS. The [state or tribe] may require that the subsequent monitoring plan include additional explanation and documentation for the reasonableness of the proposed PFMS.