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Summary Fact Sheet for WEB Trading Program: Monitoring, Recordkeeping and Reporting

The monitoring provisions for the WEB trading program balance the need for accurate monitoring to provide certainty for the trading of allowances with the goals of minimizing burdens on the affected sources and providing flexibility for the broad range of industries that would be subject to the program. The provisions build on the successful model of monitoring under the Acid Rain Program, but adopt special provisions to address the wide variety of facilities and emissions units that would be covered under the WEB backstop trading program. This fact sheet provides a brief overview of the monitoring provisions, and highlights some key issues.

Acid Rain Program Units

- For electric generating sources already subject to Part 75 monitoring under the Acid Rain Program, the rule does not require any additional monitoring or recordkeeping.

- For reporting, the rule establishes the legal authority for a state or tribe to receive directly a copy of the reports that the sources provide EPA, as well as an annual summary report of cumulative SO_2 emissions. But, the rule anticipates that this information may be provided directly from EPA to the WEB Tracking System Administrator without the need for a submittal by the source.

Other Units

Option to Continue to Use Milestone Tracking Monitoring

- Some facilities (either for an entire facility or for certain units at a facility) can continue to use the same monitoring they use for pre-trigger milestone tracking in certain circumstances. These sources would implement a unique non-tradeable allowance option in return for the reduced monitoring obligations.

- This option is available to:

  -- Smelting operations with fugitive SO_2 emissions
  -- Flares (except to the extent they are used as a fuel gas combustion device)
  -- Units where the underlying allocations did not assume any control levels (e.g., cement and lime kilns)

- For units/sources that implement this option, the owner or operator will have to submit:

  -- Notice of all applicable units at the applicable source, specifying the units to be covered by the option.

  - -- The portion of the source's overall allowance allocation attributable to any units covered by the option.
  - -- Identification of any units that are permanently retired.
  - -- A modified notice for each new unit at a source electing the non-tradeable allowance option for which the Account Representative applies for an allocation under the new source set-aside provisions of the WEB rule.

- The state or tribe would evaluate the request to implement the non-tradeable allowance option. If necessary, the state or tribe can exclude any units that did not qualify for the option and adjust the portion of allowances that did qualify to be consistent with the methodology used to establish the floor level (and reducible allocation) for the source.

- The state or tribe would hold allowances equal to the adjusted portion of the source's allowances in a special reserve account maintained by the state or tribe.

- No hold back of allowances in this reserve would be required for permanently retired units that fall into this category of "non-tradeable allowance" units.

- The source's Account Representative would submit an annual emissions statement for each unit included in the non-tradeable allowance option. The source would be required to maintain records to estimate annual emissions consistent with the methodology used to establish the floor level (and reducible allocation) for the source.

- Based on this report, the state or tribe would retire allowances to account for emissions for units included in the non-tradeable allowance option. If the estimated emissions from all the "non-tradeable allowance" units at the source are less than or equal to the number of allowances held in the special reserve account by the state or tribe for the source, the state or tribe would retire all of the reserve allowances.

- If the estimated emissions are greater (generally because of increased operating levels or some other change in operating practices at the source), the source's Account Representative would have to report the excess amount as part of the cumulative annual emissions report for the source and would be required to use other allowances in the source's compliance account to account for these emissions.

- Sources electing the non-tradeable allowance option would not be subject to the other requirements of the WEB rule.

Other Options for Non-Acid Rain Program Units

- For other SO_2 emitting units not subject to Part 75, the WEB rule generally requires the use of Part 75 monitoring, but also includes special protocols for (a) refinery fuel gas units and (b) cement or lime kilns that use positive pressure fabric filters.

- It is important to note that the Part 75 monitoring options include non-continuous emission monitoring system (CEMS) options. For small, gas or oil fired boilers and turbines ($\leq$25 tons per year SO_2), Part 75 allows the use of default SO_2 values and maximum heat input values (or long term heat input calculations) to estimate SO_2 mass emissions. For larger gas or oil fired units, Part 75 allows the use of fuel sampling and fuel flow metering to calculate SO_2 mass emissions. Other units must use CEMS for SO_2 and stack flow.

- Refinery fuel gas combustion devices may use a special WEB protocol designed to build on existing monitoring practices under the New Source Performance Standards for petroleum refineries. See the summary, below, of Appendix A to the WEB rule for a detailed overview of this methodology.

- Emission inventory data indicate that some cement and lime kilns use positive pressure fabric filters. These units do not have suitable stacks for locating a monitor downstream of the control device. Based on experience in the South Coast AQMD in California, flow monitoring upstream of the control device may be difficult because of the particulate loading in the gas stream. Appendix A to the WEB rule establishes a protocol for these situations -- see the summary, below, of Appendix A.

- Sources also can petition for alternative monitoring requirements. Any petition will require approval by the state or tribe and U.S. EPA.

Other Elements -- Monitoring Plans and Compliance Deadlines

- To ensure that states and tribes have an early understanding of the basic approach a source will use to meet these requirements, sources would submit a simplified, initial monitoring plan in advance of a more detailed monitoring plan.

- For sources that are WEB sources on or before the Program Trigger Date, the initial monitoring plan would be due 180 days after the Program Trigger Date. Existing sources that become WEB sources after the Program Trigger Date would have to submit an initial monitoring plan by September 30 of the year following the inventory year in which the source exceeded the emissions threshold. New WEB sources would have to submit the plan with their permit application for New Source Review.

- The detailed monitoring plan uses the model established in Part 75. Rather than refer to Part 75, the elements of the plan are set forth in the WEB monitoring rule. this approach makes the WEB rule self-contained for these requirements, and eliminates a few inapplicable requirements in the Part 75 provisions.

- Sources would have to install and certify monitoring systems as follows: (a) if a WEB source on or before the Program Trigger Date, two years prior to the start of the first control period as provided for in the rule; (b) if a WEB source after the Program Trigger Date, one year after the monitoring plan is due; (c) if a new web source, the earlier of 90 unit operating days or 180 calendar days after the date the new source commences operation. This will provide a window of time for sources to work out any monitoring and reporting issues well in advance of the first control period.

Other Elements -- Substitute Data Requirements

- Because the monitoring under a trading program needs to account for all emissions, sources would be required to substitute for missing or invalid unit data in accordance with either Part 75 (or WEB Appendix A, if applicable).

- For SO_2 emitting units without a certified (or provisionally certified) monitoring system in place at the beginning of the first control period, sources would be required to substitute for missing or invalid unit data in accordance with either (a) the conditional data validation procedures of 40 CFR 75.20(b)(3) [for CEMS]; (b) section 2.4 of appendix D to Part 75 [for the fuel sampling and metering option]; (c) the appropriate emission factor in 40 CFR 75.19 and the unit's maximum rated hourly heat input [if using the default monitoring for small units under Part 75]; or (d) the provisions in WEB Appendix A, if applicable.

Other Elements -- Reporting

- Quarterly reports would be required within 30 days after the end of each calendar quarter. An annual statement of total annual SO_2 emissions for all SO_2 emitting units at the source would be required within 30 days after the end of the control period.

- No particular reporting format and software are specified at this time. The expectation is that quarterly reporting comparable to Part 75 will be required. This approach will allow WEB sources to use the reporting software already developed for EPA trading programs rather than being required to develop separate custom software just for the WEB program.

Overview of WEB Monitoring Protocols (Appendix A)

Appendix A of the SO_2 monitoring provisions for the WEB trading program include two additional monitoring protocols as optional alternatives to Part 75 methods for petroleum refinery fuel gas combustion devices, and cement or lime kilns controlled by positive pressure fabric filters.

WEB-1 SO_2 Monitoring of Fuel Gas Combustion Devices

General Requirements/Options

This protocol allows petroleum refineries to monitor SO_2 mass emissions from fuel gas combustion devices (boilers, process heaters, and flares burning fuel gas generated by the refinery) based on existing monitoring technology required by the refinery New Source Performance Standards in 40 CFR Part 60, Subpart J. It also allows for monitoring at a single location to determine emissions from a group of combustion devices if emissions at that location are representative of emissions for the unmonitored units. There are three possible approaches a refinery can choose under this protocol:

- Use continuous fuel gas monitoring system (CFGMS) to determine the total sulfur content of the fuel gas combined with continuous fuel flow metering to determine the amount of fuel gas burned. SO_2 mass emissions in lbs/hr are determined using a mass balance approach assuming all the fuel sulfur is converted to SO_2.

- Use continuous emission monitoring systems (CEMS) for SO_2 and stack flow at a representative stack combined with continuous fuel flow metering. The SO_2 mass emissions rate in lbs/hr from the representative stack (fuel gas combustion device) is determined based on Part 75 SO_2 CEMS and flow CEMS. This representative emission rate is multiplied by the ratio of the total amount of fuel gas burned by all the applicable combustion devices to the amount of fuel gas monitored by the CEMS-monitored fuel gas combustion device.

- Use an SO_2-Diluent CEMS at a representative stack combined with continuous fuel flow metering, and fuel sampling and analysis for fuel heat content. The SO_2 mass emissions rate in lb/mmBtu from the representative stack is determined using the SO_2-diluent CEMS. This representative emission rate is multiplied by the ratio of the total fuel heat input to all of the applicable combustion devices to the heat input to the CEMS-monitored fuel gas combustion device.

Other Key Technical Features

- The SO_2 CEMS, SO_2-diluent CEMS, continuous fuel flow meters, and fuel sampling and analysis are all subject to Part 75 performance specifications and quality assurance/quality control requirements.

- The CFGMS performance specifications and quality assurance/quality control requirements are based on a combination of EPA Performance Specification 2, South Coast Air Quality Management District requirements, and Part 75.

- A bias test as described in Appendix A to Part 75 is applied to emission measurements made under each option.

- Applicable Part 75 substitute data approaches are used for missing data periods.

- There are additional monitoring plan requirements for sources measuring at a single representative location for a group of units. For instance, the source would specify in the monitoring plan an identifier for a group of units monitored by a single protocol. The source would report the emissions from the group under that identifier and would not apportion mass emissions to each individual unit.

WEB-2 Predictive Flow Monitoring Systems for Kilns with Positive Pressure Fabric Filter

- This protocol applies only to cement or lime kilns controlled by positive pressure fabric filters. Positive pressure fabric filters typically do not have a suitable stack location for installing an SO_2 CEMS or flow CEMS after the control device. CEMS can be installed in the ductwork prior to the fabric filter, but stack flow monitors may have interference problems due to the high uncontrolled particulate loading at upstream locations. This protocol specifies requirements for a predictive flow monitoring system (PFMS) for these limited situations.

- The results of the predictive flow monitoring under this protocol are combined with measurements from a Part 75 SO_2 CEMS upstream of the fabric filter to determine the SO_2 emission rate.

- The protocol defines a PFMS and outlines performance specifications, certification, quality assurance/quality control, and substitute data requirements. The parameters monitored by the PFMS are not specified, but the PFMS must be able to pass a flow RATA, and is subject to a bias adjustment factor (BAF).

- The monitoring plan must document the reasons for selecting the parameters included in the PFMS. The plan also must document why the upstream interference is significant enough to make stack flow CEMS unreliable.