



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 29 2001

OFFICE OF
AIR AND RADIATION

Thomas M. Daly
General Manager
Designated Representative
City of Wyandotte
3005 Biddle Avenue
Wyandotte, Michigan 48192

Re: Petition for Alternative Monitoring of SO₂ Emissions Using Stack Flow Monitor at
Wyandotte's Unit 5

Dear Mr. Daly,

EPA has reviewed your February 15, 2001 petition under §75.66(a) for alternative monitoring and reporting of sulfur dioxide (SO₂) emissions for City of Wyandotte's (Wyandotte) Unit 5. In that petition, Wyandotte requests to monitor using a default SO₂ emission rate and a stack flow monitor. As discussed below, EPA approves the petition with certain conditions.

Background

Unit 5 is a natural gas-fired boiler. The unit previously combusted coal as the primary fuel. The unit has been rendered incapable of combusting coal and now combusts natural gas. Wyandotte has installed and certified a flow rate monitoring system at the main stack, along with a nitrogen oxides (NO_x) and carbon dioxide (CO₂) continuous emission monitoring system (CEMS).

Wyandotte shares a natural gas header system with two other units (Units 7 and 8) at the plant, and the gas meters used for billing measure total gas flow to all three units, not the separate gas flow to Unit 5. According to Wyandotte, the natural gas burned at the unit qualifies for the 0.0006 lb/mmBtu default value for SO₂ for pipeline natural gas under Part 75, Appendix D, Section 2.3.1.1. As noted above, Wyandotte has certified flow rate CEMS and NO_x and CO₂ CEMS (which includes a diluent monitor) at the main stack to account for the NO_x emission rate, CO₂ mass emissions, and heat input at Unit 1. Wyandotte's petition requests to use the default SO₂ emission rate and the heat input values determined from the flow rate CEMS and diluent monitor to calculate SO₂ mass emissions in accordance with Equation F-23 in Part 75, Appendix F, Section 7. This approach would be used in lieu of certifying an SO₂ CEMS at the main stack.

EPA's Determination

Part 75 does not allow Wyandotte's requested approach for monitoring SO₂ emissions at Unit 5's main stack. Under Part 75, a unit may monitor SO₂ emissions for hours of gas combustion by using: (1) an SO₂ CEMS and a flow rate CEMS; (2) a fuel flowmeter and procedures under Part 75, Appendix D; or (3) a flow rate CEMS, a diluent monitor, the appropriate default SO₂ emission rate from Section 2.3.1.1 or 2.3.2.1.1. of Appendix D, and Equation F-23 in Appendix F. See 40 CFR 75.11(e). The latter option of using Equation F-23 was meant to be used by units combusting both natural gas and another fuel (e.g., coal) for which they had to have SO₂ CEMS. Consequently, section 7 of Appendix F explicitly makes the use of Equation F-23 available only for a unit with an SO₂ CEMS. See 40 CFR part 75, appendix F, section 7. Units (like Unit 5) combusting only natural gas were expected to choose to utilize a fuel flowmeter and Appendix D to account for SO₂ emissions.

However, EPA agrees that it is unnecessarily burdensome to require that Wyandotte operate and maintain an SO₂ CEMS in the main stack at Unit 5 in order to use Equation F-23 to determine SO₂ mass emissions. Unit 5 burns only pipeline natural gas, and Equation F-23 provides for the determination of SO₂ mass emissions using a default SO₂ emission rate for any hour of pipeline natural gas combustion. Using Equation F-23, Unit 5 will report the default SO₂ emission rate (rather than any monitored SO₂ value) for every unit operating hour, even if the unit were to install an SO₂ CEMS and the CEMS was not out-of-control. Under these circumstances, there is little or no purpose in requiring certification of an SO₂ CEMS at the main stack. Therefore, EPA approves the request in the petition to use a default SO₂ emission rate, the flow rate CEMS and diluent monitor, and Equation F-23 to calculate SO₂ mass emissions for every hour of pipeline-natural-gas combustion, in lieu of certifying an SO₂ CEMS at the main stack. Of course, Wyandotte must continue to monitor NO_x and CO₂ emissions at the main stack in accordance with §§75.10(a)(2) and (3).

EPA's determination in this letter relies on the accuracy and completeness of Wyandotte's submissions on February 15, 2001 and is appealable under part 78. If you have any questions about these matters, please contact Louis Nichols of my staff, at (202) 564-0161 or Nichols.Louis@epa.gov. Thank you for your continued cooperation.

Sincerely,



Brian J. McLean

Director, Clean Air Markets Division

cc: Constantine Blathras, EPA Region 5
Karen Kajiya-Mills, MDEQ