

March 24, 2009

Charles R. Berry
Designated Representative
Mississippi Power
2992 West Beach Boulevard
P.O. Box 4079
Gulfport, MS 39502-4079

Re: Petition to Use an Alternative Fuel Flow Meter Accuracy Test Method for Units CTA and CTB at Mississippi Power Company's Plant Watson Facility (Facility ID (ORISPL) 2049)

Dear Mr. Berry:

The United States Environmental Protection Agency (EPA) has reviewed the June 5, 2008 petition under 40 CFR 75.66(c) and supporting e-mails dated January 27, February 1, February 3, and February 4, 2009, in which Mississippi Power requested to use an alternative accuracy test method to certify the fuel flow meters installed on Units CTA and CTB at its Plant Watson facility. EPA approves the petition, for the reasons discussed below.

Background

Mississippi Power owns and operates two natural gas-fired, simple-cycle combustion turbines, Units CTA and CTB, at its Plant Watson facility in Harrison County, Mississippi. Units CTA and CTB commenced commercial operation in 1970, and have identical maximum hourly heat input capacities of 262 mmBtu/hr and generating nameplate ratings of 21 megawatts. The units are subject to the annual and ozone season Clean Air Interstate Regulation (CAIR) trading programs for nitrogen oxides (NO_x) and to the annual CAIR trading program for SO₂. Therefore, Mississippi Power is required to continuously monitor and report NO_x and SO₂ mass emissions and heat input for Units CTA and CTB, in accordance with 40 CFR Part 75. These monitoring and reporting requirements commenced on January 1, 2008 (for NO_x mass emissions and heat input) and on January 1, 2009 (for SO₂ mass emissions).

To meet the emissions monitoring requirements of CAIR, Mississippi Power has elected to use the excepted methodologies in Appendices D and E to Part 75. Section 2.1 of Appendix D requires continuous monitoring of the fuel flow rate to the affected unit, using a certified flow meter. Section 2.1.5 of Appendix D specifies three acceptable

ways to certify a fuel flow meter: (1) by direct calibration, using one of the methods listed in Section 2.1.5.1; (2) by in-line comparison against a reference meter that has been calibrated within the past 365 days using one of those methods (see Section 2.1.5.2); or (3) by an alternative method approved by petition under §75.66 and using equipment traceable to the National Institute of Standards and Technology (NIST).

According to Mississippi Power, the fuel flow meters originally purchased for Units CTA and CTB were certified using the provisions of Appendix D, Section 2.1.5.2. However, the meters were damaged prior to installation and were returned to the manufacturer. Replacement Coriolis fuel flow meters were then purchased, calibrated using NIST-traceable equipment, and installed on Units CTA and CTB. However, the calibration method that was used is not among the methods listed in Section 2.1.5.1 of Appendix D. In view of this, on June 5, 2008, Mississippi Power submitted a petition to EPA under §75.66, requesting approval of the alternative procedures that were used to calibrate Unit CTA and CTB's Coriolis flow meters.

Micro Motion, Inc. (the supplier of the flow meters) calibrated the Coriolis meters using ASME Method MFC-11M-1989, "Measurement of Fluid Flow by Means of Coriolis Mass Flow Meters", in conjunction with a transfer standard method (TSM). The TSM uses a calibration "stand"¹ equipped with reference flow meters that have NIST traceability.

EPA's Determination

EPA reviewed the information provided by Mississippi Power in the June 5, 2008 petition and in subsequent e-mails dated January 27, February 1, February 3, and February 4, 2009, describing the alternative procedures that were used to calibrate the Coriolis flow meters installed on Units CTA and CTB at the Plant Watson facility. The Agency finds the alternative calibration methodology to be acceptable and approves its use for the initial certification of these flow meters. The basis for this approval is as follows:

- ASME Method MFC-11M-1989 provides technically sound guidelines for selecting, installing, and calibrating Coriolis flow meters;
- A set of weights calibrated by Rice Lake Weighing Systems, a National Voluntary Laboratory Accreditation Program (NVLAP)-accredited mass lab with a NIST certificate, was used to calibrate the scales for Micro Motion's primary flow stand. Since the reference flow meters used in the TSM flow stand were calibrated in the primary flow stand, the NIST traceability of the Rice Lake weight set was effectively transferred to the reference flow meters; and
- Mississippi Power provided certificates of calibration for Unit CTA and CTB's

¹ A "stand" is a fluid flow system that is used to calibrate candidate fuel flow meters. Key components of the stand that was used to calibrate Plant Watson's Coriolis flow meters include a liquid holding tank, piping, a control valve, and reference flow meters with NIST-traceable calibrations.

Coriolis flow meters in the June 5, 2008 petition. The certificates indicate an accuracy of better than 0.040 percent for each meter, which is well within the 2.0 percent accuracy requirement specified in section 2.1.5 of Appendix D to Part 75.

The Agency notes that this approval applies only to the original May 17, 2007 calibration of the Coriolis flow meters installed on Units CTA and CTB at Plant Watson, with serial numbers 14042325 and 14041810. According to Mississippi Power, these meters have since been recalibrated on December 12, 2008, according to section 2.1.5 of Appendix D, and continue to meet the required accuracy specification.

EPA's determination relies on the accuracy and completeness of the information provided in Mississippi Power's June 5, 2008 petition, and in subsequent emails dated January 27, February 1, February 3, and February 4, 2009, and is appealable under Part 78. If you have any questions regarding this determination, please contact Venu Ghanta at (202) 343-9009, or by e-mail at ghanta.venu@epa.gov. Thank you for your continued cooperation.

Sincerely,

/s/

Sam Napolitano, Director
Clean Air Markets Division

cc: Venu Ghanta, CAMD
David McNeal, EPA Region IV
Mr. Chadd Lafontaine, Mississippi DEQ