



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

APR - 2 2001

OFFICE OF
AIR AND RADIATION

James O. Vick
Alternate Designated Representative
Gulf Power
One Energy Place
Pensacola, FL 32520

Re: Petition for Alternative Missing Data Substitution
Procedures for Crist Unit 5

Dear Mr. Vick:

EPA has reviewed your March 20, 2001 petition, in which Gulf Power Company (Gulf Power) requested to use an alternative missing data substitution procedure for Crist Unit 5. Specifically, Gulf Power requested to use, for a limited time period, an alternative substitute data value in lieu of maximum potential flow rate (MPF) when the unit's percent monitor data availability (PMA) was below 80.0 %.

Background

On March 7, 2001, Gulf Power conducted the annual Relative Accuracy Test Audit (RATA) of the flow monitor installed on Crist Unit 5. During preparations for the RATA, Gulf Power discovered that the flow RATA for the previous year, which was performed on March 8, 2000, was mistakenly reported as passed. The error was traced to an erroneous calculation of the percent relative accuracy by the test contractor. The contractor used dry-basis reference method flow rate data in the relative accuracy calculation, whereas the reference method data should have been on a wet basis (i.e., with stack gas moisture included).

In re-calculating the percent relative accuracy for the March 8, 2000 flow RATA, Gulf Power determined that the RATA had actually been failed. As soon as the RATA failure was discovered, Gulf Power reviewed all of the year 2000 flow RATA reports for its other units under the Acid Rain Program to determine if this problem was system-wide or an isolated problem. No problems were identified with the flow RATA reports for any other units operated by Gulf Power. To prevent a recurrence of this problem, Gulf Power is implementing a



corrective action plan that includes required use of a standardized software program to identify flow data as dry- or wet- based and additional review of all RATA reports.

The failure of the March 8, 2000 flow RATA at Crist Unit 5 triggered an out-of-control period for the flow monitor lasting until the next successful flow RATA. This results in the invalidation of all of the flow rate data recorded by the flow monitor during period starting on the hour on March 8, 2000 of the commencement of the failed flow RATA and lasting up to the date and hour of completion of the successful flow RATA on March 7, 2001. Since approximately one year's worth of flow rate data will be invalidated, this causes the unit's PMA for flow to drop from over 99% to near 0%. Further, it will take several months for PMA to build back up to a high percentage.

The flow rate substitute data provisions in §75.33(c)(4) require reporting of MPF for any hour when PMA is below 80.0%. See 40 CFR part 75, appendix A, section 2.1.4.1 (setting forth procedures for calculating MPF). For Crist Unit 5, the MPF listed in the monitoring plan is 18 million scfh. Therefore, for the missing data period in question, a flow rate value of 18 million scfh must be reported for several months when the unit's PMA is below 80.0%. Examination of historical flow rate data from Crist Unit 5 shows that, although MPF is 18 million scfh, the actual hourly flow rates for the unit seldom exceed 11 million scfh. In light of this, Gulf Power has requested relief, for the purposes of this extended missing data period, from reporting MPF when PMA is below 80.0%. Instead of reporting MPF, Gulf Power has requested to report the maximum flow rate recorded in the 2,160 quality-assured monitor operating hours preceding the missing data period.

EPA's determination

For the missing data period during March 8, 2000 - March 7, 2001, EPA approves Gulf Power's request to report the maximum flow rate recorded the prior 2160 quality-assured monitor operating hours, for those hours when monitor availability is below 80.0%. EPA has determined this value to be 12,845,112 scfh. For each hour that this flow rate value is reported as substitute data, Gulf Power must report a method of determination code (MODC) of 55 in column 41 of electronic data report (EDR) record type 220.

EPA's decision to grant the petition is based upon the following considerations. First, Gulf Power reported the incident to EPA. The incident was not discovered through an Agency audit. This is an equitable factor supporting the granting of relief.

Second, Gulf Power's proposed missing data approach is generally consistent with the purposes of the substitute data provisions of Part 75. These purposes include: prevention of under-reporting of emissions; creation of strong incentives to fix out-of-control monitors; and establishment of procedures that can be readily implemented and are not administratively burdensome for units or EPA. 58 FR 3590, 3634-35 (1993). As discussed below, Gulf Power's proposed approach is conservative enough to prevent under-reporting and to retain monitoring incentives.

With regard to under-reporting, EPA notes that Gulf Power's proposed substitute data value is the highest stack flow rate reported at Crist Unit 5 in the 2,160 quality-assured monitor operating hours preceding the missing data period, without considering the load range at which the unit was operating. In general, a higher load range of unit operation means a higher heat input, and so a higher stack flow rate, for the unit. Using the highest reported stack flow as substitute data for a given hour, even though the unit may not be operating at the load range represented by that highest reported value, is a conservative approach that is likely to prevent under-reporting. This is supported by the fact that for 2nd, 3rd, and 4th quarters 1999 (the period when the 2,160 lookback hours occurred) and 2nd, 3rd, and 4th quarters 2000 (the comparable portion of the missing data period) Crist Unit 5 had the same maximum hourly load of 85 MWe. For a given unit, load varies with, and is an indicator of, the level of heat input. The correspondence of the 1999 and 2000 maximum load values therefore indicates that the unit's maximum heat input value and associated maximum stack flow rate values for 1999 are reasonable estimates of these maximum values for 2000. Use of the maximum stack flow rate in 1999 is not likely to understate stack flow during the missing data period in 2000.

With regard to monitoring incentives, EPA notes that, although not as conservative as MPF, the highest reported value (which applies §75.33(c)(4) when PMA is less than 80%) is more conservative than the substitute data value applicable when a unit's PMA is 80.0 to 90.0%. Under §75.33(c)(3), when PMA is 80.0 to 90.0%, the highest value in the previous 2,160 quality-assured monitor operating hours is used, *considering* the load range at which the unit was operating. The lower the unit's load range during a missing data hour, the lower the applicable historical stack flow rate (i.e., the historical rate for the same load range) and, thus, the applicable substitute data value. Under Gulf Power's proposed approach, the highest historical stack flow rate is used for any hour when PMA is less than 80.0%, regardless of the unit's load range during that hour. This preserves the general substitute data structure of increasingly conservative substitute data as PMA decreases.

EPA also notes that Gulf Power's proposed approach is similar to the approach used in part 75 for developing substitute data for sulfur dioxide and nitrogen oxide monitoring systems. Under §75.33(b)(4) and (c)(4) and Appendix A, sections 2.1.1.1(b) and 2.1.2.1(a), the owner or operator of a unit has the option of developing a value for maximum potential concentration using the highest value in at least the last 720 quality-assured monitoring hours. While §75.33 and Appendix A do not include a similar option for determining maximum potential values for flow monitoring systems, these provisions use a lookback period of 2,160 hours for developing other substitute data values for flow. See 40 CFR 75.33(a) (Table 2).

Finally, Gulf Power's proposed approach, of course, involves some customizing for Crist Unit 5 of Part 75 substitute data provisions. However, the petition requests the proposed approach on a one-time basis for a past period (i.e., March 8, 2000 - March 7, 2001). Further, since Gulf Power represents that it has adopted procedures to prevent reoccurrence of the problem with the March 8, 2000 flow RATA, EPA does not anticipate reoccurrence of this problem or granting relief if it does reoccur. Balancing this factor with the other factors discussed above (i.e., the self-reporting of the problem, the conservativeness of the approach resulting in prevention of under-reporting and retention of monitoring incentives, and the

similarity to other substitute data provisions), EPA concludes that Gulf Power's approach should be approved in this case.

EPA's determination in this letter relies on the accuracy and completeness of the information provided in the March 20, 2001 petition and is appealable under 40 CFR part 78. Please contact Ms. Kim Nguyen of my staff at (202) 564-9102 if you have any questions. Thank you for your continued cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian J. McLean". The signature is fluid and cursive, with a large initial "B" and "M".

Brian J. McLean, Director
Clean Air Markets Division

cc: David McNeal, EPA Region 4
Lynn Haynes, EPA Region 4
Joseph Kahn, Florida Department of Environment Protection
Kim Nguyen, EPA Clean Air Markets Division