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

APR 30 2002

OFFICE OF
AIR AND RADIATION

John Robson
Authorized Account Representative
Piney Creek LP
428 Power Lane
Clarion, PA 16214

Re: Petition for Approval of a Default Moisture Constant for Piney Creek LP Unit 031

Dear Mr. Robson:

This is in response to your letter, dated April 8, 2002, in which Piney Creek Limited Partnership ("Piney Creek") requested approval to use a default moisture constant of 6.0% H_2O for the purposes of reporting nitrogen oxides (NO_x) mass emissions and heat input data under 25 Pa. Code Chapter 145. EPA approves the petition, for the reasons, and subject to the conditions, discussed below.

Background

Piney Creek owns and operates a fluidized bed boiler, Unit 031, at its Clarion, PA facility. Unit 031 burns waste bituminous coal (known as "gob"). The unit is subject to the continuous emission monitoring and reporting provisions of 25 Pa.Code Chapter 145, which requires that NO_x mass emissions and heat input be monitored and reported using the methods prescribed in 40 CFR Part 75.

Section 75.11 (b) of Part 75 requires certain units that combust coal or coal-derived fuel to either install and certify a continuous moisture monitoring system or use a constant, default moisture value. This rule provision applies to units whose mathematical equations for determining NO_x mass emissions or heat input rate require a correction for the stack gas moisture content. Piney Creek uses Equation F-18 in Appendix F of Part 75 to calculate the hourly heat input rate to Unit 031. Since Equation F-18 has a moisture correction term, Piney Creek must either certify a moisture monitoring system or use an appropriate moisture content in order to obtain accurate heat input rates.

Section 75.11 (b) provides default moisture constants for bituminous coal. However,

these values were derived from the combustion of pure coal, not coal waste. Therefore, they may not be appropriate for use by Piney Creek, which combusts bituminous gob. Piney Creek requested to use a default moisture content value of 6.0% H_2O and, in support, provided moisture measurements from previous relative accuracy test audits (RATAs) of the installed continuous emission monitoring systems (CEMS) at Unit 031.

EPA's Determination

EPA analyzed the moisture data provided by Piney Creek. The data represent moisture measurements made during RATA tests of the Unit 031 CEMS for three consecutive years, i.e., 1999, 2000 and 2001. A total of 50 moisture runs were provided. The percent moisture values ranged from 5.8 to 9.9 % H_2O, with a mean value of 7.6 % H_2O . The absolute average deviation from the mean value was 0.8 % H_2O, and 47 of the 50 individual values (i.e., 94 percent of the values) were higher than 6.0% H_2O.

Based on the results of the data analysis, EPA concludes that 6.0% H_2O is a conservatively low estimate of the flue gas moisture content for Unit 031. The heat input rate formula used by Piney Creek (Equation F-18) gives higher heat input rate values when the moisture decreases. Therefore, using a conservatively low moisture constant in Equation F-18 will result in both higher heat input rates and higher NO_x mass emissions being reported, since NO_x mass is calculated as the product of NO_x emission rate and heat input rate. This ensures that NO_x mass emissions will not be underestimated. On this basis, EPA approves Piney Creek's petition to use a default moisture value of 6.0% H_2O to report NO_x mass emissions and heat input data under 25 Pa. Code Chapter 145.

Conditions of Approval

As conditions of approval of this petition request, Piney Creek must:

1. Use the approved default moisture value of 6.0% H_2O to calculate heat input rate for Unit 031, starting on May 1, 2002; and

2. Re-evaluate the appropriateness of the default moisture value each year. Provided that the average percent moisture measured during the annual RATAs exceeds 6.0% H_2O, the default value of 6.0% H_2O may continue to be used. However, if the average flue gas moisture content measured during the RATAs is less than 6.0% H_2O, that average value must be used as the new moisture constant, beginning no later than one week from the date on which the results of the moisture tests are received.

EPA's determination in this letter relies on the accuracy and completeness of the information provided by Piney Creek in the April 8, 2002 petition and is appealable under Part

78. If you have any questions or concerns about this determination, please contact Robert Vollaro, at (202) 564-9116. Thank you for your continued cooperation.

Sincerely,

Peter Tsirigotis, Acting Director
Clean Air Markets Division

cc: Renee McLaughlin, EPA Region III
Joseph Nazzaro, Pennsylvania DEP
Robert Vollaro, CAMD