



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

File

MAR 25 2003

OFFICE OF
AIR AND RADIATION

Roger Dandridge
Vice President—Luke Operations
MeadWestvaco Corporation
Environmental Services
300 Pratt Street
Luke, MD 21540

Re: Petition for Alternative Compliance Methodologies for MeadWestvaco Luke Paper Mill (Facility ID (ORISPL) 50282)

Dear Mr. Dandridge:

This is in response to MeadWestvaco Corporation's (MeadWestvaco) December 9, 2002 and January 27, 2003 petitions requesting approval of three alternative compliance methodologies for Units 24, 25 and 26 at the Luke, Maryland paper mill. EPA approves the petitions, with conditions.

Background

MeadWestvaco owns and operates three coal-fired boilers, Units 24, 25 and 26, at the Luke, Maryland paper mill. Effluent gases from units are discharged to the atmosphere through a common stack. For each ozone season since 1998, MeadWestvaco has monitored nitrogen oxides (NO_x) mass emissions from Units 24, 25 and 26 at the common stack and has reported this data to EPA, to satisfy the requirements of the Ozone Transport Commission (OTC) NO_x Budget Program. The monitoring and reporting has been done in accordance with the provisions of the OTC guidance document, "Guidance for Implementation of Emission Monitoring Requirements for the NO_x Budget Program (January 28, 1997)".

However, the 2002 ozone season was the last one for which NO_x mass emissions accounting was done under the OTC program, since that program is being superseded by another NO_x trading program established under the Maryland SIP (see COMAR 26.11.29 and 26.11.30). Subsections .08 and .10 of COMAR 26.11.29 require MeadWestvaco to monitor and report ozone season NO_x mass emissions data for Units 24, 25 and 26, beginning on May 1, 2002, using the procedures in Subpart H of 40 CFR Part 75. According to COMAR 26.11.29, the NO_x mass emissions accounting for these units will begin with the 2003 control period (i.e., ozone season).

The NO_x mass emissions monitoring requirements of Part 75, Subpart H and the OTC Program are similar, but not identical. One important difference between the two programs concerns the initial certification and on-going quality-assurance requirements for stack flow monitors:

- Under the OTC program, a three-load relative accuracy test audit (RATA) was required for initial flow monitor certification, except for peaking units and bypass stacks, or unless the owner or operator petitioned and received approval from the State Agency to perform a single-load RATA. A demonstration that the unit operated at “constant load” (i.e., within 10% of average load) for at least 90% of the time in the previous year was required for approval of single-load testing. For on-going quality-assurance, a three-load flow RATA was required annually, except that single-load testing was allowed if the owner or operator had received approval to perform a single-load RATA for certification, and could demonstrate that the unit had continued to operate at constant load.
- For units that produce electrical or steam load, section 6.5.2 in Appendix A of Part 75 requires a 3-load flow RATA for initial certification, except for peaking units or bypass stacks, or unless otherwise approved by the Administrator (i.e. through a special petition under § 75.66). For on-going quality-assurance, section 2.3.1.3 of Appendix B to Part 75 requires an annual 2-load flow RATA and an additional 3-load RATA at least once every 5 years. From year-to-year, a unit may qualify for a single-load flow RATA instead of the 2-load test, if it is demonstrated that the unit has operated for at least 85% of the time at one load level (“low”, “mid” or “high”) since the last annual flow RATA.

In 2002, MeadWestvaco performed the annual flow RATA in the same manner as in previous years, i.e., at a single-load level, in accordance with the OTC guidance document cited above. In the December 9, 2002 petition, MeadWestvaco indicated that it was “not aware” that under COMAR 26.11.29.08, a 3-load flow RATA was required prior to May 1, 2002. Rather, MeadWestvaco believed the 2002 ozone season to be a “transition period from the OTC NO_x Budget Program to the NO_x SIP Call Program”.

In view of this, MeadWestvaco requested that the flow rate data recorded during the 2002 ozone season be accepted as quality-assured, based on the results of the single-load flow RATA which was performed prior to the ozone season. MeadWestvaco believes that since the flow monitor met the quality assurance requirements of the OTC guidance document, the flow rate data are sufficiently accurate for the purposes of NO_x mass emissions accounting under the OTC Program. To substantiate this, MeadWestvaco performed an analysis of the 2002 ozone season flow rate data. The results of the analysis showed that 81.2% of the flow data for the 2002 ozone season was recorded at the mid load level and an additional 14.1% of the data was recorded at high load. The flow RATA was done at mid load, toward the upper boundary of that load level. From this, MeadWestvaco concluded that “95 percent of the data generated during the 2002 ozone season is accurate and valid”.

In the December 9, 2002 petition, MeadWestvaco stated its intention to perform a multi-load flow RATA prior to the 2003 ozone season, to meet the requirements of Part 75. However, in the January 27, 2003 petition, MeadWestvaco requested a waiver of the requirement to perform a 3-load flow RATA for initial certification and every fifth year thereafter. Instead, MeadWestvaco proposed to perform 2-load flow RATAs. The request for a waiver of the 3-load RATA requirement was based on a historical data analysis of the operating load levels in 2002. The data analysis showed that 97.7% of the load data was in the mid and high ranges. Only 2.3% of the unit operation was in the low range. According to MeadWestvaco, steam production in the low range occurs only during boiler shutdowns and malfunctions, and the boilers are "very unstable in the low-range of steam production".

In the December 9, 2002 petition, MeadWestvaco also requested a waiver from the requirement to continuously monitor and report unit heat input for Units 24, 25, and 26. According to MeadWestvaco, sections 70(a)(2), 70(c)(2) and 76(a) of 40 CFR Part 96 (which was adopted by reference in COMAR 26.11.29) state that heat input is to be monitored "if required for purposes of developing source allocations". MeadWestvaco believes that heat input monitoring is unnecessary for Units 24, 25 and 26 at this time because: (a) the mill has already been allocated 947 tons of NO_x emission credits for the years 2003 through 2005; and (b) the draft Maryland budget for 2006 and 2007 allocates 947 tons to MeadWestvaco; and (c) the mill is the only non-electrical generating unit (non-EGU) in Maryland and has been allocated the entire non-EGU NO_x budget. In the December 9, 2002 letter MeadWestvaco affirmed Maryland's authority to require the installation of additional monitoring equipment to measure heat input, in the event that other non-EGUs become affected units under COMAR 26.11.29.

EPA's Determination

EPA approves MeadWestvaco's petition to accept the flow rate data recorded during the 2002 ozone season as quality-assured, for the purposes of NO_x mass emissions accounting under the OTC NO_x Budget Program. The Agency believes that the pre-ozone season flow RATA performed at mid load provides reasonable assurance of the accuracy of the ozone season flow rate data, in view of the results of the data analysis performed by MeadWestvaco. However, for the 2003 ozone season and beyond, no data from the flow monitor will be accepted as quality-assured unless the monitor has met the initial certification requirements of Part 75, Appendix A, section 6.5.2.

To ensure that the flow monitor meets the Part 75 certification requirements in time for the 2003 ozone season, MeadWestvaco must perform a 3-load flow RATA, unless otherwise approved by the Administrator. As stated above, in the January 27, 2003 petition MeadWestvaco requested a waiver from the 3-load flow RATA requirements of Part 75 and proposed to perform 2-load flow RATAs instead. The historical load data analysis performed by MeadWestvaco showed that the low load level is used only about 2% of the time, and according to MeadWestvaco, is used only during boiler shutdown events and malfunctions. Since conditions of process upset or boiler shutdown are not suitable for performing meaningful RATA testing, EPA approves MeadWestvaco's request to perform 2-load flow RATAs instead of 3-load RATAs, with the following conditions:

- (1) MeadWestvaco must upgrade its Electronic Data Reporting (EDR) software from version 2.1 to version 2.2, which must be used for reporting beginning with the second quarter of 2003. Only version 2.2 has the necessary coding (in record type 535) to accommodate a source that has an EPA-approved petition to perform 2-load flow RATAs instead of 3-load tests; and
- (2) At the end of each calendar year, beginning with 2003, MeadWestvaco shall perform a historical load analysis for all hours of operation of Units 24, 25 and 26 during the year. MeadWestvaco shall determine the percentage of the total operating hours in each of the three load ranges, i.e. low, mid and high. If, for any year, the results of the data analysis show that manner of operating the units has changed, such that the percentage of the total operating time in the low range (excluding boiler shutdowns and malfunctions) exceeds 5%, then a 3-load flow RATA must be performed prior to the next ozone season. MeadWestvaco shall submit the results of each annual load analysis to EPA Clean Air Markets Division and to the Maryland Department of the Environment, within 30 days after the end of the calendar year.

EPA also approves, with conditions, MeadWestvaco's request for a waiver of the unit heat input monitoring requirements of COMAR 26.11.29. The Agency agrees that heat input monitoring is unnecessary at this time, in view of the fact that MeadWestvaco is the only non-EGU in Maryland, has already received its allowance allocations through 2005, and is projected in the draft budget to receive the same number of allowances in 2006 and 2007. The conditions of approval are as follows:

- (1) If other non-EGUs become affected units under COMAR 26.11.29, and Maryland requires unit heat input monitoring for the purposes of allocating future NO_x allowances, MeadWestvaco shall install, certify, maintain and quality-assure the necessary continuous monitoring equipment to comply with the heat input monitoring requirement; and
- (2) For Units 24, 25, and 26, MeadWestvaco shall estimate the total ozone season (May-September) heat input to each unit for each calendar year, beginning with 2003. MeadWestvaco shall continue to make these ozone season estimates until instructed otherwise by EPA or by the Maryland Department of the Environment (MDE). The best available information shall be used for the heat input estimates, such as fuel feed rates, hours of unit operation, and fuel gross calorific values (GCV). The quality assurance program for the units shall include an explanation of the methodology used to make the ozone season heat input determinations. MeadWestvaco shall keep the results of each heat input determination (along with the associated data and calculations) on-site, in a format suitable for inspection and auditing. MeadWestvaco shall furnish this information to EPA or to MDE upon request.

EPA's determination relies on the accuracy and completeness of the information provided by MeadWestvaco in the December 9, 2002 and January 27, 2003 petitions and is appealable under Part 78. If you have any questions or concerns about this matter, please contact Robert Vollaro of my staff at (202) 564-9116. Thank you for your continued cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Napolitano', with a stylized flourish at the end.

Sam Napolitano, Acting Director
Clean Air Markets Division

cc: Renee McLaughlin, EPA Region III
Charles Frushour, Maryland Department of the Environment
Robert Vollaro, EPA, CAMD
