

Grangeville, Idaho 83503

Re: Fuel Usage Monitoring Requirement for an Exclusively Wood-Fired Boiler

Dear Mr. Atkison:

This determination is in response to a request submitted to the Environmental Protection Agency (EPA) by Bennett Forest Industries (BFI) dated June 16, 2005 regarding the fuel usage monitoring requirement of 40 CFR Part 60 Subpart Db, the Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (Subpart Db), as it applies to their source. BFI operates a 115 MMBtu/hr boiler that is exclusively fired with wood. This boiler is subject to Subpart Db. BFI is requesting clarification from EPA regarding the applicability of the requirement to record the amount of wood combusted each day and to calculate the annual capacity factor for wood as detailed in Subpart Db Sec. 60.49b(d). BFI has also proposed an alternate method for determining the amount of wood combusted.

BFI has asked if EPA can specify permit conditions regarding the fuel usage monitoring requirement. It is the role of the Idaho Department of Environmental Quality (IDEQ) to specify the permit conditions based on this determination. Therefore, EPA will refrain from specifying what those should be. EPA determines that if BFI is subject to the more stringent emission limit for particulate matter of 0.10 lb/million Btu and a restriction to combust only wood, the requirement to record the amount of wood combusted each day is not needed for the purposes of calculating the annual capacity factor, as required by Subpart Db Sec. 60.49b(d). EPA has made this determination after consultation with the Idaho Department of Environmental Quality (IDEQ) and EPA headquarters.

If BFI is required to monitor the fuel usage for some other reason, EPA has also determined that BFI's proposal to monitor the fuel usage based upon steaming rate is acceptable. The justifications for these determinations are described further below.

Background

Under Subpart Db Sec. 60.49b(d), the owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for each fuel. The purpose of determining the annual capacity factor for each fuel is to determine what sections of Subpart Db apply to your source.

The annual capacity factor, as defined in 40 CFR Sec. 60.41b, is:

"The ratio between the actual heat input to a steam generating unit from "(each fuel)", during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity" (emphasis added).

The annual capacity factor of wood is needed to determine which particulate matter limit you will be subject to, under Sec. 60.43b(c) of the Standard for Particulate Matter in Subpart Db. Based on this definition your annual capacity factor could be anywhere from zero to one for wood.

Under Subpart Db, there is an option for a less stringent limit if certain conditions are met, among them, the requirement to have an annual capacity factor of less than 30 percent for wood. If the annual capacity factor is greater than 30 percent for wood a more stringent emission limit for particulate matter of 0.10 lb/million Btu applies.

Determination

BFI states that the only fuel that will be burned is wood as required by section 3.6 of their Permit to Construct (Permit No. P-040214). Assuming the restriction to burn only wood is required by a federally enforceable permit, EPA can be assured that the annual capacity factors for all other fuels aside from wood will be zero. Therefore, there is no need to calculate the annual capacity factors for all fuels aside from wood. If BFI is subject to the more stringent limit for particulate matter of 0.10 lb/million Btu, there is also no need for BFI to calculate the annual capacity factor for wood.

Therefore, EPA determines that if BFI is subject to the more stringent emission limit for particulate matter of 0.10 lb/million Btu and a restriction to only combust wood, the requirement to record the amount of wood combusted each day is not needed for the purposes of calculating the annual capacity

factor, as required by Subpart Db Sec. 60.49b(d).

BFI has indicated in conversations that there are physical difficulties in measuring the actual mass of the wood that they combust because it comes in various forms resulting from their operation as a lumber mill. Therefore, if BFI is required to monitor the fuel usage for some other reason, they have proposed an alternative plan for monitoring fuel usage. BFI has stated that they will have a steaming rate monitor required by their permit. The manufacturer of that steaming rate monitor is capable of also having a fuel usage monitor whose values are calculated from the steaming rate. The manufacturer has stated to BFI that they have used this monitor in other applications to document fuel usage for tax purposes, and have validation studies to document its accuracy. EPA has determined that considering your circumstances, if needed, this approach is acceptable for calculating the amount of wood combusted.

If any circumstances change in the way you operate your boiler from that described in this letter, this determination will no longer be valid. If you have any further questions or concerns, contact Heather Valdez of the Region 10 Office of Air, Waste, and Toxics at (206) 553-6220 or valdez.heather@epa.gov.

Sincerely,

Jeff KenKnight, Manager
Federal and Delegated Air Programs Unit

cc: Carole Zundel, IDEQ