Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments

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Subpart AA—Pulp and Paper Manufacturing

U. S. Environmental Protection Agency
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Climate Change Division
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FOREWORD

This document provides EPA's responses to public comments on EPA's Proposed Mandatory Greenhouse Gas Reporting Rule. EPA published a Notice of Proposed Rulemaking in the Federal Register on April 10, 2009 (74 FR 16448). EPA received comments on this proposed rule via mail, e-mail, facsimile, and at two public hearings held in Washington, DC and Sacramento, California in April 2009. Copies of all comments submitted are available at the EPA Docket Center Public Reading Room. Comments letters and transcripts of the public hearings are also available electronically through *http://www.regulations.gov* by searching Docket ID *EPA-HQ-OAR-2008-0508.*

Due to the size and scope of this rulemaking, EPA prepared this document in multiple volumes, with each volume focusing on a different broad subject area of the rule. This volume of the document provides EPA's responses to significant public comments received for 40 CFR Part 98, Subpart AA—Pulp and Paper Manufacturing.

Each volume provides the verbatim text of comments extracted from the original letter or public hearing transcript. For each comment, the name and affiliation of the commenter, the document control number (DCN) assigned to the comment letter, and the number of the comment excerpt is provided. In some cases the same comment excerpt was submitted by two or more commenters either by submittal of a form letter prepared by an organization or by the commenter incorporating by reference the comments in another comment letter. Rather than repeat these comment excerpts for each commenter, EPA has listed the comment excerpt only once and provided a list of all the commenters who submitted the same form letter or otherwise incorporated the comments by reference in table(s) at the end of each volume (as appropriate).

EPA's responses to comments are generally provided immediately following each comment excerpt. However, in instances where several commenters raised similar or related issues, EPA has grouped these comments together and provided a single response after the first comment excerpt in the group and referenced this response in the other comment excerpts. In some cases, EPA provided responses to specific comments or groups of similar comments in the preamble to the final rulemaking.

While every effort was made to include significant comments related to 40 CFR Part 98, Subpart AA—Pulp and Paper Manufacturing in this volume, some comments inevitably overlap multiple subject areas. For comments that overlapped two or more subject areas, EPA assigned the comment to a single subject category based on an assessment of the principle subject of the comment. For this reason, EPA encourages the public to read the other volumes of this document with subject areas that may be relevant to 40 CFR Part 98, Subpart AA—Pulp and Paper Manufacturing.

The primary contact regarding questions or comments on this document is:

Carole Cook (202) 343-9263

U.S. Environmental Protection Agency
Office of Atmospheric Programs
Climate Change Division
Mail Code 6207-J
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

ghgreportingrule@epa.gov

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SUBPART AA—PULP AND PAPER MANUFACTURING

1. DEFINITION OF SOURCE CATEGORY

Commenter Name: Jeffry C. Muffat
Commenter Affiliation: 3M Company
Document Control Number: EPA-HQ-OAR-2008-0508-0793.1
Comment Excerpt Number: 25

Comment: Section 98.270 (a) states that the Pulp and Paper Mill source category includes "Chemical recovery combustion units at stand-alone semi-chemical facilities" and "coating and laminating processes." The definition of "chemical recovery combustion units" is not specified and there are many facilities that operate coating and laminating processes, and more specifically, coating and laminating processes that utilize paper substrates. Section 98.270 (b) specifically lists those operations where reporting is required. Item (5) includes, "Systems for adding makeup chemicals (CaCO3, Na2CO3)". Based on a literal interpretation of this rule, any facility that operates coating and laminating processes would be required to report emissions for any system that was used for adding makeup chemicals, presumably those limited to CaCO3 and Na2CO3. Rule applicability is further complicated by language contained in 98.272 which describes those processes that must report emissions. Language should be added which clearly limits the scope of the subcategory and excludes those facilities which were not intended to be contained within and have not traditionally been ascribed as being part of the Pulp and Paper Mill source category.

Response: The response has been provided in section III of the preamble to this rule (see section AA, Pulp and Paper Manufacturing).

Commenter Name: Rhea Hale
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2008-0508-0909.1
Comment Excerpt Number: 25

Comment: We request a categorical exemption for emissions from the combustion of tall oil and turpentine. As discussed in the Technical Support Document, these products are used as fuel in very small quantities and therefore emissions are small and are biogenic in nature. For these reasons, no emissions factors exist. As in the case of NCGs, Tier 3 monitoring would be inappropriate.

Response: As noted in the TSD for the pulp and paper manufacturing sector, tall oil and turpentine byproducts are derived from biomass and are combusted in relatively small amounts. No methods are specified in the rule for calculation of GHG associated with combustion of tall oil and turpentine. Thus, estimation of these emissions is not required and there is no need for categorical exemptions.

Commenter Name: Lorraine Krupa Gershman
Commenter Affiliation: American Chemistry Council (ACC)

Document Control Number: EPA-HQ-OAR-2008-0508-0423.2
Comment Excerpt Number: 13

Comment: Section 98.270(a) states that the Pulp and Paper Mill source category includes "Chemical recovery combustion units at stand-alone semichemical facilities" and "coating and laminating processes.´ The definition of "chemical recovery combustion units" is not specified and there are many facilities that operate coating and laminating processes and more specifically coating and laminating processes that utilize paper substrates. Section 98.270(b) specifically lists those operations where reporting is required. Item (5) includes, "Systems for adding makeup chemicals (CaCO3, Na2CO3)." Based on a literal interpretation of this rule, any facility that operates coating and laminating processes would be required to report emissions for any system that was used for added makeup chemicals, presumably those limited to CaCO3 and Na2CO3. Rule applicability is further complicated by language contained in §98.272 which further describes those processes that must report emissions. Language should be added which clearly limits the scope of the subcategory and excludes those facilities which were not intended to be contained within and have not traditionally been ascribed as being part of the Pulp and Paper Mill source category.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0909.1, excerpt 25

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2. GHGS TO REPORT

Commenter Name: Rhea Hale
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2008-0508-0909.1
Comment Excerpt Number: 40

Comment: AF&PA agrees with EPA's proposal not to require separate reporting of biogenic process emissions, specifically with regard to kraft mill lime kilns. Biogenic emissions from the calcination of lime mud are not combustion related emissions, but could be considered to be process emissions. However, as described in EPA's TSD for the Pulp and Paper Sector, these emissions (from calcination of lime mud) are typically performed based on black liquor carbon content such that emissions of biomass CO_2 from the recovery furnace and lime kiln are reported together. In addition, to avoid any confusion, it would be useful to add a sentence to the rule to clarify that pulp and paper sector lime kilns are not covered in the cement kiln section.

Response: We acknowledge this comment in support of the proposed approach to reporting emissions from pulp mill lime kilns. We affirm that lime kilns at kraft and soda pulp mills are unique in that the biogenic CO_2 emissions from the lime kiln are accounted for in the calculation of biogenic CO_2 emissions from the recovery furnaces that are part of the chemical recovery loop at these mills; and therefore, only the procedures for determining biogenic CO_2 emissions in subpart AA (pulp and paper manufacturing), and not in subpart H (cement production) apply to these lime kilns.

Commenter Name: Rhea Hale
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2008-0508-0909.1

Comment Excerpt Number: 24

Comment: AF&PA is concerned about the treatment of non-condensable gases (NCGs) generated in pulp and paper mills. These are comprised of organic compounds that are biogenic and are required to be collected and combusted by regulation. The proposed rule references "thermal oxidizers" within Subpart AA 98.272(f) and refers facilities to Subpart C. It is unclear if this reference is related to fossil fuels that might be fired in these units to supplement efficient thermal destruction. Further, the proposed rule is silent about how these gases are to be considered when combusting in other units within a facility. Based on EPA's discussion of non-condensable gases in the Technical Support Document for the Pulp and Paper Sector and no explicit mention of them in the rule itself, it is unclear whether EPA is requiring emissions from the combustion of these gases to be included in GHG reporting totals. Given that these quantities are small (representing less than 0.005% of emissions at a typical mill), and the gases themselves are not routinely measured and could be difficult to measure, we recommend that they be categorically excluded from reporting requirements. AF&PA is concerned over how these gases are treated because, as written, it appears that as no emission factors are currently provided in the proposed rule, the rulemaking defaults to Tier 3, which would require daily sample collection for carbon content and molecular weight. The requirement for daily monitoring of process gases appears to have been developed for a particular industry sector other than the Forest Products Sector. Daily monitoring of any process gases is not a current industry practice and would, in reality, be virtually impossible to implement given the extremely small quantities of NCGs produced. In addition, extensive procedures would need to be implemented to ensure that sampling could be done safely and could also potentially result in routine periods of ventings from these systems, both of which can be avoided, by specifically excluding the reporting of these gases. Further, EPA should consider such arguments for other industries where similar concerns may be present and the GHG contribution is negligible or the gases that are treated are biogenic in nature. In such circumstances, facilities would still be required to account for the combustion related to fossil fuels as determined through the appropriate subparts within the proposed rule.

Response: As noted in the TSD for the pulp and paper manufacturing sector, process vent gases such as NCG and Stripper Off Gases (SOG) from kraft and semi-chemical pulp mills are derived from biomass and represent relatively small emission sources. Potential safety issues involved with sampling are also acknowledged. No methods are specified in the rule for calculation of GHG associated with combustion of NCG and SOG. Thus, estimation of these emissions is not required. However, emissions from fossils fuels used for thermal destruction must be calculated using the appropriate method in Sub Part C.

Commenter Name: Traylor Champion
Commenter Affiliation: Georgia-Pacific, LLC (GP)
Document Control Number: EPA-HQ-OAR-2008-0508-0380.1
Comment Excerpt Number: 24

Comment: EPA should provide a definition for "biogas" and clarify the current definition of "process gas" which is overly broad. NCGs and SOGs should be excluded from the definitions of "biogas" and "process gas." These gases, of biogenic origin, generated during the pulping and chemical recovery processes, are combusted in general stationary combustion devices in the pulp and paper industry.

It is unsafe to obtain samples from NCG and SOG streams. The NCG and SOG systems are operated under vacuum and at very low oxygen levels to maintain the gas stream below its explosive limit. If pulp mills were required to obtain samples of these gases for carbon content, the sampling procedures could lead to the introduction of oxygen into the piping system which could lead to operation into the explosive range resulting in very unsafe conditions.
Further, the industry does not have any instrumentation to measure the flow of these gases, and it would not be feasible to install measurement devices. The motive force to collect NCG and SOG is from steam eductors rather than mechanical fans (again, the system is stringently designed to exclude air intrusion which could be introduced by a fan). Therefore, these systems operate at low vacuum that is at insufficient pressure for use of any flow restricting measurement device (such as an orifice).

The amount of greenhouse gases (CO2) from combustion of NCG and SOG is small compared with the total amount from a pulping operation. The National Council for Air and Stream Improvement (NCASI) has estimated the amount of greenhouse gas from NCG combustion for a typical Kraft pulp mill. This analysis shows that CO2 from NCG combustion is less than 0.08% of the total biomass combustion from the mill and less than 0.005% of the total methane and nitrous oxide of the mill's total GHG emissions. NCASI performed similar calculations for SOG. This analysis shows that CO2 from SOG combustion is less than 0.5% of the total biomass combustion from the mill and less than 0.04% of the total methane and nitrous oxide of the mill's total GHG emissions.

Response: Process gases are defined within the sub parts of the rule. The definition for biomass is intended to address the recovery of gases and liquids from decomposing organic matter. Emission factors for biogases derived from biomass are provided sub part C. Other gaseous fuels from biogenic sources are defined in the rules sub-parts if emissions from those fuels are required to be report using methods described within the appropriate sub section.

For NCG and SOG from pulp mills, we acknowledge the safety and measurement issues described by the commenter in the TSD for the pulp and paper manufacturing sector. As noted in the TSD for the pulp and paper manufacturing sector, process vent gases such as NCG and SOG are derived from biomass and are relatively small emission sources. No methods are specified in the rule for calculation of GHG associated with combustion of NCG and SOG. Thus, estimation of these emissions is not required.

Commenter Name: Traylor Champion
Commenter Affiliation: Georgia-Pacific, LLC (GP)
Document Control Number: EPA-HQ-OAR-2008-0508-0380.1
Comment Excerpt Number: 40

Comment: Based on the analysis of this source category described in the preamble and the definition of the source category given under the rule as well as the discussion in the pulp and paper technical support document, GP believes that pulp and paper mills piping an exhaust stream, most likely from lime kilns or calciners, to an adjacent PCC plant for use as a raw material are not considered "Suppliers of Carbon Dioxide." CO_2 is not separated and removed from a manufacturing process as described in the definition of the source category in §98.420(a)(1). However, for clarification, GP requests EPA categorically exempt pulp and paper mills exporting an exhaust stream to a PCC plant under §98.420(b).

Response: See EPA's Response to Public Comments for Sub Part PP Suppliers of Carbon Dioxide at the response to comment EPA-HQ-OAR-2008-0508-0380.1 excerpt 40.

Commenter Name: Rhea Hale
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2008-0508-0909.1
Comment Excerpt Number: 22

Comment: Based on the definition of "Suppliers of CO2" in the rule, it appears that pulp and paper mills that export CO2 to precipitated calcium carbonate (PCC) plants are required to report these exports. However, Section 6.3 (p.25) of the Technical Support Document states that "these exports of CO2 should not be included in the estimates of GHG emissions because they are not emitted by the mill." As explained in the TSD, the CO2 used by PCC plants is made into limestone to be used as a filler in paper products. Unlike in other commercial uses of CO2 where the CO2 is ultimately released into the atmosphere, limestone is inherently stable and the CO2 is never emitted back into the atmosphere during subsequent use and disposal. For this reason, we contend that pulp and paper mills exporting CO2 to PCC plants be categorically exempted from reporting requirements as "Suppliers of CO2".

In addition, and also explained in EPA's TSD for the Pulp and Paper Sector, for pulp and paper facility's exporting CO2, CO2 emission calculation results should be adjusted to reflect that not all of the fuel-derived CO2 is emitted to the atmosphere. EPA reporting program requirements should provide guidance on adjusting these emissions (total actual emissions equals emissions calculated based on mass balance minus CO2 captured rather than emitted). EPA should also recognize that the most common source of CO2 capture is from kraft lime kiln vent which includes both fossil derived CO2 and biogenic CO2, and the guidance on adjusting calculated emissions to account for CO2 capture should reflect this practice.

Response: See EPA's Response to Public Comments for Sub Part PP Suppliers of Carbon Dioxide at the response to comment EPA-HQ-OAR-2008-0508-0380.1 excerpt 40.

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3. SELECTION OF PROPOSED GHG EMISSIONS CALCULATION AND MONITORING METHODS

Commenter Name: John Piotrowski
Commenter Affiliation: Packaging Corporation of America (PCA)
Document Control Number: EPA-HQ-OAR-2008-0508-1029.1
Comment Excerpt Number: 3

Comment: The National Council for Air and Stream Improvement (NCASI) developed a series of spreadsheets for the Climate Change Working Group of the International Council of Forest and Paper Associations (ICFPA/NCASI Spreadsheets for Calculating GHG Emissions from Pulp and Paper Manufacturing) that calculate emissions from pulp and paper mill combustion, process and fugitive sources. Said spreadsheets segregate calculated GHG emissions into fossil fuel and biogenic categories. PCA believes that tools like those developed by NCASI and others should be allowed as an option for facilities subject to the emission calculation requirements imposed by

the Rule at §98.3. This streamlined approach will provide the Agency with valid GHG emission data without imposing extraordinary capital and labor burdens on the industry.

Response: The ICFPA/NCASI tools were considered in developing the requirements of the GHG reporting rule. However, the ICFPA/NCASI spreadsheets, though valuable tools, are not broadly applicable to all industrial sectors covered under the GHG reporting rule, as are the monitoring, reporting, recordkeeping, and emissions verification requirements specified in 40 CFR 98.3. Additionally, these tools often use default factors and estimates, which differs from the approach proposed by EPA. The data collected from all subparts of the GHG reporting rule will be tabulated in EPA's electronic reporting system. This system will be used to verify emission calculations and will require specific data be reported in order to run the calculations used for verification. The tools suggested by the commenter, however, would only provide a total emission number. Consequently, EPA would not be able to check the underlying calculations for accuracy. The final GHG reporting rule reflects the data reporting requirements necessary for emissions verification by EPA. This includes generalized data on production that will be used to verify potential changes in emissions from year to year that may result from decreases or increases in production. Edits to the reporting and recordkeeping language (40 CFR 98.276 and 98.277) of subpart AA were made to clarify calculation inputs and units of measure to be reported. As part of the implementation phase of today's final rule, EPA intends to prepare guidance documents to assist the industry in complying with the rule's requirements. In recognition of the fact that the pulp and paper industry has been using the ICFPA/NCASI spreadsheets, EPA will consider including in the guidance materials a comparison between these spreadsheets and the EPA electronic reporting system to reduce the burden on the industry and minimize confusion.

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4. DETAILED GHG EMISSION CALCULATION PROCEDURES/EQUATIONS IN THE RULE

Commenter Name: John Piotrowski
Commenter Affiliation: Packaging Corporation of America (PCA)
Document Control Number: EPA-HQ-OAR-2008-0508-1029.1
Comment Excerpt Number: 5

Comment: PCA urges the Agency to allow the use of scientifically peer reviewed GHG calculation instruments such as the ICFPA/NCASI Spreadsheets for Calculating GHG Emissions from Pulp and Paper Manufacturing as an alternative to the methods required under §98.273. For instance, the Rule does not provide GHG emission factors associated with the combustion of NCGs that our industry typically burns in lime kilns and recovery furnaces, nor does it address minor biogenic fuel streams such as turpentine and tall oil, yet the NCASI tool recognizes and addresses all three of these streams. Therefore, allowing the pulp and paper industry to use an effective tool like that developed by NCASI et al. will provide the Agency with the necessary level of accuracy in CO2e calculations and significantly reduce the effort required to determine GHG the emissions.

Response: As discussed above, the ICFPA/NCASI tools were considered in developing the requirements of the GHG reporting rule, including the methods required under §98.273. As discussed in the TSD for the Pulp and Paper Sector and as noted in the response to comment EPA-HQ-OAR-2008-0508-1029.1 excerpt 3, the GHG reporting rule does not require calculation

of GHG associated with combustion of non-condensable gases (NCG), stripper off-gases, tall oil and turpentine.

Commenter Name: George Woods
Commenter Affiliation: E. Roberts Alley & Associates, Inc.
Document Control Number: EPA-HQ-OAR-2008-0508-0269.1
Comment Excerpt Number: 4

Comment: On page 16691 below Equation AA-3 the Molecular weight of $CaCO_3$ should be 100 and not 180.

Response: The molecular weight of $CaCO_3$ has been revised to 100.

Commenter Name: Traylor Champion
Commenter Affiliation: Georgia-Pacific, LLC (GP)
Document Control Number: EPA-HQ-OAR-2008-0508-0380.1
Comment Excerpt Number: 32

Comment: Monthly measurements of the mass of spent liquor solids, HHV, and carbon content of spent liquor solids are unnecessary. The calculation methods specified in Subpart AA for determining emissions from combustion of spent liquor solids require monthly measurements of the mass of spent liquor solids combusted and HHV for each chemical recovery furnace at a Kraft or soda pulp and paper mill and the mass of spent liquor solids combusted, HHV, and carbon content for each chemical recovery combustion unit at a sulfite or stand-alone semi-chemical facility using specified TAPPI standards. Each pulp and paper mill conducts measurements for HHV, and possibly carbon content, throughout a given year. However, given the process dependence of these parameters, the frequency may be less than monthly and may not be based on the specified TAPPI standards. Once a mill has characterized these parameters for its process, there is little variability over a year or several years given there are no major process changes such as changing from softwood to hardwood fibers. Therefore, facilities can develop mill-specific values for these parameters and confirm their validity with annual testing per the TAPPI standards rather than monthly testing. Emissions would then be calculating using the measured spent liquor solids flow rate to a chemical recovery unit and these mill-specific values for HHV, and carbon content. It is necessary for recovery boiler operators to know the actual percent solids fired in the boiler at all times. This knowledge is the most significant parameter to monitor to assure spent liquor solids are maintained in a safe operating range to prevent a potential explosive environment and is essential in regulating the quantity of air to be distributed in different port levels for the oxidation and reduction stages of the recovery furnace for efficient chemical recovery. Therefore, all recovery boilers have at least one, if not more, online solids meters installed to provide continuous measurement of the mass of spent liquor solids entering the boiler. GP proposes EPA allow use of this existing equipment and measurement to comply with the proposed reporting rule rather than requiring an additional monthly determination using TAPPI Method T 650.

Response: The proposed rule would have required the following monthly measurements of the following fuel properties:

Fuel property	Measurement method	Measurement required for
Mass of spent liquor solids	Test Method T 650 - *Solids content of black liquor*	-Chemical recovery furnaces at kraft and soda facilities

		-Chemical recovery combustion units at sulfite or stand alone semichemical facilities
High heat value of spent liquor solids	TAPPI Test Method T 684 - *Gross Heating Value of Black Liquor*	Chemical recovery furnaces at kraft and soda facilities
Carbon content of spent liquor solids	ASTM D5373-08 - *Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Laboratory Samples of Coal*	Chemical recovery combustion units at sulfite or stand alone semichemical facilities

In light of comments received regarding the frequency of fuel property measurements and further investigation, we are reducing the frequency of measurements from monthly to annual measurements. EPA agrees that annual measurements will provide sufficient accuracy for developing a site specific emission factors. In addition, we agree that it is appropriate to allow use of existing measurement equipment for purposes of determining the annual mass of spent liquor solids fired. Therefore, the final rule allows use of either an annual measurement of the mass of spent liquor solids fired (with TAPPI Test Method T 650) or use of annual spent liquor solids data calculated from continuous measurements already performed for process control purposes. If the annual spent liquor solids fired is determined using existing measurement equipment, then for verification purposes, you must retain records of the calculations used to determine the annual mass of spent liquor solids fired from the continuous measurements. These changes have been incorporated throughout the text and equations of subpart AA.

Commenter Name: Stephen Woock
Commenter Affiliation: Weyerhaeuser
Document Control Number: EPA-HQ-OAR-2008-0508-0451.1
Comment Excerpt Number: 32

Comment: Forest product industry specific fuel characteristics, such as pulping spent liquor do not change significantly over time to warrant monthly testing. Spent pulping liquor is generated in large quantities and stored temporarily in large tanks before it is combusted for inorganic chemical and biomass energy recovery. During this temporary storage the large quantities of spent pulping liquor blend and homogenize the material's properties. Although spent liquor properties may differ between facilities, the spent liquor at each site will exhibit consistent properties. Therefore, after an initial fuel characterization is conducted the material could be retested on a longer, more representative frequency schedule, such as annually or every two years.

Weyerhaeuser's preferred approach is to follow the conventions established by the Canadian and European Union's programs, which allow either national average fuel-specific property factors, those factors published by the IPCC, or site specific factors. Direct measurement, as EPA has proposed requiring for Tier 2 and 3, should be optional. Most regulated facilities have internal control procedures to determine which method is the most consistent and accurate for its operations given its fuels and fuel systems and multiple data analysis and reporting requirements. If, however, mandatory fuel testing is required, only limited, periodic testing should be required as described above to avoid endless, costly and unnecessary testing.

Response: As discussed above, the frequency of fuel property measurements has been reduced

from monthly to annual measurements in the final rule.

We have determined that applying default emission factors is more appropriate for national-level emissions estimates than facility-specific estimates, where data are readily available to develop site-specific emission factors. In general, default approaches do not provide site-specific calculation of emissions that reflect differences in inputs, operating conditions, fuel combustion efficiency, variability in fuels, and other differences among facilities. Further, it is our understanding already conduct period testing of spent liquors and that is data can be apply towards developing site specific factors. Using data from direct measurements will therefore provide a more accurate representation of site specific emissions.

Commenter Name: Rhea Hale
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2008-0508-0909.1
Comment Excerpt Number: 41

Comment: To determine quantities of biomass fuel combusted in recovery furnaces, facilities should be allowed the option of back-calculating fuel combustion quantities based on boiler steam generation quantities, boiler steam generation efficiencies, and default higher heating values.

Response: We disagree that facilities should be allowed the option of back-calculating spent pulping liquor fuel consumption for recovery furnaces. The final rule allows facilities to use steam production data to back-calculate the amount of solid biomass combusted in stationary combustion units, due to the difficulties associated with accurate measurement of biomass fuel consumption. (See §98.33(e)(6). However, the measurement of spent pulping liquor consumption does not present the same measurement challenges. The consumption of spent pulping liquor in recovery furnaces can be easily measured with an acceptable degree of accuracy and is already being measured and monitored closely by pulp mill personnel. Also, as discussed in the response to comment EPA-HQ-OAR-2008-0508-0451.1 excerpt 32, we have reduced the burden associated with the calculation of GHG emissions from recovery furnaces by reducing the frequency of fuel property measurements. For these reasons, we disagree that facilities should be allowed the option of back-calculating spent pulping liquor fuel consumption for recovery furnaces.

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5. DATA REPORTING REQUIREMENTS

Commenter Name: Rhea Hale
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2008-0508-0909.1
Comment Excerpt Number: 41

Comment: EPA requests comments regarding the appropriate details to be reported in terms of quantities of biomass fuel use since purchase records may not be applicable. AF&PA believes that, given the range of methods employed by facilities to track biomass, the rule should allow a facility to report whatever the basis is for the calculation method employed.

Response: The proposed subpart AA requirement to report consumption of all biomass fuels (proposed §98.276(b)) has been eliminated from the rule because this information was judged to be unnecessary for electronic data reporting/verification of subpart AA data. The associated proposed recordkeeping requirements (proposed §98.277(b) and (g)) were eliminated from subpart AA as well. Reporting of biomass consumption for stationary biomass combustion units is addressed under subpart C.

Commenter Name: Rhea Hale
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2008-0508-0909.1
Comment Excerpt Number: 39

Comment: EPA proposes to require monthly higher heating value determinations and monthly carbon content determinations for spent pulping liquors. As we have addressed earlier in these comments, we propose that EPA allow the use of the IPCC (2006) default heating value of 11.8 TJ LHV/Gg (equivalent to 10.7 MMBtu HHV / short ton BLS. Regardless of how heating value is determined, requiring monthly determinations is unnecessary. Facilities should have flexibility to determine the appropriate frequency of these measurements or calculations.

Response: We disagree with commenters that default fuel carbon content and high heating values should be allowed instead of measured values. The approach favored by the EPA is to use site specific emission factors that ensure greater accuracy in reporting. Furthermore, since these parameters are already measured by mills (though less frequently than monthly), developing a site specific emission factor does introduce a significant burden. We are reducing the frequency of fuel property measurements from monthly to annual. In addition, the final rule allows use of either an annual measurement of the mass of spent liquor solids fired (with TAPPI Test Method T 650) or use of annual spent liquor solids data calculated from continuous measurements already performed for process control purposes.

Commenter Name: Traylor Champion
Commenter Affiliation: Georgia-Pacific, LLC (GP)
Document Control Number: EPA-HQ-OAR-2008-0508-0380.1
Comment Excerpt Number: 33

Comment: The annual reports required under Subpart AA for the pulp and paper manufacturing sector specify that annual emissions, consumption of biomass fuels, and quantity of spent liquor solids fired should be reported by calendar quarter. Segmentation of the annual data into calendar quarters is unnecessary and burdensome for an annual reporting system.

Response: We agree and have revised §§98.276 and 98.277(a) to remove the requirement for inclusion of quarterly details. EPA agrees that requiring quarterly details is not necessary for ensuring the accuracy of data reported annually.
