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

Volume No.:38

Subpart MM—Suppliers of Petroleum Products

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Subpart MM—Suppliers of Petroleum Products

U. S. Environmental Protection Agency
Office of Atmosphere Programs
Climate Change Division
Washington, D.C.

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 MM—Suppliers of Petroleum Products.

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. Rather than repeating those responses in this document, EPA has referenced the preamble.

While every effort was made to include significant comments related to 40 CFR Part 98, Subpart MM—Suppliers of Petroleum Products 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 MM—Suppliers of Petroleum Products.

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1. DEFINITION OF SOURCE CATEGORY

Commenter Name: Karen St. John
Commenter Affiliation: BP America Inc. (BP)
Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 47

Comment: Miscellaneous Products §98.6 (p. 16623): BP suggests the addition of the word "refined" to the definition of Miscellaneous Products. The suggested revision is: "Include all *refined* petroleum products not classified elsewhere. It includes petrolatum lube refining byproducts (aromatic extracts and tars) absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils."

Response: EPA does not concur with this comment. We have concluded that adding the term "refined" could exclude petroleum products on which we want information. However, we did refine the definition to exclude organic waste sludges, tank bottoms, spent catalysts, and sulfuric acid.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 226

Comment: EPA requests comments on the "proposed definition of petroleum products as it applies to importers," and the proposal that "all exporters report on their exported petroleum products." (p. 16571) API comments: EPA should clarify the scope of the Subpart MM reporting requirements for importers and exporters of NGLs. The Preamble to the proposed rule clearly states that blenders of petroleum products would not be required to report upstream emissions associated with their production. However, the definitions of "importer" and "exporter" in the proposed 40 CFR § 98.390 expressly include blenders. The final rule should be clearly revised to exclude blenders from the Subpart MM reporting requirements. In addition, the Preamble to the proposed rule and the proposed 40 CFR § 98.390 state that only importers and exporters of petroleum products need report under Subpart MM. However, Subpart MM also requires covered importers and exporters to report imports and exports of natural gas-derived NGL products. It is not clear whether this reporting requirement only applies to importers and exporters engaged in the petroleum product supply chain, as § 98.390 implies, or whether any entity that imports and exports NGLs would be required to report. Since shippers using international pipelines may be subject to this provision, the final rule should clarify this point.

In general, the requirements for NGL reporting would be easier to comprehend if they were gathered together under one subpart, rather than divided among Subparts MM and NN. Doing so would minimize the risk of confusion and inadvertent regulatory violations. Suggested clarification regarding NGLs in Subparts MM and NN: Subpart MM – delete all references to reporting of NGLs, except for NGLs used as a feedstock by domestic petroleum refiners. 40 CFR § 98.400 This supplier category consists of natural gas processing plants, and local natural gas distribution companies, and importers and exporters of natural gas liquids (NGLs).... [insert after

paragraph (b)] (c) Importers and exporters are defined at 40 CFR § 98.6. A blender shall be considered an importer or exporter if it otherwise satisfies the aforementioned definition.

Response: EPA acknowledges the confusion relating to whether blenders should be included or excluded as reporting parties. We have improved the definition of a covered facility in Subpart MM to clarify that a blender is considered an importer or exporter only if it otherwise satisfies the definition of Importer or Exporter, respectively. Further, a facility that blends finished fuels, oxygenates, and/or renewable fuels is considered a refinery under Subpart MM only if it otherwise satisfies the definition of a refinery provided in Subpart MM. If a blender does not import/export petroleum products or meet the definition of a refinery as specified in Subpart MM, it is not required to report.

EPA has clarified in the final rule that any importer or exporter of a petroleum product listed in Table MM-1 that meets the 25,000 $mtCO_2$ annual threshold is a covered entity under Subpart MM and is required to report under Subpart MM. It may not be possible for an importer or exporter to distinguish whether a product is petroleum or natural gas based, so EPA requires reporting of all such products irrespective of the fossil fuel origin under one subpart - Subpart MM. Importers and Exporters are not covered entities in Subpart NN.

See the response to comment EPA-HQ-OAR-2008-0508-0370.1, excerpt 42 for a response to the comment on gathering together requirements for NGL reporting into one subpart.

Commenter Name: See Table 2
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0530.1
Comment Excerpt Number: 27

Comment: NGC requests that EPA refine the definitions of "importer" and "exporter" in the proposed 40 CFR §§ 98.6 and 98.390 in order to remove two potential sources of confusion. First, although the Preamble to the Proposed Rule makes it clear that blenders of petroleum products have no reporting obligations under Subpart MM, the definitions of "importer" and "exporter" in the proposed 40 CFR § 98.3 90 nonetheless make explicit reference to blenders. EPA should revise those definitions to make it clear that only entities that meet the general definition of "importer" or "exporter" in the proposed 40 CFR § 98.6 have reporting obligations under the Proposed Rule.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 226.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 50

Comment: The preamble on page 16570 states "We are not proposing to include retail gas station owners and oxygenate blenders to report to EPA as suppliers of petroleum products." However, the regulations at §98.390(c) and (d) defines importers and exporters as having "the same meaning given in §98.6 and includes any blender or refiner of refined or semi-refined petroleum products." NPRA agrees with including parties that blend components to produce finished fuels but excluding oxygenate and renewable fuel blenders. Adding the phrase "excluding oxygenate and renewable fuel blenders" to 98.390 (c) and (d) would provide needed

clarity.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 226.

Commenter Name: Kim Dang
Commenter Affiliation: Kinder Morgan Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2008-0508-0370.1
Comment Excerpt Number: 42

Comment: The requirements for NGL reporting would be easier to comprehend if they were gathered together under one subpart, rather than duplicated within Subparts MM and NN. Doing so would minimize the risk of confusion and inadvertent regulatory violations. Kinder Morgan suggests the following clarification regarding NGLs in Subparts MM and NN: 1) Subpart MM – delete all references to reporting of NGLs in both the text and tables, except for NGLs used as a feedstock by domestic petroleum refiners. Remove Table MM-2. 2) Subpart NN – Revise Definition of Source Category: 40 C.F.R. 98.400 This supplier category consists of natural gas processing plants, and local natural gas distribution companies, and importers and exporters of natural gas liquids (NGLs).... [insert after paragraph (b)] (c) Importers and exporters are defined at 40 C.F.R. 98.6. A blender shall be considered an importer or exporter if it otherwise satisfies the aforementioned definition.

Response: EPA does not concur with the comment that reporting requirements for natural gas liquids (NGLs) should be gathered together under one subpart rather than be divided among Subparts MM and NN. To get a complete picture of the volumes of ethane, butane, isobutene, propane, and pentanes plus (i.e., NGLs) that are introduced into the economy, EPA requires reporting in this rule from fractionators under Subpart NN, from refineries under Subpart MM, and from importers and exporters of these products under Subpart MM. EPA has concluded that a reporter may not be able to distinguish whether an NGL, such as butane, is derived from natural gas or petroleum. Therefore one Subpart was selected under which importers and exporters of NGLs are required to report. Subpart MM was selected so that an importer or exporter of multiple fossil fuel-based products is required to report only in one Subpart as an importer/exporter. See the response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 226 for a response to comments on importer and exporter definitions.

Commenter Name: Kim Dang
Commenter Affiliation: Kinder Morgan Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2008-0508-0370.1
Comment Excerpt Number: 43

Comment: The requirements for NGL reporting would be easier to comprehend if they were gathered together under one subpart, rather than duplicated within Subparts MM and NN. Doing so would minimize the risk of confusion and inadvertent regulatory violations. Kinder Morgan suggests the following clarification regarding NGLs in Subparts MM and NN: 3) Subpart MM – delete all references to reporting of NGLs in both the text and tables, except for NGLs used as a feedstock by domestic petroleum refiners. Remove Table MM-2. 4) Subpart NN – Revise Definition of Source Category: 40 C.F.R. 98.400. This supplier category consists of natural gas processing plants, and local natural gas distribution companies, and importers and exporters of natural gas liquids (NGLs).... [insert after paragraph (b)] (c) Importers and exporters are defined at 40 C.F.R. 98.6. A blender shall be considered an importer or exporter if it otherwise satisfies the aforementioned definition.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0370.1, excerpt 42.

Commenter Name: Kim Dang
Commenter Affiliation: Kinder Morgan Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2008-0508-0370.1
Comment Excerpt Number: 40

Comment: The Preamble to the Proposed Rule and the proposed 40 C.F.R. 98.390 state that only importers and exporters of petroleum products need report under Subpart MM. However, Subpart MM also requires covered importers and exporters to report imports and exports of natural gas-derived NGL products. It is not clear whether this reporting requirement only applies to importers and exporters engaged in the petroleum product supply chain, as section 98.390 implies, or whether any entity that imports and exports NGLs would be required to report. Since shippers using Kinder Morgan's international pipelines may be subject to this provision, Kinder Morgan requests that the final rule clarify this point. Kinder Morgan's review of the proposed 40 C.F.R. 98.6 concluded that the definitions of "importer" and "exporter" would only encompass entities that own or hold title to imported and exported products. Kinder Morgan requests that EPA confirm in the final Rule that entities that merely transport products, without holding title or paying customs duties, do not have a reporting obligation. In addition, the proposed definition of an "importer" closely parallels the definition provided in U.S. Customs and Border Protection (CBP) regulations. In order to avoid confusion as to who must report under the exporter/importer provisions of the Proposed Rule, Kinder Morgan recommends that EPA clarify the Rule by more explicitly linking its definition to entities that are already considered importers of record or exporters of record (Principal Parties in Interest) in CBP regulations. If an entity is not currently regarded as an importer or exporter of record for purposes of U.S. Customs, then it can be confident it will have no further obligations under the Reporting Rule. Similarly, entities that already deal with Customs would know for certain that they were also subject to the Rule.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0370.1, excerpt 42 for a response to comment on grouping requirements for NGLs together. An entity whose only role in importing a product is the physical transport of the product would not be classified as an importer under this rule, unless the entity otherwise meets the definition of an importer. In general, an importer is the person, company, or organization that derives the principal economic benefit from importing a product. Please see response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 256 in comment response document volume 14 for the response on using the CBP definition of importers and exporters.

Commenter Name: Karen St. John
Commenter Affiliation: BP America Inc. (BP)
Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 103

Comment: BP requests that EPA explicitly exclude the two small (combined 3,300 bbls/day) middle distillate "topping" plants ("Topping Plants") located at the Prudhoe Bay and Kuparuk Fields on the North Slope of Alaska from coverage as Petroleum Product Suppliers under 40 CFR Part 98 Subpart MM. The Topping Plants produce what is referred to as arctic heating fuel, which is similar to diesel, and a small quantity of jet fuel (approximately 4% of the total production). The majority of the arctic heating fuel is used as oil well freeze protection fluids as part of the field drilling operations. It is not combusted. The jet fuel is burned in our own aircraft

that are used for Kuparuk and Prudhoe Bay operations. A portion of the arctic heating fuel is combusted in emission sources on the North Slope at facilities that will likely be subject to Subpart C reporting if greater than 25,000 metric tons per year. A small portion of the production (approximately 2 %) is sold to third party oil and gas operators for combustion in equipment at other North Slope oil fields. Regulation of the Topping Plants under 40 CFR Part 98 Subpart MM (Section 98.3 90) does not appear necessary to capture reporting of the vast majority of the distillates produced at these topping plants and instead would lead to double and possibly triple reporting of the same volume. This exemption request is similar to past exemptions that recognize the uniqueness of the North Slope and its challenges. See for example NSPS KKK at 40 CFR 60.633(e) where EPA recently exempted certain North Slope equipment from the routine monitoring requirements of 40 CFR 60.482.

Response: EPA is finalizing Subpart MM of this rule with a reporting requirement for any refinery engaged in producing petroleum products through the distillation of crude oil, regardless of end-use or size. For the proposed rule, EPA considered but did not propose a reporting threshold for refineries under Subpart MM. EPA reviewed the Atmospheric Crude Oil Distillation capacity of each facility that met our definition of refinery (including Prudhoe Bay and Kuparuk) and determined that every refinery would trigger a 100,000 $mtCO_2$ threshold. Furthermore, all refineries report the same or similar data to EIA already. Therefore, we proposed that all refineries report under Subpart MM.

The same rationale applies for the decision in the final rule to require reporting from all facilities that meet the definition of refinery in Subpart MM. In addition, EPA concludes that, given the scope of the petroleum market, the size of GHG emissions from petroleum, and the importance of petroleum to the economy, it is necessary for our accounting to be as comprehensive as possible. We seek as full an understanding of GHG emissions from petroleum products as possible. For these reasons, we do not concur with making special provisions for North Slope facilities, even though special provisions have been in other rules.

See the preamble Section II and separate comment response document volume for a specific response on requiring reporting by both upstream and downstream sources and on double counting. See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 59

Comment: EPA has stated in the proposed rulemaking, and in meetings with industry, that all refineries will be required to report. Facilities that are classified as “refineries” under other EPA rules encompass more than the traditional refinery operations. One example is ConocoPhillips’ Alaska North Slope operation where a distillation column is used to produce distillate product that is used in a number of applications. A significant percentage of the produced volume is used in non-combustion applications and should clearly be excluded. Another portion of the product volume is used for stationary combustion equipment, used only within the North Slope oil fields and would already be accounted for via Subpart C. Therefore, including it in Subpart MM would be double-counting and these volumes should also be excluded from Subpart MM. The total produced volumes are very small and the product volumes that would be combusted even smaller. ConocoPhillips requests that EPA provide exemptions for these non-traditional refinery operations and exclude them from the provisions of Subpart MM. This can be accomplished by

specific EPA reference to these topping plant operations.

Response: See EPA-HQ-OAR-2008-0508-0631.1, excerpt 103.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 87

Comment: For subpart MM, Marathon opposes reporting information and emissions at a facility level. Marathon requests that reporting be allowed at the company level for confidential business purposes. There is no need for EPA to report by facility the emissions from products made.

Response: EPA does not concur with this comment. Please see the Preamble section II.F for the response on the selection of the level of reporting. Please see Preamble section II.R for more information about CBI.

Commenter Name: Kim Dang
Commenter Affiliation: Kinder Morgan Energy Partners, L.P.
Document Control Number: EPA-HQ-OAR-2008-0508-0370.1
Comment Excerpt Number: 39

Comment: EPA should clarify the scope of the Subpart MM reporting requirements for importers and exporters of petroleum products. Kinder Morgan has identified three specific points of confusion in the scope of Subpart MM. First, the Preamble to the Proposed Rule clearly states that blenders of petroleum products would not be required to report upstream emissions associated with their production.[Footnote: Kinder Morgan agrees with EPA's rationale for excluding blenders, terminals, pipelines, and transmix processors from reporting. However, the definitions of "importer" and "exporter" in the proposed 40 C.F.R. 98.390 expressly include blenders. Kinder Morgan requests that EPA clearly revise the final Rule to exclude blenders from the Subpart MM reporting requirements. Kinder Morgan recommends the following change to Subpart MM regarding the blending issue: Section 98.3 90. This source category consists of petroleum refineries and importers and exporters of petroleum products. ... (c) Importer has the same meaning given in 98.6 and includes any blender or refiner of refined or semi-refined petroleum products. (d) Exporter has the same meaning given in 98.6 and includes any blender or refiner of refined or semi-refined petroleum products.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 226 for a response to comment on importer and exporter definitions.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 51

Comment: NPRA supports having all importers and exporters required to report as suppliers of petroleum products. This data could be critical if regulations to control greenhouse gases were issued in the future.

Response: In the final rule, EPA is establishing a threshold of 25,000 metric tons of CO_2 per year for importers and exporters of petroleum products and natural gas liquids; see preamble Section III.MM.3 for our rationale on this decision.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 60

Comment: ConocoPhillips also supports the establishment of de minimis threshold values for importers, exporters, and refineries to alleviate the burden of these reporting requirements in the situations where small volumes are involved.

Response: In the final rule, we are establishing a threshold of 25,000 metric tons of CO_2 per year for importers and exporters of petroleum products and natural gas liquids; see preamble Section III.MM.3 for our rationale on this decision. In the final rule, we continue to require reporting from all refineries as defined in Subpart MM regardless of the level of emissions that would result from the complete combustion or oxidation of the products they supply; see EPA-HQ-OAR-2008-0508-0631.1, excerpt 103 for rationale on this decision. Please see Preamble section II.K for more information about de minimis reporting for small emission points.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 58

Comment: EPA should consider all the options available for obtaining product data. Products are not combusted at the refinery, therefore, should not be assigned to a refinery facility. The most accurate accounting of the products that are entering the market and will be consumed by combustion would be from data collected downstream of the refinery, most likely at the terminal level. On this basis, it seems most efficient that EPA use existing reporting structures like STARS at the terminals to collect such data along with default BTU values to determine associated CO_2 emissions for fuels collectively being consumed in the marketplace rather than any attempt to assign these products to a refinery facility.

Response: EPA does not concur with this comment. We considered various parties in the petroleum product supply chain for reporting, and ultimately determined that petroleum refiners and importers and exporters of petroleum products represent the smallest number of reporters that could provide a comprehensive and accurate dataset of the petroleum products supplied in the U.S. See the Preamble section II.D for the response on selection of source categories to report and the general decision to require reporting by both upstream and downstream sources.

The Administrator believes that upstream suppliers have information that is necessary for purposes of carrying out an evaluation of how to use the CAA to address GHG emissions and climate change. Emissions data are not limited to information regarding the actual level of emissions from a smokestack. See the EPA-HQ-OAR-2008-0508 Preamble, Section 3 for a discussion of EPA's legal authority under the heading *Clean Air Act.*

Commenter Name: See Table 3

Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 239

Comment: For carbon content determination, a different method is proposed because samples stored for up to twelve months would probably deteriorate and be unrepresentative, as well as presenting a significant support burden on the reporting party. Attempting to composite dozens if not hundreds of samples following proper laboratory protocol is impractical. Most modern laboratories perform this by analyzing the individual samples and mathematically "compositing" the sample using the average or other appropriate techniques. It is further expected that most of the materials will tend to have carbon shares that are consistent over the year. Repeated sampling and analyses of these materials will not appreciably improve the accuracy of the CO_2 calculation while it does significantly increase the support burden.

API also recommends including a mechanism to reduce sampling and analyses of materials for which the previous analysis results have converged on a result that has sufficiently small variability that further testing would not appreciably change the carbon share calculation. (c) For Calculation Methodology 2 of this subpart, samples of each petroleum product and natural gas liquid shall be taken at least monthly for the reporting year. (1) The samples shall be tested using ASTM test methods for carbon share, as appropriate (see Technical Support Document). (2) If the carbon content of the prior sample analysis for a material group has a one-sided, two standard deviation probability range of 1% of the average carbon share or less, sampling may be suspended for the remainder of the year for that material. Reporters must sample seasonal gasoline each month of the season. For materials whose analyzed carbon shares are not statistically different at the 95% confidence level, the reporter can choose to combine analytical results and use a common Emission Factor based on the combined dataset and sample the combined group as if a single product.

Sec. 98.395 Procedures for estimating missing data. Whenever a quality-assured value of the quantity of petroleum products, natural gas liquids, biomass, or feedstocks during any period is unavailable, a substitute data value for the missing quantity measurement shall be used in the calculations contained in Sec. 98.393. (a) The method, the calculations and input variables used to calculate the missing data must be supportable and/or documented. (b) For imported and exported refined and semi-refined products, the estimated or calculated quantity may not be less than the quantity reflected in any financial transaction with a buyer or seller of the material for the period. (c) For pipeline-imported and exported refined and semi-refined products, the last valid volume reading based on the company's established procedures for purposes of product tracking and billing shall be used. If the reporting period does not coincide with the company's established periods for financial reporting and the quantity for the reporting period requires estimation, the quantity reported shall be based on the amount prorated for the time in the period at the average flowrate during the prorated portion of the period. (d) For refinery-imported and exported refined and semi-refined products, the last valid volume reading based on the company's established procedures for purposes of product tracking and billing shall be used. If the reporting period does not coincide with the company's established periods for financial reporting and the quantity for the reporting period requires estimation, the quantity reported shall be based on the amount prorated for the time in the period at the average rate of quantity change during the prorated portion of the period.

Response: See preamble Section III.MM.3 for our response to comments related to carbon sampling. See preamble Section III.MM.3 for our response to comments related to frequency of sampling. The commenter proposed edited language for Section 98.395 (Procedures for estimating missing data) without providing an explanation as to why the existing language is not

appropriate or satisfactory, Therefore, EPA did not include the proposed edited language.

Commenter Name: See Table 4
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0635
Comment Excerpt Number: 43

Comment: We disagree with the proposal to exclude biomass fuels from the reporting requirements imposed on upstream fuel suppliers.269 Consumption of biomass fuels may result in significant net GHG emissions and should be reported to ensure accurate accounting. Moreover, requiring reporting of co-processed fuels (i.e. biomass/fossil blends) but not pure biomass fuels could create market distortions as suppliers try to minimize reporting burdens by avoiding co-processed fuels. The draft regulation should be revised to require reporting of biomass fuels by fuel suppliers regardless of whether or not they are co-processed.

Response: We recognize the importance of understanding GHG emissions associated with biomass-based fuels supplied in the U.S., however, because the Renewable Fuel Standard (RFS) program (40 CFR Part 80 subpart K; proposed 40 CFR Part 80 subpart M) requires the Agency to collect much of this information, we are not requesting additional information from primary suppliers of biomass-based fuels through this rulemaking.

We are, however, requiring petroleum product suppliers to report data on certain biomass products in order to distinguish between the biomass- and fossil fuel-based carbon in their products. We are requiring petroleum product suppliers to subtract the CO_2 emissions associated with biomass-based products from the total emissions they report to EPA. This reflects a longstanding accounting convention adopted by the IPCC, the UNFCCC, the U.S. GHG Inventory, and many other State and regional GHG reporting programs where, as discussed in the Notice of Proposed Rulemaking (74 FR 16472), emissions of CO_2 from the combustion of biomass ("biogenic emissions") are calculated separately from emissions of CO_2 from combustion of petroleum or other fossil-based products. Under such convention, potential emissions from the combustion of biomass are tracked at the time of feedstock harvest, collection, or disposal, as part of a comprehensive accounting of emissions or carbon stock changes, and not at the point of fuel combustion. This accounting convention does not include an assessment of the carbon neutrality of biomass or biomass-based fuels or whether or not biomass is renewable.

To facilitate the subtraction of biogenic CO_2 emissions from the total emissions they report to EPA, we are requiring petroleum product suppliers to provide information on biomass under two circumstances. First, in the case where refiners co-process biomass with petroleum feedstock to make a product that will be supplied to the economy, we require refiners to report the quantity and CO_2 emissions associated with the combustion of each type of biomass they use. Second, in the case where a reporter supplies or exports a petroleum product that is blended with a biomass-based fuel, we require reporting of the percent volume of the product that is petroleum-based. This reporting requirement also applies to a refiner that receives a blended biofuel (e.g., gasoline with ethanol) as feedstock to be further refined or otherwise used onsite. (See response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 94 for an example of the procedures in subpart MM related to blended biomass-based fuels.)

We are not requiring reporters to report information on products that were derived entirely from biomass. We are requiring reporters to calculate and report CO_2 emissions from products derived from co-processing biomass and petroleum feedstocks outside their operations as if the

products were entirely petroleum-based.

Given that reporters are already tracking the information on biomass required for subpart MM, we have concluded that these reporting requirements are unlikely to create market distortions and/or provide an incentive for reporters to avoid co-processing biomass- and petroleum-based feedstocks.

Commenter Name: Laurie Burt
Commenter Affiliation: Massachusetts Department of Environmental Protection
Document Control Number: EPA-HQ-OAR-2008-0508-0453.1
Comment Excerpt Number: 8

Comment: Similarly, Massachusetts believes that GHG emissions from the production and the combustion of biofuels should be reported. Some GHG emissions from the combustion of biomass-based fuels will be reported under EPA's proposed GHG Reporting Rule if they occur at covered facilities or if they result from blending with petroleum fuels by a petroleum refiner or importer. However, suppliers of solely biomass-based fuels are not required to report the GHG emissions from their product. Given the increasing focus on energy independence and the rising requirements of the Federal Renewable Fuel Standard, it is likely that the impact of the biofuels source category will increase over time. Some biomass-derived replacements for petroleum fuels are currently in small-scale production or are under development. These would not necessarily be blended with petroleum-based fuels, thus GHG emissions from some biomass-derived transportation fuels will not be reported under EPA's proposed GHG Reporting Rule. Information on the GHG emissions resulting from the combustion of biofuels by facilities supplying or producing biofuels would be very useful in efforts to develop a low carbon fuel standard because it would provide a standardized means of accounting for direct GHG emissions from these fuels. Furthermore, requiring suppliers of all biomass-based fuels, transportation fuels or otherwise, to report under EPA's proposed GHG Reporting Rule would provide a potential mechanism to incorporate the lifecycle GHG emissions of biofuels into GHG reporting in the future. Finally, requiring all fuel suppliers, fossil-based and biogenic, to report their associated GHG emissions will ensure effective comparisons between fuel types. Massachusetts thus urges EPA to require suppliers of biomass-based fuels to report under EPA's proposed GHG Reporting Rule. Specifically, Massachusetts believes ethanol producers covered under Subpart J: Ethanol Production should also to be required to report the GHG emissions from their product and that an additional Subpart should be created to cover suppliers of other biofuels.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43.

Commenter Name: Don Scott
Commenter Affiliation: National Biodiesel Board (NBB)
Document Control Number: EPA-HQ-OAR-2008-0508-0591
Comment Excerpt Number: 1

Comment: NBB supports the exclusion of biomass-based fuel suppliers from the proposed reporting requirements.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43.

Commenter Name: Jeff A. Myrom

Commenter Affiliation: MidAmerican Energy Holdings Company
Document Control Number: EPA-HQ-OAR-2008-0508-0581.1
Comment Excerpt Number: 51

Comment: EPA states they are not proposing to require suppliers of biomass-based fuels to report on their products anywhere under this rule, except as discussed for petroleum suppliers. MidAmerican agrees that the proposed reporting approach is reasonable.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43.

Commenter Name: Jeff A. Myrom
Commenter Affiliation: MidAmerican Energy Holdings Company
Document Control Number: EPA-HQ-OAR-2008-0508-0581.1
Comment Excerpt Number: 32

Comment: So long as such fuel suppliers are providing 100% biomass based fuel, the GHG emissions from their products should not be included as such emissions can be considered part of the natural, biogenic, carbon cycle.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43.

Commenter Name: Don Scott
Commenter Affiliation: National Biodiesel Board (NBB)
Document Control Number: EPA-HQ-OAR-2008-0508-0591
Comment Excerpt Number: 6

Comment: EPA is encouraged to relieve petroleum refiners, importers, and exporters from reporting associated with blending renewable fuels. EPA can incentivize the decrease in overall GHG emissions by streamlining the ability to introduce renewable fuels, specifically biodiesel, into the market place. Biodiesel reduces lifecycle CO emission by 78% compared to petroleum diesel. Removing barriers to the marketplace in the form of reporting burdens is a sound approach to achieving EPA's overriding goal of climate change mitigation. Requiring blenders to report biodiesel volumes under this rule is also redundant considering volume reporting that is achieved through existing programs.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43.

Commenter Name: Bob Dinneen
Commenter Affiliation: Renewable Fuels Association (RFA)
Document Control Number: EPA-HQ-OAR-2008-0508-0494.1
Comment Excerpt Number: 24

Comment: In the Proposed Rule, EPA notes that it is not proposing to require suppliers of biomass-based fuels to report on their products anywhere under this rule. 74 Fed. Reg. at 16,570. EPA notes that this is consistent with the "longstanding accounting convention adopted by the IPCC, the UNFCCC, the U.S. GHG Inventory, and many other State and regional GHG reporting programs where emissions of CO_2 from the combustion of renewable fuels are distinguished from emissions of CO_2 from combustion of petroleum or other fossil-based products." Id. "Under such convention, potential emissions from the combustion of biomass-

based fuels are accounted for at the time of feedstock harvest, collection, or disposal, not at the point of fuel combustion." Id. This approach is also consistent with EPA's approach in the proposed rule for changes to the RFS, as noted above. 74 Fed. Reg. at 25,039. RFA strongly supports this approach. As noted above, Congress recognized the importance of renewable fuels in reducing GHG emissions from the mobile source sector in passing the RFS. Under that program, EPA is required to estimate the emissions from combustion of renewable fuel compared to gasoline. Although we are still reviewing the proposal (and have substantial concerns with much of EPA's analysis), EPA's proposed rule on changes to the RFS program includes a comparison of lifecycle emissions for gasoline and ethanol, finding that 2005 baseline gasoline had 3,417,311 CO_2-eq/mmBtu tailpipe GHG emission compared to 37,927 for ethanol.25 74 Fed. Reg. at 25,041. Thus, use of ethanol over fossil fuels results in substantial reductions in GHG emissions. Given that Congress has already spoken on the issue, there is no need nor justification for EPA to impose reporting requirements on renewable fuel producers under the Reporting Rule.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43.

Commenter Name: Thomas W. Easterly
Commenter Affiliation: Indiana Department of Environmental Management (IDEM)
Document Control Number: EPA-HQ-OAR-2008-0508-0525.1
Comment Excerpt Number: 24

Comment: The proposed reporting rule requires fossil fuel suppliers and industrial gas suppliers to report their GHG emissions, but does not require suppliers of biomass-based fuels or renewable fuels to do so. If fossil fuel and industrial gas suppliers are required to report their GHG emissions, U.S. EPA must ensure that GHGs emitted upon combustion of biomass-based and renewable fuels are taken into account at the point of biomass production.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43.

Commenter Name: D. Lawrence Zink
Commenter Affiliation: Montana Sulphur & Chemical Company Inc. (MSCC)
Document Control Number: EPA-HQ-OAR-2008-0508-0505.1
Comment Excerpt Number: 6

Comment: EPA states that suppliers of biomass fuel are not required to report as upstream suppliers of fuel because GHGs are traditionally taken into account at the point of biomass production, even though producers of some biomass based fuels (e.g. ethanol) must report. EPA then asks if this approach is appropriate. We wonder why there should be any exemptions. If it is important enough to gather these data at all, then all of the data should be gathered instead of leaving arbitrary gaps that will require guesses to fill. All fuel source categories should be treated the same. If any "upstream" supplier of fuels is required to report, then all should be, once above the thresholds; otherwise single and double reporting will make comparisons between industries, and between users and suppliers biased and relatively useless.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43.

Commenter Name: Traylor Champion
Commenter Affiliation: Georgia-Pacific, LLC (GP)

Document Control Number: EPA-HQ-OAR-2008-0508-0380.1
Comment Excerpt Number: 2

Comment: GP agrees with EPA in not requiring suppliers of biomass-based fuels to report. [FR 16466 (Preamble)] EPA is requiring upstream reporting by suppliers of certain fuels and industrial GHGs. However, EPA is not requiring reporting by suppliers of biomass-based fuels. GP agrees with EPA in not requiring upstream reporting by suppliers of biomass-based fuels.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43 for a discussion of the limited circumstances for which we are requiring petroleum product suppliers to report information on biomass-based products.

Commenter Name: Don Scott
Commenter Affiliation: National Biodiesel Board (NBB)
Document Control Number: EPA-HQ-OAR-2008-0508-0591
Comment Excerpt Number: 5

Comment: NBB supports EPA's decision not to include operators of terminals and pipelines and blenders in the petroleum source category. To require these operators and blenders to report volumes of renewable fuel, specifically, may dissuade them from providing these renewable fuels due to perceived reporting burden.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 226 for a discussion of the definition of importer and exporter for the petroleum product supplier source category, which may include operators of terminals, pipelines, and/or blending facilities. See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43 for a discussion of reporting requirements related to renewable fuels for petroleum product suppliers.

Commenter Name: Nancy N. Young
Commenter Affiliation: Air Transport Association of America, Inc. (ATA)
Document Control Number: EPA-HQ-OAR-2008-0508-0522.1
Comment Excerpt Number: 22

Comment: ATA agrees that refineries as well as importers and exporters of petroleum products are the relevant "suppliers" in the petroleum fuel source category, as proposed. The most appropriate approach is (1) to include owners or operators of petroleum refineries and importers that introduce petroleum products into the U.S. economy and (2) to have them report on the CO_2 emissions associated with the combustion or oxidation of their petroleum products set forth in the Proposed Reporting Rule. In this regard, the inclusion of producers, importers of fossil fuels and industrial GHGs in the definition is consistent with the intent of the Appropriation Act to capture emissions from "upstream production." At the same time, the definition should not include end users, those who dispense fuels after receipt, or downstream entities (such as terminal operators, wholesale purchasers of transportation fuel, blenders of blendstock, transmix processors, or retail gas station owners), but should be confined to those parties that function primarily in upstream petroleum production, such as oil drillers and well owners, as well as petroleum refiners and importers of refined and semi-refined products.

Response: EPA concurs with the commenter that refineries as well as importers and exporters of petroleum products are relevant suppliers that should be covered under subpart MM. However, we do not agree that oil drillers and well owners should report petroleum supply under Subpart

MM. We considered including oil drillers and well owners as reporters, but ultimately decided that the number of oil drillers and well owners is prohibitively large and they produce only a portion of the overall crude that is processed into finished products in the U.S. EPA determined that we could obtain the same level of data comprehensiveness and accuracy by requiring reporting from a smaller group of reporters – refineries, importers, and exporters.

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2. REPORTING THRESHOLD

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 227

Comment: EPA seeks comment "on whether or not to establish a de minimis level, either in terms of total product volume or potential CO_2 emissions, to eliminate any reporting burden for parties that may import or export a small amount of petroleum products on an annual basis." (pp. 16571-16572). API Comment: The MRR does not include a threshold for the amount of petroleum products that a supplier must import or export in order to be subject to reporting. API requests that a threshold for the amount of petroleum products equivalent to 25,000 metric tonnes of CO_2 when combusted be included in the rule.

Response: In the final rule, we are establishing a threshold of 25,000 metric tons of CO_2 per year for importers and exporters of petroleum products and natural gas liquids. See preamble Section III.MM.3 for our rationale on this decision.

Commenter Name: Michael A. Caldarera
Commenter Affiliation: National Propane Gas Association (NPGA)
Document Control Number: EPA-HQ-OAR-2008-0508-1031.1
Comment Excerpt Number: 2

Comment: Propane is a domestically produced fuel with over 90 percent made in the United States. The remaining 10 percent, however, is imported (mostly from Canada), and, therefore, those companies who import propane would be subject to the requirements of Subpart MM (Suppliers of Petroleum Products). The proposed requirements for importers under Subpart MM do not specify a minimum threshold level for reporting, though the agency does seek comments on whether a de minimus level should be established for importers. NPGA believes that EPA should establish a minimum threshold level for importers. In 2007, 10.2 billion gallons of odorized propane was sold in the U.S. for residential, commercial, industrial, agricultural and motor fuel operations. Approximately 0.9% of U.S. energy needs are met by propane, and propane combustion only accounts for 0.8% of total carbon dioxide emissions in the United States. Given the minimal contribution of propane to overall CO_2 emissions in this country, EPA should recognize this by establishing a minimum threshold level for importers to be consistent with the other levels proposed by EPA for other source categories, which is 25,000 metric tons CO_2-equivalent per year. Below this level, reporting of GHG emissions under the requirements of Subpart MM should not be required.

Response: In the final rule, we are establishing a threshold of 25,000 metric tons of CO_2 per year for importers and exporters of petroleum products and natural gas liquids. See preamble Section III.MM.3 for our rationale on this decision.

Commenter Name: Bill Grygar
Commenter Affiliation: Anadarko Petroleum Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0459.1
Comment Excerpt Number: 15

Comment: EPA could streamline reporting requirements and thus and lower the burden by permitting the use of best available data for operational emissions, and aligning its fuel suppliers reporting requirements with what is already being provided by the industry to the EIA, and to EPA's Office of Transportation Air Quality.

Response: See preamble Section III.MM.3 for our response to comments related to using data that the industry reports to EIA. To collect data from reporters in subpart MM, EPA plans to build from the existing data systems and reporting procedures that the Office of Transportation and Air Quality uses to support transportation fuels programs.

Commenter Name: See Table 2
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0530.1
Comment Excerpt Number: 2

Comment: NGC asks EPA to reduce the burden on the oil and natural gas industry by aligning the fuel supplier reporting requirements with the data already being reported to the Energy Information Administration (EIA) and EPA's Office of Transportation Air Quality.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0459.1, excerpt 15.

Commenter Name: Don Scott
Commenter Affiliation: National Biodiesel Board (NBB)
Document Control Number: EPA-HQ-OAR-2008-0508-0591
Comment Excerpt Number: 4

Comment: NBB encourages EPA to establish a de minimis level to eliminate the reporting burden for parties that export small amounts of petroleum products on an annual basis. If all petroleum exporters are required to report regardless of volume, that may include exporters of biodiesel who blend with small amounts of petroleum for purposes of adhering to the requirements of the biodiesel blenders tax credit. These biodiesel producers, blenders, and exporters are likely to have CO emissions far below the quantity intended to be captured by this rule. A de minimis level based on petroleum volume would provide the most straightforward method for exporters to determine their reporting responsibility.

Response: In the final rule, we are establishing a threshold of 25,000 metric tons of CO_2 per year for importers and exporters of petroleum products and natural gas liquids. See preamble Section II.MM.3 for our rationale on this decision.

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3. GHGS TO REPORT

Commenter Name: See Table 4
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0635
Comment Excerpt Number: 96

Comment: EPA presently requires suppliers of coal, petroleum products, and natural gas to report only CO_2, but requests comment on whether to apportion "national inventory estimates of CH_4 and N_2O emissions" among suppliers based on the quantity of their products. We support including these emissions, which are quite significant. Across the three fuel categories, the N_2O emissions that EPA presently excludes total 44.93 $MtCO_2$. This figure is substantially larger than the emissions of several entire industry categories. It should not go unaccounted for. EPA should apportion these emissions, as it suggests.

Response: EPA agrees that CH_4 and N_2O emissions associated with petroleum products are significant (see Preamble section II.C and comment response document volume 2 for the response on selection of GHGs to report.). As proposed, however, we are not requiring petroleum product suppliers to report on the CH_4 and N_2O emissions that would result from the complete combustion or oxidation of their products since CH_4 and N_2O emissions are dependent on factors other than petroleum product characteristics such as end-user combustion temperatures, air-fuel mixes, and use of pollution control equipment. Refiners, importers, and exporters cannot always know with certainty the ultimate end-use of their products, let alone the end-user's specific combustion conditions. Furthermore, we have concluded that requiring petroleum products suppliers to report national default values of CH_4 and N_2O emissions associated with their products would not help EPA better understanding GHG emissions from petroleum products supplied in the U.S. EPA will continue to rely on national estimates of CH_4 and N_2O in the U.S. GHG Inventory, which are based on bottom-up data, such as market penetration of control technologies and distance traveled for on-highway mobile sources.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 91

Comment: Materials that a facility produces and sells to another facility as feedstocks should be accounted for at the facility that further processes them. It is inappropriate for the company producing these to have to account for the emissions when the buyer of these products will be further processing or blending these feedstocks. This facility would then be able to account for the emissions as the product is further refined or otherwise used.

Response: EPA realizes that a petroleum product may move through multiple refineries – and possibly facilities that are not required to report under subpart MM – before the product is ultimately supplied to an end-user (e.g., a third-party may downgrade a gallon of gasoline ex-refinery gate and return it to another refinery for further processing). We have also concluded that refiners and importers cannot always know with certainty the ultimate end-use of their products (see preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses). To avoid double-counting the CO_2 emissions that would result from the complete combustion or oxidation of a specific volume of petroleum product, EPA continues to require each refinery to subtract the CO_2 emissions associated with any non-crude feedstocks from the total emissions they report to EPA, since the CO_2 emissions associated with non-crude feedstocks would have already been reported by another upstream "supplier" under this rule (i.e. a refinery, a NGL fractionator, or an importer of petroleum

products). We could not identify a better approach, nor were any proposed in public comment, that would minimize the number of reporters and the level of duplicative reporting while ensuring comprehensive reporting of the CO_2 emissions that would result from the complete combustion or oxidation of all petroleum products supplied in the U.S..

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4. SELECTION OF PROPOSED GHG EMISSIONS CALCULATION AND MONITORING METHODS

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 25

Comment: EPA is requesting reporting on a facility basis for the petroleum products produced, and reporting at a corporate level for the petroleum products imported or exported. In the preamble (pg. 16570) EPA indicates that the rationale for this separate reporting is that they are generally proposing coverage at the facility level where feasible (e.g., refineries) and proposing corporate reporting only where facility-level coverage may not be feasible (e.g., importers and exporters). EPA makes no claims on the quality or accuracy of the information provided when done on a facility or corporate basis. Industry believes that using the so called "elaborated mass balance approach" would not result in more accurate data when calculations are performed on a facility to facility versus corporate basis. The calculations would be simplified if the necessary data is gathered and the calculations performed at a corporate level. This will follow a process similar to the one used by the Energy Information Administration (EIA) to gather the nationwide fuel information. In addition, this will reduce the amount of CBI submitted to EPA. Since the required information has to be gathered for EIA, the amount of additional data reporting and recordkeeping required by the GHG mandatory reporting rule would be significantly reduced.

Blending of gasoline with biomass fuel (ethanol) is done at a terminal. Terminals may be located at the refinery and/or at remote locations, and may be owned by a third party which purchases fuels from many sources. Therefore, some of the petroleum products (Product in equation MM-1) leaving the refinery may not contain biomass. To estimate CO_2 emissions from biomass, we suggest using the amount of biomass fuel used at a corporate level and the default factor. The quantity of CO_2 generated from biomass would then be subtracted from the total fuel sales recorded at the corporate level.

Response: Subpart MM of the final rule continues to require reporting on a facility-level basis for petroleum products produced. See the Preamble section II.F and comment response document volume 1 for the response on the selection of the level of reporting. Please see Preamble section II.R for more information about CBI. See preamble Section III.MM.3 for our response to comments related to using data reported to EIA.

For the same reasons that EPA requires refineries to report information on petroleum products on a facility-level basis, EPA is also requiring refiners to report information associated with biomass on a facility-level basis. See the response to comment EPA-HQ-OAR-2008-0508-0635, excerpt 43 for a discussion of reporting requirements related to biomass for petroleum product suppliers.

Commenter Name: See Table 3
Commenter Affiliation:

Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 230

Comment: EPA seeks "comment on the appropriateness and adequacy of the proposed default CO_2 emission factors - including factors for biomass products - and ways to improve these default values." (p. 16572) API comments: The EPA emission factors were compared to those in the API Compendium, which are cited primarily from the Energy Information Administration. When compared on the same units basis, the API and EPA values compare very well for the common fuel types. However, the EPA MRR provides more a detailed list of fuel types than the API Compendium. For example, EPA lists four types of motor gasoline (conventional and reformulated summer and winter blends), while the Compendium cites just one emission factor for gasoline. Based on this comparison, the emission factors seem adequate and appropriate.

Response: EPA concurs with the comment and notes that we have updated the default emissions factors based on technical research since the proposal. Changes to the default factors include the addition of new sub-categories of finished motor gasoline and blendstocks, the use of more recent data, and the expansion of the factors to four significant digits. Please see the "Final TSD on Subpart MM Product Definitions and Emission Factors" in Docket EPA-HQ-OAR-2008-0508 for more information.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 53

Comment: To the extent that EPA continues to pursue the collection of carbon content information, NPRA supports EPA's proposed approach for carbon content determination. A system of default carbon factors and optional measurement is needed to lessen the regulatory burden of the regulation.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 230.

Commenter Name: Don Scott
Commenter Affiliation: National Biodiesel Board (NBB)
Document Control Number: EPA-HQ-OAR-2008-0508-0591
Comment Excerpt Number: 8

Comment: NBB notes that EPA proposes a default CO factor for biodiesel of 0.40 tonnes CO/bbl. NBB also notes that EPA requests comments on methods to determine the carbon share of biomass products. Life cycle analysis such as that conducted on biodiesel by USDA and DOE in 1998 show that the fossil-based carbon share of biodiesel is closer to 0.10 tonnes CO/bbl. Using this factor to derive the carbon share of biodiesel would be more consistent with the IPCC and other conventions where only the fossil-based emissions from biofuel production are counted.

Response: For the purpose of this rule, EPA's default factor for biodiesel reflects the CO_2 emissions that would result from the complete combustion or oxidation of biodiesel, not lifecycle emissions associated with biodiesel. Our request for comment on determining carbon share was with respect to direct measurement of density and carbon share of biomass products that are co-processed with petroleum feedstocks at a refinery. We did not receive any comments regarding

the availability of appropriate methods to directly measure density and carbon share of biomass products, so we are requiring reporters to use the default factors for these products as proposed.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 94

Comment: Marathon requests clarity on estimation of emissions for fuel mixtures for subpart MM. As there are currently no default emission factors for fuel mixtures, Calculation Methodology 1 cannot be used to estimate combustion emissions from fuel mixtures. However, since CO_2 emissions are based on the carbon content of the fuels, multiplying the volume of each pre-mixed fuel by its respective fuel-based emission factor would result in an accurate estimate of CO_2 for the fuel mixture. Clarification should be added to Subpart MM as to how emissions from fuel mixtures should be estimated, without the use of carbon content measurements. Marathon recommends including the above procedure into Calculation Methodology 1. Marathon proposes allowing the regulated entity the option to choose either use of emission factors (Methodology 1) or carbon content sampling (Methodology 2) to determine CO 2 emissions from products.

Response: EPA acknowledges that refineries receive and/or produce fuel mixtures. Specifically, based on our research, we determined that three kinds of fuel mixture scenarios occur at refineries: (1) mixtures of NGL components, (2) biofuel mixtures, and (3) fuels that are mixtures of individual molecular components. In the final rule, we have provided clarity on how reporters can approach these three fuel mixture scenarios. Our research did not identify any other fuel mixture scenarios, nor were any other specific scenarios identified in comment.

For mixtures of NGL components and biofuel mixtures, our research determined that petroleum product suppliers currently track the volumes of individual components of natural gas liquids (e.g., butane, ethane, propane) and blended biomass-based fuels (e.g. E-85, B-20), so we require reporters to report volume and CO_2 emissions data for the individual product components rather than the product mixture. The individual components appear on Table MM-1 with corresponding default emission factors.

Evaluating CO_2 emissions associated with blended biomass-based fuels requires reporters to take additional steps (see §98.393(h)) in order to isolate and subtract the CO_2 emissions associated with the biomass-based component of the product from the total CO_2 emissions they report to EPA. For example, if a refiner decides to use Calculation Method 1 to calculate CO_2 emissions for their annual production of Reformulated-Winter-Premium gasoline that contains 9.75% pure ethanol and 0.25% denaturant by volume, they would report the volume of the total product (for example, 10,000 barrels), the percentage of the volume that is petroleum-based including the denaturant (9025 barrels), and the CO_2 emissions associated with the petroleum-based component of the fuel based on the default factor for Reformulated-Winter-Premium gasoline (9025 barrels * 0.3679 metric tons CO_2 per barrel = 3320.3 metric tons CO_2).

Finally, for fuels that are mixtures of individual molecular components, based on our research we conclude that all fuels received or produced by refineries can be placed into one of the petroleum product categories listed in Table MM-1. We have concluded that the list of products in Table MM-1 is adequate for the purpose of estimating emissions from the variety of petroleum products and NGLs supplied to the economy. We acknowledge, however, that a specific fuel sample used to calculate the default emission factor for a product in Table MM-1 may contain a

different mixture of individual molecular components than the specific fuel received or produced at the refinery. For this reason, we have provided two methods for reporters to determine an emission factor. Reporters who choose Calculation Method 1 must use the default CO_2 emissions factor associated with the most appropriate product listed in Table MM-1. Reporters who are not satisfied that a fuel's default emission factor is representative of the particular mixture of individual molecular components in their fuel may choose Calculation Method 2. We evaluated the option to include default CO_2 emissions factors for each, individual molecular component of a fuel (e.g., hexane and benzene) in the rule or to allow reporters to develop default factors using their own using reference materials, but concluded that reporters would most likely have to undertake a gas chromatography analysis in order to accurately determine the relative amount of the molecular components in an individual product per the carbon share measurement procedures in Calculation Method 2. If reporters are already following the carbon share measurement procedures for Calculation Method 2, we determined that taking the additional step of directly measuring density is unlikely to pose significant additional costs and would be highly preferable to using a default density factor since density and carbon share are usually correlated.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 229

Comment: EPA requests "comment on whether reporters should be allowed to combine default CO_2 emission factors to develop alternative factors for fuel reformulations according to the volume percent of each fuel component, and if so using what methodology." (p. 16572) API comments: As there are currently no default emission factors for fuel mixtures, Calculation Methodology 1 cannot be used to estimate combustion emissions from fuel mixtures. However, since CO_2 emissions are based on the carbon content of the fuels, multiplying the volume of each pre-mixed fuel by its respective fuel-based emission factor would result in an accurate estimate of CO_2 for the fuel mixture. Clarification should be added to Subpart MM as to how emissions from fuel mixtures should be estimated, without the use of carbon content measurements.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 94.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 228

Comment: EPA seeks comment on proposing that "reporters could either use the default CO_2 emission factors for each product type [...J or, in the case of petroleum products and NGLs, develop their own factors." (p. 16572). API Comments: API supports the flexibility to use either option.

Response: EPA concurs with this comment. The final rule maintains the option to use either default factors or direct measurements of density and carbon share to determine CO_2 emissions that would result from the complete combustion or oxidation of petroleum products and natural gas liquids.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 88

Comment: For subpart MM, Marathon proposes to report the total of a product rather than by the grade of each produced. For example, Marathon and other regulated entities should be allowed to report total gasoline (or distillate), rather than reporting all the different grades of fuels separately. This will reduce reporting burden and alleviate CBI issues (reporting emissions for specific grades of products that can be back-calculated to estimate volumes).

Response: EPA does not concur with this comment. We have determined that the carbon content of different types of distillates and gasoline can differ and should be tracked individually. Please see Preamble section II.R for more information about CBI.

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5. MONITORING AND QA/QC REQUIREMENTS

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 52

Comment: The preamble on page 16572 states “Product flow meters and tank gauges would be required to be recalibrated either annually or at the minimum frequency specified by the manufacturer” while the regulation at §98.393 (b) states “Product flow meters and tank gauges shall be recalibrated either annually or at the minimum frequency specified by the manufacturer, whichever is more frequent”. Obtaining the best possible measurement for both custody and title transfer is standard practice for the industry because of the economic impact. There is no need or benefit in EPA dictating prescriptive practices for volume measurement. NPRA recommends that: 1) the phrase “whichever is more frequent” be dropped from the regulatory language at 98.393, 2) 98.393 be modified to include weight measurement which is how petroleum coke is sold, and 3) 98.393 be modified by adding an option for suppliers to use existing standard industry practices for custody and title transfer measurement, i.e., add the following: "(d) Notwithstanding the provisions of this paragraph 98.393 (b), use of existing procedures and practices for custody and title transfer shall be deemed to meet the requirements of 98.393 (b).

Response: See preamble Section III.MM.3 for our response to comments related to measurement of product quantity.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 234

Comment: Regarding the measurement methods proposed on p. 1344-1345 for measuring the quantity of petroleum products, including all intermediates shipped off site, coke, natural gas liquids, and all feedstocks entering/leaving the refinery, some of the flow meters used for shipping volumes are operated by a 3rd party outside the refinery such as a pipeline company,

terminal operator and/or shipping agents measuring tank levels for marine shipments and therefore this activity is not something that refinery personnel have direct control over.

Also, positive displacement flow meters are used for some crude service. The regulations should allow the option for industry to be able to use the current volume measurement systems that are in place for custody and title transfer.

The requirement that all petroleum products need to be measured by flow meters or tank gauges (98.394 (a)) seems to exclude solids, such as petroleum coke. Coke quantities may be determined by weighing in and out the coke trucks delivering the coke. This section should include some indication of the acceptability of measuring weight of solids. EPA needs to make sure that a reasonable sampling program is defined and implemented.

API is assuming "samples of each petroleum product and NGL" can be interpreted to mean a representative sample of that stream during the month. Other options, such as sampling the shipping tank every time a shipment goes out, or sampling every tank that a shipment could pump out of would be unnecessarily burdensome. Also, keeping monthly samples and compositing them for analysis at the end of the year seems unreasonable. An alternative would be to analyze the samples each month and volume weight them together at the end of the year. Monthly tracking is likely to be required for planning anyway.

Also, when a refiner tests to establish an emission factor, that facility should be able to establish a factor and then be able to reduce testing frequency based upon a lack of data variability.

EPA needs to make sure that double accounting is avoided on products that are produced at the refinery, shipped out and then returned to the refinery at a later date, such as the movement of butane from the refinery during the summer and return of the butane during the winter.

Response: EPA does not concur that refiners are not responsible for calibration of measurement equipment operated by a third-party. Reporting parties must ensure that the calibration requirements as specified are met for quantity measurement equipment even if the equipment is outside the refinery and/or operated by a third party. EPA has concluded that such calibration requirements are necessary to ensure consistency across reporters and accuracy of data.

See preamble Section III.MM.3 for our response to comments related to measurement of product quantity and to sampling frequency.

EPA concurs with this comment regarding double accounting of products. We have ensured that no double-counting occurs. Any product, such as butane, that leaves the refinery gate for storage must be reported as an ex-refinery gate product under Subpart MM. Similarly, if that product returns to the refinery from storage – or is removed from storage by another refinery – it must be reported as a non-crude feedstock entering the refinery. Refiners must subtract the CO_2 emissions associated with the combustion of non-crude feedstock from the total CO_2 emissions they report to EPA (per §98.393(d)). See comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 91 for additional discussion of the purpose of collecting non-crude feedstock data.

Commenter Name: Karen St. John
Commenter Affiliation: BP America Inc. (BP)
Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 98

Comment: EPA should allow for the option to use product measurement requirements based on the current volume measurement systems used for financial transfer of custody measurement. Because these measurements are the basis for financial transaction, both parties' interests will insure that the product volume measurements are as accurate as possible. This would also free the Agency from having to track and update every type of volume metering technique and standard. For this reason, it is suggested that Section 98.394(a)(1) and (2) have the additional following language – "(v) and (iv) The quantity of petroleum products, natural gas liquids, biomass, and all feedstocks may be determined based on the company's procedures for purposes of inventory tracking and billing using the same methods as used to measure and calculate the financial transactions for those transfers including any and all adjustments to the quantities of those transactions".

In addition, Section 98.394(b) needs to be made consistent with the other "Monitoring and QA/QC Requirements" of each Subpart. The typical language used is " ... meters shall be recalibrated either annually or at the minimum frequency specified by the manufacturer". Section 98.394(b) differs from this language typical throughout the other Subparts. It states "...meters shall be recalibrated either annually or at the minimum frequency specified by the manufacturer, which ever is more frequent." There is no reason to require meter calibration more frequently than manufacture specification. The last 5 words of the sentence should have been removed. This would make the calibration requirements in Subpart MM consistent with the other Subparts and align with the necessary quality specific of each meter manufacturer.

EPA has defined petroleum coke a petroleum product but Section MM 98.394(a) did not address how petroleum coke should be measured. Petroleum coke production is tracked and monitored by weight (i.e. tons of coke shipped). EPA can avoid the need to identify a particular measurement method standard by implementing the new language suggested for section 98.394(a).

Section 98.394(c) states that "reporters must sample seasonal gasoline each month of the season and then test the composite sample at the end of the season". Keeping monthly samples and compositing them for analysis at the end of the year seems inappropriate. Sample quality and integrity may degrade over time or other issues may arise with the sample that could not be addressed at the end of the year. EPA should give the reporter the option of analyzing monthly sampling and then create a weighted composite of the monthly analyses. Specific language added to 98.394(c) would be "or analyze the samples each month and volume weight them together at the end of the year". This would avoid issues associated with long term storage of samples.

Response: EPA concurs with this comment with regard to increasing flexibility in the use of measurement standards. See preamble Section III.MM.3 for our response to comments related to measurement of product quantity. However, we do not concur with the language proposed for inclusion in the Rule.

In regard to calibration, petroleum coke measurement, and sampling frequency, please see preamble Section III.MM.3 for our response to comments.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 17

Comment: EPA discusses the utmost importance of accurate volumetric measurements and carbon content information for fuel suppliers: “Rather than directly measuring emissions from the combustion or consumption of their products, suppliers of petroleum products would need to estimate the potential emissions of their non-crude feedstocks and products based on volume and characteristic information. Therefore product volume metering and sampling would be of utmost importance to accurately calculate potential CO_2 emissions.” (74 FR 68, page 16572) API Comments Section 98.394 requires refineries and importers and exporters of petroleum products to measure the quantity of petroleum products, natural gas liquids, biomass, and all feedstocks using a flow meter of specified types or tank gauge that are calibrated according to the standards and methods referenced in the rule. The listed methods and standards specified are not complete and nor are they inclusive enough to describe the actual methods used to measure these materials for custody transfer. Many other methods of measurement are used, using many different industry standards. Imposition of the proposed methodologies would create the need to change thousands of custody transfer systems without any benefit or justification. For fuel suppliers who will be subject to reporting under the proposed MRR, the most accurate quantity information in their possession is that on which they base their financial records. These records are the basis for reporting inventories as well as commercial purchase & sale payments of which any potential “carbon costs” would be only a fraction. These financial records also have the benefit of being subject to audit under existing internal controls, Sarbanes-Oxley regulations, as well as Internal Revenue Service (IRS), Customs & Border Protection (CBP) and other regulatory compliance systems. Any attempt to under-report such quantities under the proposed MRR would be impractical, as it would involve a third party, likely to object and report the infraction. It would likely result in one of the two parties incurring a financial loss greater than the impact of any potential reporting rule. EPA’s proposed MRR would require setting up a separate - though somewhat similar – data set. This data set, containing information about quantities of fuels and products transferred, would require a substantial amount of resources on the part of EPA to develop the computer systems needed to record and track the data as well as entail substantial expenditures for reporters. Use of two separate data systems, one for financial records and another for environmental data, that contain the same information about quantities of fuels transferred, could easily be cross-posted into the wrong system. This could lead to corrupting both sets of data. We suggest that EPA take advantage of existing custody transfer and accounting systems and avoid devising a redundant “second set of books” for fuels movement. The existing financial records already contain volumes (or weights) for all materials that are shipped into or out of a facility identified by material-specific codes. Even low value or waste products are measured before shipment, if only to determine freight or disposal charges or DOT compliance. For imported fuels, CBP is the federal agency tasked with enforcing regulatory requirements around calculation of imported quantities of bulk petroleum feedstocks and products. 19 CFR§151 Examination, Sampling and Testing of Merchandise details the requirements and Subpart C of 19 CFR§151 deals specifically with petroleum and petroleum products. The CBP in its guideline for approval and validation of FTZ petroleum measurement systems (including sampling) state that petroleum measurement systems must be approved (i.e. 19 CFR 151.42 (a) (1) (i) and 151.42 (a) (3)) and are typically accepted if those petroleum measurement systems “meet or exceed the installation, operational, and performance criteria found in the “appropriate” (sic current edition) API Manual of Petroleum Measurement Standards (MPMS). For marine movements, third party gaugers bonded and approved by CBP’s Laboratory and Scientific Services group are to be employed to objectively determine quantities of bulk petroleum materials being imported at refineries and chemical plants. Subpart C of 19 CFR§151 deals specifically with petroleum and petroleum products. Third party gaugers are approved by CBP prior to carrying out any marine measurement work and they are tasked with assuring the accuracy of the data. CBP periodically audits third party gaugers to ensure their practices and equipment are in accordance with industry requirements. Importers and exporters

of record often do not own or operate the equipment used to transport or store materials including flow meters and tank gauges. Instead, the importer and exporter are contracted to handle the transfer of materials. The quantities of materials are measured by CBP, which has a rigorous program to ensure measurement accuracy. The CBP program also applies to some refinery feedstocks. For pipeline movements into the United States, CBP requires that a custody transfer meter on the pipeline be determined, and the importer must certify to CBP that the meter was installed in accordance with API or ASTM guidelines, that the meter is proved/calibrated on a basis in accordance with its usage, and that records relating to the installation, care and operation of the meter are stored in an organized manner and available for CBP's review upon request. As the importer is often times not the owner/operator of the meter, contracts between the meter owner and the importer are issued to convey the requirements. In summary, API suggests that the volumes in the reporter's financial records be the basis of reporting or serve as an alternative monitoring requirement to be included in section 98.394 that would allow refineries, importers and exporters to use their existing accounting systems and quantities determined under the CBP program.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0631.1, excerpt 98.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 61

Comment: Section 98.394 concerning product sampling and measurement is unnecessarily prescriptive and limiting. The industry is well versed in product sampling and quantity measurement as countless business transactions are based on methods currently employed by the industry. The facilities should be allowed to continue current practices that are used for custody and title transfers without a new set of requirements through this reporting rulemaking. The American Petroleum Institute (API) developed detailed comments that are applicable to a broader context than Subpart MM as well as some specific comments to §98.394. ConocoPhillips supports these comments.

Response: See preamble Section III.MM.3 for our response to comments related to measurement of product quantity.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 241

Comment: Section 98.394 requires refineries and importers and exporters of petroleum products to measure the quantity of petroleum products, natural gas liquids, biomass, and all feedstocks using a flow meter or tank gauge that are calibrated according to the standards and methods referenced in the rule. Importers and exporters of record often do not own or operate the equipment used to transport or storage materials including flow meters and tank gauges. Instead the importer and exporter are contracted to handle the transfer of materials. The quantities of materials are measured under the Department of Homeland Security's Bureau of U.S. Customs & Border Protection (CBP), which has a rigorous program to ensure measurement accuracy. The CBP program also applies to some refinery feedstocks. Therefore, API suggests an alternative monitoring requirement be included in section 98.394 that allows refineries, importers and

exporters to use quantities determined under the CBP program.

The Department of Homeland Security's Bureau of U.S. Customs & Border Protection (CBP) is the federal agency tasked with enforcing regulatory requirements around calculation of imported quantities of bulk petroleum feedstocks and products. 19 CFR§151 Examination, Sampling and Testing of Merchandise details the requirements and Subpart C of 19 CFR§151 deals specifically with petroleum and petroleum products. For marine movements, third party gaugers bonded and approved by CBP's Laboratory and Scientific Services group are to be employed to objectively determine quantities of bulk petroleum materials being imported at refineries and chemical plants. Subpart C of 19 CFR§151 deals specifically with petroleum and petroleum products. Accuracy of the data is assured by the third party gauger, who is in turn approved by CBP prior to doing any marine measurement work. CBP periodically audits third party gaugers to ensure their practices and equipment are in accordance with industry requirements. For pipeline movements into the United States, CBP requires that a custody transfer meter on the pipeline be determined, and the importer must certify to CBP that the meter was installed in accordance with API or ASTM guidelines, that the meter is proved/calibrated on a basis in accordance with its' usage and that records relating to the installation, care and operation of the meter are stored in an organized manner and available for CBP's review upon request. As the importer is often times not the owner/operator of the meter, contracts between the meter owner and the importer are sued to convey the requirements. Also there are Foreign-Trade Zones (FTZs) that operate outside of the Customs Territory of the United States and as such, movements from FTZs by any mode of transportation into the United States are considered imports. All custody transfer points into and out of FTZ facilities must be maintained in accordance with API's Manual of Petroleum Measurement Standards (MPMS). Under that guideline, each refinery asserts to CBP that the custody transfer and measurement systems have been installed according to API MPMS or ASTM or manufacturer's guidelines, that said systems are being maintained and operated in accordance with those same guidelines, and that the records are being stored in an organized manner and are available for review by CBP.

Response: See preamble Section III.MM.3 for our response to comments related to measurement of product quantity.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 237

Comment: The Monitoring and QA/QC requirements section 98.394 (Subpart MM) explains the intent of the EPA regarding test methods used to determine quantities. However, the references to specific test methods and editions of test methods in API's opinion will not accomplish the intent and desired goals of EPA for collecting consistent and accurate data, especially if the EPA intends for data collection to begin as soon as January 1, 2010. Some of the specific problems in these sections are:
1. Many individual feedstocks and products are measured and transferred on the basis of measurement(s) systems other than meters and manual shore tank gauges. Feedstocks and product quantities received from or delivered to tank trucks at truck racks often are determined by calibrated custody transfer grade meters. If the meters are not available or malfunction (i.e. are deemed to be inaccurate), accepted measurements can include gauging of rail cars and trucks using computations from certified truck strapping tables, and/or by weighing rail cars and trucks on certified weigh scales. This is especially true for heavier liquids and petroleum coke which have a lower carbon/hydrogen ratio and might be of particular interest to the EPA.

2. The words “depending on the reporters existing equipment and preferences” might be construed to mean that the existing equipment and methods can not be changed or upgraded. This would be contrary to the Agency’s intent.
3. The enumerated meter types in (a)(1) are recognized as effective technologies, but are not the only meter types that are used for transferring and measuring hydrocarbon materials. Missing from the list, for instance, are well recognized and widely used devices such as displacement meters, vortex meters, cone meters, helical turbine meters, as well as several other types that some experts might argue are either different or else subclasses of the above. These are in use and would meet the needs of the EPA. These other meters are also sometimes used to meet specific process constraints that make the use of other listed meter types less practical.
4. If this rule does not automatically expire after one reporting year, using a specific enumerated list of acceptable technologies will unfairly inhibit the development of new technologies or evolutionary improvements from old technologies. This would be difficult for the process industries but it might be devastating for the equipment manufacturing companies in the U.S. which depend on innovative products to fuel their growth and influence their ability to retain and create jobs.
5. (a)(1)(i) to (a)(2)(iii): The references to individual industry standards are incomplete and some editions of the standards referenced are outdated. Industry uses several different standards for these types of devices based on the scope of the standard, company preference, and type of device. API has made updates to the originally proposed series of standards but these updates do not represent a complete list. API publishes one of the more comprehensive sets of custody transfer measurement standards, but it is neither complete nor the only widely recognized source. Even so, new or revised measurement standards are published each year. To provide a complete list of the individual standards, one would need to include the entire API Manual of Petroleum Measurement Standards (MPMS) (which comprises over 140 standards) and additional API standards. API has included a list of some of the measurements standards used in the industry, but this long list is neither complete nor inclusive of all the consensus organizations that produce suitable standards for measuring hydrocarbon materials. Standards evolve over time to meet changing technology and user and manufacturer experience. Use of a specific edition date freezes out improvements and error correction in the standards without giving the Agency any more assurance of accuracy. The use of a phrase such as “the current edition” would be more effective than attempting to specify individual dates. In addition, equipment is installed in accordance with standards in effect at the time of design or installation, but would not necessarily be modified if the standard were subsequently changed. Calculation and test methods based on standards are often updated to follow changes in the applicable Standards. Though API does not recommend this approach, for illustration API notes the following modifications to the list of standards published in the proposed Subpart MM: 1. Ultra-sonic flow meter: AGA Report No. 9 (2007). Also include API MPMS Chapter 5.8 2. Turbine meters: American National Standards Institute, ANSI/ ASME MFC-4M-1986 Also list API MPMS Chapters 4, 5 and 6 (multiple sections). 3. Orifice meters: American National Standards Institute, ANSI[spelling]/ API 253 0 (also called AGA-3) (1991). The API standard is now numbered API MPMS Chapter 14.3 and is still joint with AGA-3. 4. Coriolis meters: ASME MFC-11 (2006). Also list API MPMS Chapter 5.6. For tank gauges any one of the following test methods can be used to determine quantity: 1. API-2550: Measurements and Calibration of Petroleum Storage Tanks (1965). This is outdated and for calibration should be either/or API MPMS Chapter 2 and ISO 7507 for vertical tanks and ISO 12917 for horizontal tanks. For measurement the reference should be API MPMS Chapter 3 (multiple sections). 2. API MPMS 2.2: A Manual of Petroleum Measurement Standards [incorrect title] (1995). Included above. 3. API-653: Tank Inspection, Repair, Alteration and Reconstruction, 3rd edition (2008). This standard does not apply it is for tank mechanical inspection, not measurement. For measurement, you would reference API MPMS Chapter 3 (multiple sections). However, API would suggest a different construction for Section 98.394 that would allow the data to be collected on a more timely basis, with a greater

degree of quality and fidelity than originally proposed. This proposed construction meets the Agency's legitimate need for accurate and quality-assured data without forcing the Agency into a near continuous cycle of re-evaluating alternative measurement technologies. The most accurate quantity information available to the reporters is the quantities on which they base their financial records. These records are the basis for payments of which any potential "carbon costs" would be only a fraction. These records also have the benefit of being subject to audit under existing Sarbanes-Oxley regulations as well as Internal Revenue, U.S. Customs & Border Protection, and other regulatory compliance systems. Any attempt to under-report the quantity for the purpose of this rule would in application be impractical, as it would involve a third party likely to object and report the infraction, and it would result in one of the two parties having a financial loss greater than the impact of any potential new rule. A similar approach is implicitly used in 98.405 when data is missing for Natural Gas Plants. An attempt to accumulate a separate but similar set of quantities transferred would take a substantial amount of time and resources to develop computer systems capable of recording the reported data. The separate financial and environmental quantities could easily be cross posted in the wrong system by individuals. The results would potentially corrupt both sets of data. There are existing Federal Regulations and Statutes that are used by other agencies in the public sector that would accomplish the intent and desired goals of EPA for collecting consistent and accurate data. For example, U.S. Customs & Border Protection in its guideline for approval and validation of FTZ petroleum measurement systems (including sampling) state that petroleum measurement systems must be approved (i.e. 19 CFR 151.42 (a) (1) (i) and 151.42 (a) (3)) and are typically accepted if those petroleum measurement systems "meet or exceed the installation, operational, and performance criteria found in the 'appropriate' (sic current edition) API MPMS." This also includes 19 CFR 151.13: Approval of Commercial Gaugers ("Customs-approved gaugers must comply with appropriate procedures published by such professional organizations as the American Society for Testing and Materials (ASTM) and the American Petroleum Institute (API), unless the Executive Director gives written permission to use an alternate method. Alternative methods will be considered and approved on a case-by-case basis."). Suggested changes in complete substitution for sections 98.394 & 98.395 Sec. 98.394 Monitoring and QA/QC requirements. (a) The quantity of petroleum products, natural gas liquids, biomass, and all feedstocks shall be determined based on the company's procedures for purposes of inventory tracking and billing using the same methods as used to measure and calculate the financial transactions for those transfers including any and all adjustments to the quantities of those transactions. (1) For quantities measured as part of U.S. Customs and Border Protection Foreign Trade Zones, the methods described in the approved measurement plan as well as those measurements obtained by a US Customs & BP-approved commercial gauger must be used to determine the quantity reported for this rule. 1. For quantities reported from facilities not regulated as Foreign Trade Zones, the measurements must be of an assured level of accuracy to be acceptable under the provisions of the Sarbanes-Oxley Act, and must be compliant with the provisions of 404 of the Act. (2) For marine-imported and exported refined and semi-refined products, the reporting party shall use the shore measured quantity at the loading or discharge port as used to determine payments for the cargo. If the reporting party is unable to use shore measurements of the quantity, vessel measurements as determined by an independent inspection company (i.e. a U.S. Customs &BP-approved commercial gauger) with application of a Vessel Experience Factor (VEF), if determined to be valid (per API MPMS Chapter 17.9) and applicable must be used for emission calculation purposes. (4) For quantities that are not sold or transferred but are subject to reporting under this rule, quantification methods that comply with appropriate procedures published by such industry consensus organizations as the American Society for Testing and Materials (ASTM) and the American Petroleum Institute (API) will be used to report. (i) The documentation must include any calibration methods to be used to maintain measurement accuracy. (ii) The documentation will include an estimate of the uncertainty of the quantity reported. (b) If any separate adjustment of a reportable quantity transferred is made, a record of the adjustment, including the reason for the adjustment, must be

made and the adjustment must be included in the reported total quantity.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0631.1, excerpt 98.

Commenter Name: Sam Chamberlain
Commenter Affiliation: Murphy Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0625
Comment Excerpt Number: 45

Comment: We request clarification of 3rd party inspections of product leaving the refinery as is accepted by current commerce practice would be an acceptable practice under the new EPA GHG rule. Further, we request clarification of tank measurement requirements as discussed on page 16572. Clarification on the following language and definition of the term calibration is requested, such "that all flow meters and tank gauges must be calibrated prior to monitoring under this rule using a method published by a consensus standards organization" and "Product flow meters and tank gauges would be required to be recalibrated either annually or at minimum frequency specified by the manufacturer." It is unclear whether calibration would be performed on tank gauges or tankstrappings as required. Murphy's current position post-Katrina with limited tankage leans heavily on 3rd party inspections to certify product volumes leaving the facility. Calibration of tank strappings on all tanks prior to the rule effective date of January 2010 is an impossible exercise and the deadline to uphold would not be met. Each tank requires a minimum of three months outage for this exercise. Further, frequent required calibration of tank strappings is a significant financial burden estimated at $250K/tank and will limit refinery operations causing economic hardship. Murphy recommends the continued use of 3rd party inspections as an acceptable industry practice for verifying products leaving the facility. We also recommend complying with API 653 is sufficient for the purpose of this rule, which involves performing calibration exercises every ten to fifteen years.

Response: See response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 234 in regard to third-party calibration requirements. §98.394(b)(1) requires that all measurement equipment be calibrated prior to first use for reporting under that subpart. If tank strappings or other equipment have been calibrated within a time frame acceptable according to the standard method used or the equipment manufacturer's directions, then re-calibration prior to first use is not necessary.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 14

Comment: EPA seeks comments on the appropriateness of citing specific industry standards for sampling of petroleum products, "...we request comment on the appropriateness of the proposed sampling and analysis standards and methods for developing CO_2 emission factors for petroleum products and NGLs, especially the methods for determining carbon share. Specifically, we seek comment on specific ASTM or other industry standards that would be more appropriate for sampling petroleum products and NGLs to determine carbon share". (74 FR 68, page 16572) API Comments API welcomes EPA's reference to industry consensus standards, such as ANSI, API, ASTM, ISO and other standard setting organizations that have rigor in the development of measurement standards. However, it may not be effective or efficient for EPA to reference specific measurement standards and specific editions of those standards, as is the case in the

proposed Subpart MM. Such a comprehensive list would require considerable resources for maintenance and updating, since measurement standards are reviewed at least every five years to ensure that standards are consistent with technological changes and advancements. This rule, if enacted, may itself drive the development of additional standards to use more cost effective or newly developed technologies or extend existing methods to cover materials that previously were not covered. The references to individual industry standards that appear in some parts of the proposed rule are incomplete and some are outdated. Industry uses standards from several different standards developing organizations resulting in equivalent measurements, based on the scope of the standard, company preference, and type of device used. API publishes one of the more comprehensive sets of custody transfer measurement standards, but it is neither complete nor the only widely recognized source for such industry practices [see Appendix A]. For example, to effectively list some of the individual standards that need to be referenced one would have to include the entire API Manual of Petroleum Measurement Standards (MPMS) (which comprises over 140 titles) and other related standards. Notably, API publishes approximately eight new or revised measurement standards each year. API recommends that EPA direct the reporter to use suitable methods from a "consensus standards organization". This provides the Agency with an assurance of technical accuracy and transparency in the methods used, while at the same time not restricting the reporters to an infrequently updated list. The approach taken by EPA in the proposed Subpart NN (Sec. 98.404) is more effective than that of proposed lists of standards as given in Subpart MM. It relies on "using any of the oil and gas flow meter test methods that are in common use in the industry and consistent with the Gas Processors Association Technical Manual and the American Gas Association Gas Measurement Committee reports". This construction still has the problem that it limits the reporter to a very restricted set of standards from amongst several well respected organizations, but it does not trap both EPA and the industry into a role of specifying details that are not critical to the objectives of the proposed MRR. Paragraph 98.164(d) improves on the construction by specifying the type of standards organization that meets the Agency's needs by giving examples without excluding potentially acceptable organizations, quoting "using a suitable method published by a consensus standards organization (e.g., ASTM, ASME, API, AGA, or others)".

Response: See preamble Section III.MM.3 for our response to comments related to measurement methods.

Commenter Name: Terry L. Steinert
Commenter Affiliation: Koch Carbon LLC
Document Control Number: EPA-HQ-OAR-2008-0508-0392.1
Comment Excerpt Number: 8

Comment: At section 98.394(a), the proposed rule requires that petroleum products be quantified by using either a flow meter or tank gauge. As petroleum coke is a solid material that is not pumped through pipe nor typically stored in tanks, such prescribed measurement methods simply will not work. As discussed in Section A above, typical measurement of export volumes are by vessel surveys.

Response: See preamble Section III.MM.3 for our response to comments related to measurement of product quantity.

Commenter Name: Karen St. John
Commenter Affiliation: BP America Inc. (BP)

Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 97

Comment: Embedded within the proposed rule, EPA cites specific industrial standard for measurement. It may not be effective or efficient for EPA to reference specific measurement standards and specific editions of those standards, as is the case in the proposed Subpart MM. Citing a specific list of acceptable methods would require considerable resources for maintenance and updating, since standards are updated frequently to keep pace with technological changes and advancements. An indication of the difficulties associated with trying to compile and all encompassing list is the fact EPA should have included positive displacement flow meters and vortex meters to the list in Section 98.394(a). Another complicating factor is that some of the flow meters used for shipping volumes are operated by a 3rd party outside the refinery such as a pipeline company, terminal operator and/or shipping agents measuring tank levels for marine shipments and are therefore not something that refinery personnel have direct control over.

Response: See preamble Section III.MM.3 for our response to comments related to measurement of product quantity. See also the response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 234 in regards to third-party calibration requirements.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 65

Comment: EPA has included in a Technical Support document in the docket some background on the default petroleum carbon content factors developed by EPA. It appears these factors are based on limited data. Also, some links in the document to other supporting information do not work to allow the reader to readily access this other supporting information which hampers our ability to review. Carbon content testing in petroleum products is not widely or routinely done. We have suggested elimination of Subpart MM requirements which is further supported by the lack of robust data to use in the required calculations. Should EPA persist in required reporting for petroleum products, ConocoPhillips supports the proposed flexibility provided by EPA to be able to utilize either the default values, develop our own default values or use a hybrid approach (i.e. use our measured densities but EPA's carbon share factors or vice versa).

EPA references two test methods (ASTM D 5291 and ASTM D 6729) that could be used to determine carbon content but also asked for comment on whether there are other test methods that EPA should consider. California, as part of their mandatory GHG reporting regulations, provides for carbon content measurement in liquid fuels by ASTM D 3238 entitled Calculation of Carbon Distribution and Structural Group Analysis. California provides this method of analysis for liquid fuels combusted in the refinery with the results used as the basis for calculation of CO_2 emissions from the facility. California facility reporting does not include products, unless combusted in the facility for heat, power generation, etc. ConocoPhillips also encourages

EPA to develop an approach under Methodology 2 that would allow facilities to reduce the frequency of testing once the emission factor has been established. This could be accomplished by demonstrating the test data used to establish the factor met certain statistical requirements (variability) and then periodic testing to demonstrate the product stream test results remains statistically equivalent to the established factor. Industry personnel would be happy to discuss in

more detail with EPA.

There are concerns with retaining samples for an entire year for the purpose of creating an end-of-year composite. ConocoPhillips recommends EPA allow for a mathematical annual "compositing" of the individual test results in lieu of the proposed approach.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0679.1, excerpt 230 for a discussion of changes made to the default factors since the proposal. Detailed documentation on the default factors is available in the *Technical Support Document (TSD) on Subpart MM Product Definitions and Default Factors* in Docket EPA-HQ-OAR-2008-0508.

We removed the option (referenced as the "hybrid approach" in the comment) for reporters to directly measure density but not carbon share under Calculation Method 2. We determined that using a measured density and a default carbon share factor will likely adversely affect the accuracy of the calculated emission factor since the density and carbon share of hydrocarbons are, in the absence of impurities, correlated.

See preamble Section III.MM.3 for our response to comments related to measurement methods and frequency of carbon sampling.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 95

Comment: Marathon supports allowing the option for reporters of petroleum products to develop their own emission factors. Having this as an option will allow reporters to further refine the accuracy of their emissions if they choose to.

Response: EPA allows suppliers of petroleum products to develop their own emission factors by directly measuring density and carbon share (Calculation Method 2).

Commenter Name: Sam Chamberlain
Commenter Affiliation: Murphy Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0625
Comment Excerpt Number: 41

Comment: EPA requests "comment on the appropriateness of the proposed sampling and analysis standards and methods for developing CO_2 emission factors for petroleum products and NGLs, especially the methods for determining carbon share" (Preamble, p.572). Murphy prefers to use the current industry accepted method of ASTM D6729 versus ASTM D5291 to measure carbon share. Performing the required ASTM 5291 would require Murphy to purchase additional testing equipment for both refineries for ~ $140K ($70K per instrument) along with employing more laboratory personnel.

Murphy also requests clarification to determine if separate sample composites will be required for RFG (CBOB) vs. conventional gasoline under the proposed rule, due to the fact that separate composites would require additional cost and personnel as well. Allow the use of ASTM D6729 as an acceptable measure for carbon share to eliminate additional laboratory equipment and

personnel costs for both facilities.

Response: See preamble Section III.MM.3 for our response to comments related to methods to directly measure density and carbon share (Calculation Method 2). If Calculation Method 2 is selected, then separate sampling is required for each product listed in Table MM-1 such as Conventional-Summer-Regular finished motor gasoline, RBOB-Summer-Midgrade blendstock, and Reformulated-Winter-Premium finished motor gasoline. Reporters may decide to use default factors for some products (e.g. RBOB-Summer-Midgrade) and direct measurement for others (e.g. Conventional-Summer-Regular), but reporters must use a consistent method for each product within the reporting year.

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6. PROCEDURES FOR ESTIMATING MISSING DATA

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 238

Comment: Sec. 98.395 (MM): Procedures for estimating missing data, presents a series of options for replacing missing data, but the prescribed method overlooks the fact that a secondary set of measurements (i.e. vessel measurements), that if properly obtained in compliance with API standards, may be an accurate and acceptable alternative. For section (a), if meters are not available or malfunction (i.e. are deemed to be inaccurate), quantity shall be based on shore tank measurements. In the event of using an active (vs. static) shore tank during any part of the transfers, or if the shore tank measurements are determined to be inaccurate or not representative of the cargo transferred, quantity shall be based on the volumes as determined from measurements of the vessel before and after the transfer with application of a Vessel Experience Factor (VEF), if determined valid (per API MPMS Chapter 17.9) and applicable. This approach is accepted in practice and is similar to the one used in 98.405. For section (b), if there are valid volume readings, then there is no missing data or need to provide substitute data, but the Agency does have the issue of how to report for periods that may end between pipeline volume readings. API recommends that the estimated end (start)-of-period quantity be determined by prorating of the time in the reporting period. API proposes wording to accomplish that end. For section (c), refinery changes in the volumes in inventory are reflected in the financial accounts either as inventory increases/decreases or as transactions proposed to be the basis of reporting. The sections proposed based on transactions will address any missing data portions, except for non-coincident reporting periods. For this possibility, a section similar to the pipeline section is proposed.

Response: In Subpart MM of the proposed rule, EPA listed missing data procedures for importers and exporters by type of product transportation (ship, pipeline) and listed one overarching missing data procedure for refineries to follow established procedures for purposes of product tracking and billing. These procedures followed the monitoring and QA/QC requirements in Section 98.394.

For Subpart MM of the final rule, EPA substantially improved Section 98.394 (Monitoring and QA/QC requirements) to allow for the variety of procedures already in use by importers, exporters, and refineries to measure quantity. EPA specified that where an appropriate standard method published by a consensus-based standards organization exists, such a method shall be used; where no appropriate standard method developed by a consensus-based standards

organization exists, industry standard practices shall be followed. Since Section 98.394 allows for a multitude of procedures, we updated Section 98.395 (Procedures for estimating missing data) to allow a reporter to use established procedures for purposes of product tracking and billing in the event that QA/QC requirements cannot be followed. Petroleum product suppliers already track quantities of all products and have procedures in place should an industry standard practice not be accessible. EPA concludes that the missing data procedures suggested by the commenter above would qualify under the procedures required in the final rule.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 235

Comment: Regarding the data reporting requirements on p. 1346-1350, physical properties of materials that can are tested on-site can be reported. Other specific information about the origin of the material many times is not available to the refinery, as historically this is fairly irrelevant compared to the physical properties.

Response: We have determined that reporters can collect and report all of the data we require in 40 CFR 98.396. We have also clarified in the final rule that, in cases where a refiner does not know the country of origin of a crude oil batch processed at their facility, refiners are not required to report the country of origin.

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7. DATA REPORTING REQUIREMENTS

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 96

Comment: Marathon opposes moving the deadline up for reporting product and import/exporter information to February 28. The requirements for this subpart should be due the same day as the rest of the report to allow sufficient time to meet the proposed requirements and to align efforts in meeting the requirements of this rule.

Response: EPA concurs with the comment. The reporting deadline for petroleum product suppliers will be the same as other reporters in this rule.

Commenter Name: John Robitaille
Commenter Affiliation: Petroleum Association of Wyoming (PAW)
Document Control Number: EPA-HQ-OAR-2008-0508-1603
Comment Excerpt Number: 12

Comment: PAW is also concerned with the EPA proposed deadline for reporting, i.e. February 28th for fuel supply and March 31st for facility emissions. These deadlines are not realistic given the large amount of data and supporting information that needs to be collected, assembled, reviewed and certified internally by companies prior to reporting.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 96.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 56

Comment: NPRA opposes the alternative deadline of February 28 that the preamble discusses on page 16575. Just because some existing reports for gasoline and diesel have a February 28 deadline is not justification for moving up all of the reporting requirements in subpart MM.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 96.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 232

Comment: EPA requests "comments on ways to take advantage of existing reporting and verification programs, particularly those related to transportation fuels. Specifically, [...] on requiring annual attest engagements for all reporters [...] we seek comment on an alternative deadline of February 28 following the reporting year for annual reports." (p. 16575) 129. API comments: A reporting deadline of February 28 does not allow adequate time for inventory preparation. As detailed during preliminary discussions with the U.S. EPA, API would support annual reports on a calendar year basis, with reports due 6-12 months after the close of reporting year, for an initial program that is of finite duration and is designed to collect data for policy development.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 96.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 31

Comment: EPA requested comment on requiring third-party verification for suppliers of petroleum products, many of whom currently report to EPA under the Office of Transportation and Air Quality's fuels programs. NPRA opposes the use of third-party verification for suppliers of petroleum products as it is redundant, burdensome and costly for industry. EPA states in the preamble on page 16477 that, "this rule, to some extent, would build on existing transportation fuels programs that already require audits of records maintained by these suppliers by independent certified public accountants or certified internal auditors." Because this reporting rule overlaps with other rules that require verification, it would be redundant for the EPA to impose strict third party verification requirements on this data. NPRA therefore opposes the use of third party verifications on petroleum suppliers.

Response: While we sought comment on using attest engagements for subpart MM, EPA is not requiring attest engagements in this rule. See the preamble for the response on the emissions verification approach.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 55

Comment: NPRA strongly opposes requiring attest engagements. This would add substantial unnecessary cost to refiners and petroleum product suppliers. Existing attest engagements cover only gasoline and diesel. Expanding this to crude, feedstocks, and all petroleum products would be a substantial burden. Refiners, importers and exporters should not be singled out from all other sources of greenhouse gas emissions and treated more onerously.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0433.2, excerpt 31.

Commenter Name: Sam Chamberlain
Commenter Affiliation: Murphy Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0625
Comment Excerpt Number: 47

Comment: EPA requests "comment on requiring annual attest engagements for all reporters under proposed 40CFR part 98, subpart MM." (Preamble, p. 16575). We oppose performing attest past gasoline on all other products and feedstocks due to the additional financial burden. Current gasoline attest per facility is $25K/year. We envision the cost of GHG reporting attestations could be upwards of $300K/year per refinery. The financial burden on refiners to facilitate a 3rd party attest for each facility regarding all products and feedstocks is erroneous. Murphy recommends that no attest be required for this proposed rule.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0433.2, excerpt 31.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 64

Comment: Although EPA did not propose requiring attestations, EPA asked for comment on whether attestations should be required. ConocoPhillips is opposed to any attestation requirement. Any attestation requirement would be burdensome and not necessary in context of a reporting only requirement where there is no compliance standard in effect.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0433.2, excerpt 31.

Commenter Name: Sam Chamberlain
Commenter Affiliation: Murphy Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0625
Comment Excerpt Number: 46

Comment: EPA states “we consider information that refiners and importers already report to EIA with respect to units and frequency, for example, when crafting the reporting requirements for refiners, importers, and exporters under the final rule” (Preamble, p.16574). We are concerned that information reported to the EPA and the DOE/EIA is similar but different. Thorough review of the EPA’s reporting requests under this rule as compared to the current requirements by the DOE/EIA suggest many variances and data differences. We believe that cross checking information across these government entities would not be feasible or possible because of these variations. Murphy recommends that DOE/EIA reporting remain separate from the reporting requirements of this proposed rule.

Response: EPA concurs with this comment. See preamble Section III.MM.3 for our response to comments related to using data already reported to EIA.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 89

Comment: Regarding subpart MM, Marathon currently reports product information to EIA. Although this may not represent a complete picture of what the EPA is asking for in this rule, it would decrease burden significantly if certain information did not have to be reported twice. As this is a reporting rule, EPA should use data currently available to them (some product information is reported in RFG, MSAT1, and MSAT2 regulations) and work with other agencies (EIA) to obtain data that is already present.

Response: See preamble Section III.MM.3 for our response to comments related to using data already reported to EIA.

Commenter Name: Lorraine Krupa Gershman
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2008-0508-0423.2
Comment Excerpt Number: 162

Comment: EPA is requesting reporting data on the petroleum products produced on a facility basis and reporting at a corporate level the petroleum products they import or export. In the preamble (74 FR 16570), EPA indicates that the rationale for this separate reporting is that it is proposing coverage at the facility level where feasible (e.g., refineries) and proposing corporate reporting only where facility-level coverage may not be feasible (e.g., importers and exporters). EPA makes no claims as to the quality or accuracy of the information provided when done on a facility or corporate basis. Industry believes that using the ³elaborated mass balance approach´ would not result in more accurate data when calculations are performed on a facility basis versus a corporate basis. The calculations would be simplified if the necessary data is gathered at a corporate level before performing the GHG emission calculations. This will follow a process similar to the one used by EIA to gather the nationwide fuel information. In addition this will reduce that amount of CBI information submitted to EPA. Since the required information has to be gathered for EIA, the amount of additional data reporting and recordkeeping required by the GHG reporting rule would be significantly reduced.

Blending of gasoline with bio-mass fuel (ethanol) is done at a terminal. Terminals may be located at the refinery and/or at remote locations, and may be owned by a third party who purchase fuels from many sources. Therefore, some of the petroleum products (Products in equation MM-1) leaving the refinery may not contain biomass. To estimate CO_2 emissions from biomass, we suggest using the amount of biomass fuel used at a corporate level and the default factor. The number of CO_2 generated from biomass would then be subtracted from the total fuel sales recorded at the corporate level.

Response: Subpart MM of the final rule continues to require reporting on a facility basis for petroleum products produced. See the preamble and separate comment response document volume for the response on the selection of facility level reporting. See the preamble for the response on CBI. See preamble Section III.MM.3 for the response to comments related to using data reported to EIA.

Since Subpart MM requires reporting on petroleum products on a facility level, EPA has determined that biomass must also be reported at the facility level so that each facility can appropriately adjust its supply totals.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 4

Comment: ConocoPhillips supports comments provided by the National Petrochemical and Refiners Association (NPRA) regarding EPAs request for facilities to provide feedstock and product information. NPRA in its comments indicate that required reporting of feedstock and product data is not supported by NPRA and is beyond the intended scope of the GHG emission inventory program. This statement would support elimination of Subpart MM in its entirety. It is not clear what EPA intends to do with the reported data other than statements indicating the reporting program would provide data which would inform further climate change policies. This provides a significant conundrum to the industry. If the policies and intent are not developed, it would seem appropriate for EPA to simply use existing data from existing sources to estimate the emissions. However, if EPA intends to use facility specific data for some future rulemaking, then it is incumbent upon each facility to portray their emissions as accurately as possible.

Response: EPA has concluded that we need data on non-crude feedstock coming into refinery do a mass-balance calculation for verification purposes and to prevent double-counting of a product produced by one refinery and then received by a second refinery for further processing. See response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 91 for additional rationale on requiring reporting by refineries on non-crude feedstocks.

EPA has concluded that we require data on all products produced at a refinery. EPA requires reporting on fuels produced for use in motor vehicles or nonroad vehicles or equipment in order to evaluate potential future regulation under CAA Section 211. EPA requires reporting on products not used as vehicle fuel but combusted by other end users such as residential heating oil to develop an economy-wide understanding of the supply of these products so that we can compare it to the downstream reporting and determine if we are missing any downstream pockets of data. EPA requires reporting on products with potentially non-emissive uses to allow for EPA verification using mass-balance approach and to ensure that we have a comprehensive accounting of CO_2 emissions that would result from the complete combustion or oxidation of all

petroleum products supplied to the economy (see preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses).

See the EPA-HQ-OAR-2008-0508 Preamble, Section 3 for a discussion of EPA's legal authority under the heading *Clean Air Act.*

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 48

Comment: The EPA proposal to collect extensive feedstock and product information from refiners, importers, and exporters is, to a large degree, duplicative of information already provided to the Federal government. As stated in EPA's "Technical Support Document – Industry Overview and Current Reporting Requirements for Petroleum Refining and Petroleum Imports," companies already report to the EIA the monthly total of crude imports at the company level. This data includes the import port, volume, API gravity, sulfur content, and country of origin. In addition, companies already report to the EIA, at the facility level, the monthly average API gravity, and sulfur of crude processed. Furthermore, production data, such as for gasoline and diesel, are reported to the EIA by the batch. Production of other products such as lubes, asphalts, etc is reported monthly. NPRA fails to understand the rationale for providing the feedstock/product information outlined in Subpart MM when the bulk of this information is already provided, on a regular basis, to the Federal government. EPA states in the preamble that "all U.S. refineries must report their fuel consumption to the EIA, so there is limited additional burden to estimate their GHG emissions." (74 Fed. Reg. 16540) NPRA disagrees with this assertion: regardless of the similarity of the data in question, a doubling of the reporting obligations is always burdensome, requiring different forms and formats and differentiated recordkeeping, and runs contrary to the Paperwork Reduction Act. At 74 Fed. Reg. 16574, EPA states that they considered, but did not propose, the option of obtaining through access to existing Federal government reporting databases. NPRA highly encourages EPA to reconsider this position. With the bulk of feedstock and product information already available to the government, coupled with the use of existing emission factors, the GHG emission information EPA seeks already exists.

Response: See preamble Section III.MM.3 for our response to comments related to using data reported to EIA. See response to comment EPA-HQ-OAR-2008-0508-0625, excerpt 48 for a response to the comment on costs.

Commenter Name: Rich Raiders
Commenter Affiliation: Arkema Inc.
Document Control Number: EPA-HQ-OAR-2008-0508-0511.1
Comment Excerpt Number: 63

Comment: EPA should clarify that the definition of "petroleum product" that defines Subpart MM applicability concerning the marketing of petroleum fuel products only includes refinery products intended for sale as fuel. EPA intended for this subpart to capture carbon emissions from fuel usage, not from the feedstocks for other chemical reactions, such as polymerization reactions used to manufacture plastics. EPA should strike the words "plastics and plastic products" from the § 98.6 "petroleum product" definition and include language similar to that in proposed § 98.426 requiring petroleum product marketers to identify sales of petroleum products

marketed as fuels. EPA should explain why Table MM-1 contains chemical feedstocks rarely, if ever, used as fuels, such as ethylene, propylene, and isobutylene, solvents like naphtha, or utility materials like lubricants and waxes as potential GHG emissions sources. The most common method for these materials to be transformed into GHGs is through a Subpart C combustion unit, where EPA has asserted direct GHG emissions reporting authority. EPA should remove all non-fuel related Table MM-1 entries, footnote Table MM-1 to indicate that only fuel products should be reported under Subpart MM authority. By including a wide range of reporting obligations for materials that will not be used as fuels, EPA has inadvertently included GHG reporting for materials that will likely never be combusted and will never cause combustion CO_2 emissions. The refinery industry has extensive reporting systems that EPA can use to determine what materials are released into the fuel markets and what materials are sold predominately as feedstocks. EPA should consider requiring reporting facilities that use fuel-like materials as feedstocks to report feedstock usage, in a manner similar to how facilities using industrial GHGs in feedstock service under Subparts L and OO report in-bound feedstock industrial GHG purchases.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products that are not fuels or could have potential non-emissive uses.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 90

Comment: Marathon opposes the requirement to estimate emissions from products with "non-emissive end uses". The non-emissive products regulated under this rule include asphalt, lubricants, and waxes. Estimation of emissions from these products as if they are combusted would result in an abnormally high and inaccurate number. Asphalt, in particular, is viewed as a carbon sink. It is inappropriate for EPA to require emissions calculations for the combustion of a product that will not be combusted. Further, on page 74 FR 16571 of the preamble, EPA specifies an abbreviated list for importers and exporters that excludes asphalt and road oil, lubricants, waxes, plastics, and plastic products. Marathon believes excluding these from estimation for fuel suppliers is also needed as they are not fuels. Throughout the preamble when discussing product emissions, EPA discusses collecting emissions estimations from the combustion of fuel. Requiring reporting of non-combusted products will result in an inaccurate, over-representation of emissions.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 231

Comment: EPA requests comment on the “proposal to require petroleum product suppliers to report the CO_2 emissions associated with products that could potentially have non-emissive end-uses [and] on ways in which non-emissive end-uses could be tracked and reported.” (p. 16573) API comments: CO_2 emissions should not be reported for products that are not combusted (e.g. asphalt produced for road application). Estimating these emissions skews the emissions estimate

to be artificially too high.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: Gary F. Lindgren
Commenter Affiliation: Calumet Specialty Products Partner, L.P.
Document Control Number: EPA-HQ-OAR-2008-0508-0626.1
Comment Excerpt Number: 13

Comment: Petroleum products that are not used as fuels should not be counted as GHG emissions. Examples include asphalt and petrolatums, and petroleum products used as raw materials for plastics and pharmaceuticals.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 240

Comment: EPA in the preamble on page 16569 states: "Petroleum products are ultimately consumed in one of two ways: Either through combustion for energy use, or through a non-energy use such as petrochemical feedstocks or lubricants. Combustion of petroleum products produces CO_2 and lesser amounts of CH_4 and N_2O, which are in almost all cases emitted directly into the atmosphere. Some non-energy uses of fuels, such as lubricants, also result in oxidation of carbon and CO_2 emissions. This process may occur immediately upon first use or, in the case of biological deterioration, over time. Carbon in other petroleum products, such as asphalts and durable plastics, may remain un-oxidized for long periods unless burned as fuel or incinerated as waste." API comments: EPA provides a summary of emissions in the Technical Support Document on page 17, which shows asphalt contributes 0 emissions and waxes contribute 0.7% of the emissions of the source category. API recommends that: (1) asphalt should not be included because this material remains un-oxidized for long periods of time and EPA indicates that the emissions are 0; (2) durable plastics should not be included because they remain un-oxidized for long periods of time; and (3) waxes should not be included because they have minimal contribution (0.7% of the source category total).

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: Lorraine Krupa Gershman
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2008-0508-0423.2
Comment Excerpt Number: 161

Comment: The scope of this subpart is unclear. While the category is clearly intended to capture fuel production from petroleum refineries, the definitions of “petroleum products” and ”petrochemical feedstocks” are sufficiently general to cause confusion as to whether chemical

manufacturing operations that are not refineries are part of the source category, or if EPA intended for refineries to report production of materials that are not intended to be combusted by the refinery customer base. One example is the U.S. polymers and resin manufacturing industry. This industry sector is comprised of large companies with manufacturing locations around the globe. They consume liquid organic chemical feedstocks and produce solid plastic polymers and liquid organic chemical by products. They may import some portion of the liquid chemical feedstocks they consume and may export some of the liquid organic chemical by products they produce. None of these materials are intentionally combusted as fuel. Based on the construction of Table MM-1 of Subpart MM, it appears that petrochemical feedstocks are considered a subgroup of petroleum products. The definition of "petrochemical feedstocks" in §98.6 states that they are "feedstocks derived from petroleum for the manufacture of chemicals, synthetic rubber, and a variety of plastics". Clearly, many of the liquid organic chemical feedstocks for polymer and resin manufacturing are "feedstocks derived from petroleum for the manufacture of…plastics" and could be classified as "Miscellaneous Products" under the heading of Petrochemical Feedstocks in Table MM-1. [Footnote: Methanol, another common liquid chemical feedstock in polymers and resin manufacturing, is also listed in Table MM-1.] This appears to mean that most polymer and resin manufacturing companies are importers and exporters of petroleum products and thus squarely within the source category described in the introductory sentence of §98.390 and paragraphs (c) and (d) therein. We do not believe that EPA intended this outcome, because none of the liquid organic chemical feedstocks used in the polymers and resins manufacturing industry areimported expressly to be combusted and few of the liquid organic chemical byproducts are exported for fuel use. In the Preamble to the rule, the EPA is directed to develop a rule for reporting of emissions including those resulting from upstream production and downstream sources, as follows: "…require mandatory reporting of GHG emissions above appropriate thresholds in all sectors of the economy of the United States." The preamble states that EPA should "use its existing authority under the Clean Air Act" to develop a mandatory GHG reporting rule. "The Agency is further directed to include in its rule reporting of emissions resulting from upstream production and downstream sources, to the extent that the Administrator deems it appropriate." EPA has apparently interpreted that language to confirm that it may be appropriate for the Agency to exercise its CAA authority to require reporting of the quantity of fuel or chemical that is produced or imported from upstream sources such as fuel suppliers, as well as reporting of emissions from facilities (downstream sources) that directly emit GHGs from their processes or from fuel combustion. This language describing EPA's authority is directed toward reporting of emissions, not quantities of materials imported or exported. Many uses of petroleum products will not result in emissions, especially not in the short term. Using the plastics example above, production involves incorporating petroleum-based chemicals into engineered thermoplastics. The carbon in the plastics would not be released as emissions unless the plastic is incinerated, in which case the emissions may require reporting under a separate section of this rule. Engineered thermoplastics are designed for long use life and have properties preventing ready biodegradation and therefore the carbon is not emitted but is actually sequestered in the resin product. Therefore, the calculated emissions resulting from the import/export of chemicals will result in erroneous calculation of potential emissions and appears to exceed the boundaries of statutory authority for this rule. We suggest that the requirement for reporting import/export be limited to only refineries and the fuels listed in Table MM-1 after the deletion of "miscellaneous products."

Response: We changed the source category definition of petroleum refinery for the purposes of 40 CFR part 98, subpart MM to only include facilities that process crude oil. As such, we are no longer requiring reporting from facilities that only handle intermediary petroleum products.

See preamble Section III.MM.3 for our response to comments related to reporting on products

with potential non-emissive uses.

Commenter Name: Stephen B. Kemp
Commenter Affiliation: Occidental Chemical Corporation (OCC)
Document Control Number: EPA-HQ-OAR-2008-0508-0644.1
Comment Excerpt Number: 10

Comment: OCC believes that EPA needs to clarify reporting obligations contained in proposed Subpart MM. The definition of the source category is as follows: § 98.390 Definition of the source category. This source category consists of petroleum refineries and importers and exporters of petroleum products. (a) A petroleum refinery is any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt (bitumen) or other products through distillation of petroleum or through redistillation, cracking, or reforming of unfinished petroleum derivatives. (b) A refiner is the owner or operator of a petroleum refinery. (c) Importer has the same meaning given in § 98.6 and includes any blender or refiner of refined or semi-refined petroleum products. (d) Exporter has the same meaning given in § 98.6 and includes any blender or refiner of refined or semi-refined petroleum products. The above would seem to indicate that not only petroleum refineries but also importers and exporters of petroleum products would be covered by this source category. As stated in proposed §98.391 "Any supplier of petroleum products who meets the requirements of §98.2(a)(4) must report GHG emissions." Proposed §98.2(a)(4) states the following: "(4) Any supplier of any of the products listed in this paragraph (a)(4) in any calendar year starting in 2010. For these suppliers, the GHG emissions report must cover all applicable products for which calculation methodologies are provided in subparts KK through PP of this part. (6) Coal-based liquid fuels. (iii) Petroleum products. (iv) Natural gas and natural gas liquids." The definitions found at proposed 98.6 state the following regarding petroleum product: "Petroleum product means all refined and semi-refined products that are produced at a refinery by processing crude oil and other petroleum-based feedstocks, including petroleum products derived from co-processing biomass and petroleum feedstock together. Petroleum products may be combusted for energy use, or they may be used either for non-energy processes or as non-energy products. The definition of petroleum product for importers and exporters excludes asphalt and road oil, lubricants, waxes, plastics, and plastics products. Page 16571 of the preamble states the following: "Furthermore, our proposed definition for petroleum products for importers and exporters in Subpart A excludes asphalt and road oil, lubricants, waxes, plastics, and plastic products. We seek comment on this proposal." OCC strongly supports the specific exclusion of "plastics" and "plastic products" in the definition of petroleum product. While a definition of either term is not provided in the proposed rule, the inclusion of "plastics and plastic products" could be interpreted to include raw commodity plastics such as high density polyethylene and polyvinyl chloride (PVC) resins, as well as produced or formed products such as lawn furniture, garden hoses and plastic ware. GHG emissions associated with these products would occur in their manufacture, and not their distribution in commerce. Also, such products are not used as a fuel and, if combusted, would be done so via an authorized disposal process, such as incinerator that will be covered under proposed Subpart C - General Stationary Fuel Combustion Sources.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: Sam Chamberlain
Commenter Affiliation: Murphy Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0625

Comment Excerpt Number: 42

Comment: EPA requests "comment on whether reporters should be allowed to combine default CO_2 emission factors to develop alternative factors for fuel reformulations according to the volume percent of each fuel component" (Preamble, p. 572). Murphy is concerned with inconsistencies in Table MM-1 which poses to only include combustible products, releasing harmful CO_2 emissions into the atmosphere upon creation. We express concern that all products produced, both noncombustible and combustible, require carbon emissions calculations reflecting 100% combustion. This practice would overstate the true carbon dioxide released into the atmosphere. In addition, we request additional clarification regarding the role of renewables at refining facilities. Specifically, we request confirmation that aggregated terminal ethanol blending is excluded from refinery facility emissions calculations. Murphy recommends that in order to report the most accurate information regarding our contribution to CO_2 emissions into the air, that as a noncombustible product, Asphalt be removed from table MM-1. Further, we recommend an alternative emission reporting calculation for products that are produced that may or may not be completely combusted such a refinery propylene product which may be used for generation of plastics. Or, request that these refinery products also be excluded from the calculations and an alternative method further down the supply chain be proposed.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses. Please see comment EPA-HQ-OAR-2008-0508-0635, excerpt 43 for a description of reporting on blended renewable fuels.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 54

Comment: EPA's proposed definition for petroleum products for importers and exporters in Subpart A at 98.6 excludes asphalt and road oil, lubricants, waxes, plastics, and plastic products. Refiners, importers and exporters should all have the same reporting requirements. There is no value in reporting CO_2 emissions associated with products that have non-emissive end-uses. Attempting to obtain enough data to perform a carbon mass balance is an admirable goal for purely academic purposes. However, it is not practical in the complex world of refining and just adds costs with no benefit. In addition, there is the potential for inaccurate representation of emission data by requiring the reporting of non-combusted products. NPRA strongly urges the EPA to revise the definition of petroleum product at 98.6 so the exclusion of asphalt and road oil, lubricants, waxes, plastics, and plastic products applies to importers, exporters and refiners. In addition, the EPA should provide a mechanism to exclude petroleum coke if it is sent to a landfill. Finally, EPA should clarify that refinery waste and by-products such as spent sulfuric acid from an alkylation unit that contains 5% – 10% hydrocarbon and elemental sulfur are not petroleum products. The regulations should state that Table MM-1 is an all-inclusive list that covers all petroleum products. Accordingly, asphalt and road oil, lubricants, waxes, should be removed from Table MM-1.

Response: See preamble Section III.MM.3 for our response to comments related to reporting products with potential non-emissive uses.

The definition of petroleum product now excludes spent catalysts and sulfuric acid.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 43

Comment: We find that the EPA's conclusion that 37 million Tonnes of CO_2 emissions result from the Asphalt and Road Oil type inconsistent with the Agency's earlier statements on the matter. Nearly all Asphalt and Road Oil produced is consumed in road-making cements and does not contribute to CO_2 emissions. Rather, these materials provide economically-viable materials for infrastructure improvements and public works projects and serve as stable carbon sinks. From a long-term life-cycle perspective, the majority of asphalt road-bed materials are recycled and returned to service and are not burned for energy recovery or incinerated as waste. On page 16569 of the proposed rulemaking, EPA notes: "carbon in other petroleum products, such as asphalts and durable plastics, may remain un-oxidized for long periods unless burned as fuel or incinerated as waste". This statement is consistent with page 3-7 of the Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006 (EPA-HQ-OAR-2009-0171-0029), where EPA refers to the IPCC's recommendation that "particular adjustments be made to national fuel combustion statistics. Certain fossil fuels can be manufactured into plastics, asphalt, lubricants, or other products. A portion of the C consumed for these non-energy products can be stored (i.e., sequestered) indefinitely." This EPA report further mentions that an accounting for the non-combusted carbon in these products is provided in the "Carbon Emitted and Stored Products from Non-Energy Use of Fossil Fuels" section. Section 3.2 of this report describes, and enumerates in Table 3-13, a 100% storage factor of the carbon in Asphalt and Road Oil Non-Energy Use product, resulting in a CO_2 emission factor of zero. Table 3-14 enumerates, as described later, that this product type has the least uncertainty in developing estimates of CO_2 emissions from Non-Energy Use products. In the Petroleum Product Suppliers Technical Support Document (TSD) (EPA-HQ-OAR-2008-0508-003 9), EPA also provides information about the CO_2 emission factors from energy and non-energy use products. On Exhibit 13 of the TSD, EPA outlines that there are no carbon emissions associated with the Asphalt and Road Oil product type. However, later in that TSD, we note that a CO_2 emission factor of 0.5 Tonnes per Bbl is assigned to the Asphalt and Road Oil product type on Exhibit 14. On page 57 of that TSD in Exhibit 20, a 40% oxidation rate was assumed for this product type. We also noted that the annual volumes noted in Exhibit 5 were not equivalent to the production data listed in Exhibit 21. We assert that EPA erred in assigning a CO_2 emission factor for the Asphalt and Road Oil product type in Table MM-1 on page 16718 of the proposed rule, and request that an emission factor of zero be used. An emission factor of zero would be consistent with the 2006 US Inventory Report referenced above.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: Sam Chamberlain
Commenter Affiliation: Murphy Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0625
Comment Excerpt Number: 40

Comment: EPA states on page 16569 of the proposed rulemaking, "carbon in other petroleum products, such as asphalts and durable plastics, may remain un-oxidized for long periods unless burned as fuel or incinerated as waste." This statement is consistent with page 3-7 of the Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2006 (EPA 430-R-08-005), where

EPA refers to the IPCC's recommendation that "particular adjustments be made to national fuel combustion statistics. Certain fossil fuels can be manufactured into plastics, asphalt, lubricants, or other products. A portion of the C consumed for these non-energy products can be stored (i.e., sequestered) indefinitely." This EPA report further mentions that an accounting for the non-combusted carbon in these products is provided in the Carbon Emitted and Stored Products from Non-Energy Use of Fossil Fuels section. Section 3.2 of this report describes, and enumerates in Table 3-13, a 100% storage factor of the carbon in Asphalt and Road Oil Non-Energy Use product, providing 25.3 Teragrams of carbon storage and zero CO_2 emissions. Table 3-14 enumerates, as described later in the EPA report, that this product type has the least uncertainty in developing estimates of CO_2 emissions from Non-Energy Use products. In the Petroleum Product Suppliers Technical Support Document (EPA-HQ-OAR-2008-0508- 0039), EPA also provides information about the CO_2 emission factors from energy and non-energy use products. On Exhibit 13 of the TSD, EPA outlines that there are no carbon emissions associated with the Asphalt and Road Oil product type. However, later in this TSD, we noted that EPA applied a CO_2 emission factor of 0.5 Tonnes per Bbl to the Asphalt and Road Oil product type on Exhibit 14. On page 57 of that TSD in Exhibit 20, a 40% oxidation rate was assumed for this product type. We also found that the annual volumes noted in Exhibit 5 were not equivalent to the production data listed in Exhibit 21. Also in that Exhibit 23, we noted that EPA estimated that refineries contribute 37 million Tonnes of CO_2 emissions annually from the Asphalt and Road Oil product category. We find this conclusion unusual, considering the information presented in the US GHG Inventory (EPA 430-R-08-005), Exhibit 13 of the aforementioned TSD, and considering the information we obtained from The Asphalt Institute ("TAI"). According to copyrighted data provided by the TAI, 90% of all Asphalt and Road Oil produced in 2006 was consumed in paving materials used for road-making. Asphalt paving materials provide stable carbon sinks for these refined petroleum products, and these products do not amount to the CO_2 emissions stated in Exhibit 21 of the aforementioned TSD. Further, the remaining 10% of the Asphalt and Road Oil produced in 2006 (provided by TAI) was consumed in non-paving activities (roofing and other non-paving applications) whose stable products have a very low oxidation rate. We compared the volumes reported to us by TAI with the records published by the Energy Information Administration ("EIA"). We noted that the volumes of Asphalt and Road Oil provided by TAI track closely (within 5%) with the volumes of Asphalt and Road Oils reported by EIA as part of the EIA's 2006 Consumption/Sales information under Products Supplied by Petroleum Energy Sources (refer to http://tonto.eia.doe.gov/dnav/pet/pet cons psup dc nus mbbl a.htm). Considering that 90% of these materials are reported to be used in paving activities, and using EIA supply data (190,049,000 bbls), and other data available in the TSD (specific gravity, and carbon share data from Exhibit 14, at 1.03 and 83.47%, respectively), we estimate that 85,694,099 tonnes of CO_2 emissions were NOT emitted as a result of asphalt paving activities. Further to our concerns with EPA's approach under Subpart MM, by presuming complete oxidation of all refinery products, EPA will significantly overstate the CO_2 emissions from these products as they traverse the US economy. To demonstrate this point, consider that refiners routinely provide product mixtures (for example, mixtures of propane and propylene) that are sold to downstream users. These users may choose to combust the material as a fuel and/or further process the mixture. In the former case, this facility would likely exceed the proposed emission threshold and report under Subpart C of the proposed rule. The emissions from combusting the mixture (or a portion thereof) would overstate CO_2 emissions when considering the carbon content of the refiner's original mixture. In the latter case, the end-user may further process the material and offer it again as a fuel and a petrochemical feedstock. In the petrochemical feedstock case, some of the subsequent downstream users' processes may generate CO_2 in several ways. Some petrochemical processes form CO_2 as part of the conversion of the feedstock to the petrochemical product. Emissions of CO_2 may also result from air pollution control equipment that manage vent gases associated with the production process. This second-tier user would also likely report their emissions under Subpart C or as a source category

under Subpart X. Again, the CO_2 emissions from these activities would further overstate CO_2 emissions when considering the carbon content of the refiner's original mixture. We recommend that EPA reconsider the CO_2 emission factors proposed in Table MM-1 (74 FR 16719 of the proposed rule). Using the proposed factor would significantly overstate refiner's, and ultimately, the United States', CO_2 emissions. We understand the EPA's need to develop information in order to support future policy decisions, however, we suggest the EPA develop an alternative approach for reporting of those products whose end use does not include combustion and often results in stable carbon sinks. As EPA considers an alternative reporting scheme, we caution EPA to balance information needs for policy decisions with industry concerns that would require the producer to report on the end-uses of its products. While producers may have some understanding of the end use, specifics regarding end-user applications and emission factors would require elaborate and new commercial transaction records and present new anti-trust challenges between producers and end-users. In considering revisions to Subpart MM, we offer that Asphalt and Road Oils provide economically-viable materials for infrastructure improvements and public works projects and serve as stable carbon sinks. From a long-term life-cycle perspective, the majority of asphalt road-bed materials are recycled and returned to service and are not burned for energy recovery or incinerated as waste. We assert that EPA erred in assigning a CO_2 emission factor for the Asphalt and Road Oil product type in Table MM-1 on page 16718 of the proposed rule, and request that an emission factor of zero be used. An emission factor of zero would be consistent with the 2006 US Inventory Report referenced above. We also emphasize the need for EPA to develop alternative reporting schemes for petroleum products listed in Table MM-1, so that commercial transactions are not unnecessarily encumbered by new recordkeeping requirements and introduce new anti-trust challenges among producers and customers.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 15

Comment: EPA is proposing and new and far reaching reporting framework for petroleum products supply, as follows: "Owners or operators of petroleum refineries, or 'refiners,' and importers that introduce petroleum products into the U.S. economy would be required to report on the CO_2 emissions associated with the complete combustion or oxidation of their petroleum products". (74 FR 68, page 16569) API Comments API believes petroleum fuel refiners, importers, and exporters should not have to conduct additional reporting on petroleum feed stock and product volumes and GHG emissions to EPA. We already provide extensive data on the requested volumes of finished petroleum products and feedstocks to other federal and state agencies on a weekly, monthly, and annual basis. These existing reporting schemes provide essential protection of these competitively sensitive data as Confidential Business Information (CBI). EPA would be able to have access to these data provided they agree to keep that data business confidential. Agreeing to keep the data confidential would not preclude the agency from developing emission profiles from each refinery's products. The proposed rule goes beyond the authorizing legislation's direction to require reporting of "...greenhouse gas emissions..." by requesting detailed data on volumes of interim and final petroleum products and even crude oil feed stocks, which are not relevant to estimating GHG emissions. It would establish duplicative reporting requirements and raises questions regarding EPA's legal authority to manage sensitive data as CBI (see legal analysis of CBI in Section IV). EPA should coordinate with agencies like

the Department of Energy (DOE) and Customs and Border Protection (CBP) to make use of existing reporting data and processes to support development of future climate policy.

As designed, the current proposed reporting system will result in significant overstatement of emissions for some facilities, as clearly some products are not combusted. The concern is twofold: a) There are the products that will not be combusted (asphalt, lubricants, etc.). These should be flagged or excluded somehow. There should be some way for the refinery to indicate that the end use of the product does not result in its combustion; and b) There are feedstocks that will either have to be further processed or blended (for example, naphtha). The refinery that processes the feedstock and produces the extra volume of product should be the one that reports. If a facility has the ability to determine that the stream will not be combusted they should be able to exclude it from their GHG emissions calculations. Additionally, EPA's requirements for reporting of "natural gas liquids" (NGLs) contained in Subparts MM and NN will result in significant "double counting" of NGLs and reporting of NGLs which are used for chemical feedstock and do not result in GHG emissions from their combustion. In fact, most of the NGL produced in the U.S. or imported is used as feedstock rather than fuel – as noted in EPA's Technical Support Document. Odorized propane and/or butane are almost exclusively used for NGL-based fuels, and should be the focus of the rule rather than the broad production of all NGLs.

API suggests that reporting of NGLs be restricted to odorized propane and/or butane (or propane/butane mix) and that such reporting only be required from facilities which fractionate NGLs into these particular components, which are the only sources of fuel quality propane/butane. This will avoid the double counting of mixed NGLs that are subsequently fractionated at different facilities and reported a second (or perhaps third) time. It will also avoid the reporting of NGLs that are not suitable for or destined for fuel use and subsequent emissions.

Response: See preamble Section III.MM.3 for our response to comments related to using data reported to EIA. See the preamble for the response on CBI. See preamble Sections III.MM.3 and III.NN.3 for our response to comments related to reporting on petroleum products and NGLs with potential non-emissive uses. See preamble Section III.NN.3 for our response to comments on perceived double counting between Subparts MM and NN. See the response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 91 for a discussion of the purpose of collecting non-crude feedstock data and the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63 for a discussion of the purpose of collecting crude data.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 62

Comment: Should EPA continue with required reporting of products from individual refinery facilities, it is critical to construct the reporting to most accurately reflect emissions attributable to only products that will be combusted. There must be a mechanism to exclude produced streams that one can assume with a high degree of certainty will not be combusted (asphalt, lube oils, etc.). This could be accomplished in a couple of different ways. EPA could list products that will be excluded (asphalt, lube oils, etc.) or let the facility determine which streams to exclude from reporting based on knowledge of its disposition. ConocoPhillips disagrees with the proposal's handling of feedstock. EPA's proposed approach results in inaccurate assignment of emissions to individual facilities. This is critical because it is unknown how the reported data will be used by EPA for publication, future policy formulation or rulemaking. Therefore, it is

essential that any assignment of emissions to an individual facility be as accurate as possible. For example, under the current proposal, a refinery that produces asphalt would have higher emissions associated with their facility than they should because although asphalt is not combusted, the facility is required to report it as if it will be combusted. A facility that produces feedstock for processing at another facility should not have to report those emissions. Rather, the receiving facility should report the emissions from the finished product produced from processing the feedstock. ConocoPhillips requests paragraph §98.396(a)(2) be removed from the regulation and a mechanism provided for excluding produced feedstocks from a facility's calculations. As previously mentioned, this could be accomplished either by EPA listing streams to be excluded or by allowing an individual facility to make the determination based upon knowledge of the disposition of these streams. Calculating the CO_2 emissions for each petroleum product or natural gas liquid entering the refinery as feedstock to be further refined or used onsite is burdensome and results in an over estimation of emissions. If the product is used onsite, the emissions will be calculated under Subpart C or Subpart Y.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses. See the response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 91 for a discussion of the purpose of collecting non-crude feedstock data

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Commenter Affiliation: Asphalt Institute (AI)
Document Control Number: EPA-HQ-OAR-2008-0508-0528.1
Comment Excerpt Number: 1

Comment: The Asphalt Institute (Al) appreciates the opportunity to provide information it believes to be pertinent to the above-referenced proposed rule, particularly those portions dealing with the use of liquid asphalt and asphalt products. Al is a U.S. based association of international petroleum asphalt producers, manufacturers and affiliated businesses. With more than 95 members, Al represents about 90 percent of the annual domestic production. The wide variety of products manufactured from asphalt includes hot mix asphalt, asphalt emulsions, residential and commercial roofing materials and several other smaller volume applications. As a service to members and the larger asphalt industry, the Asphalt Institute conducts an annual survey of asphalt usage in the U.S. and in Canada. This survey is open to all member companies as well as non¬member companies known to be involved in asphalt production. Participation is voluntary and reported tonnages are kept confidential. The final product, Asphalt Usage Survey©, is provided to each participating company and is available for sale as an Al publication. According to the most recent survey, in 2007, the U.S. usage of asphalt was reported to be 30,403,367 short tons. Of this total 26,562,444 (87%) was for paving applications, 3,396,318 (11%) was for roofing applications, and the remainder was reported as "miscellaneous".

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses.

Commenter Name: Robert D. Bessette
Commenter Affiliation: The Council of Industrial Boiler Owners (CIBO).
Document Control Number: EPA-HQ-OAR-2008-0508-0513.1
Comment Excerpt Number: 43

Comment: Subpart MM requires reporting of CO_2 emissions that would result from the complete combustion or oxidation of each petroleum product and natural gas liquid produced, used as feedstock, imported, or exported during the calendar year. Data provided under this

subpart in combination with Subpart NN will result in double counting of potential emissions where consuming entities are reporting combustion related emissions from those products. This data will also result in over-counting of CO_2 emissions for those cases where those products are used as feedstocks and a portion of that carbon is sequestered in products. EPA's purpose for collecting this data is unknown, but the potential for gross mischaracterization exists and EPA should explain and take comment on how it intends to use this data.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on products with potential non-emissive uses. See the response to comment EPA-HQ-OAR-2008-0508-0712.1, excerpt 91 for a discussion of the purpose of collecting non-crude feedstock data.

Commenter Name: J. Jared Snyder
Commenter Affiliation: New York State Department of Environmental Conservation
Document Control Number: EPA-HQ-OAR-2008-0508-1184
Comment Excerpt Number: 11

Comment: While EPA is proposing reporting requirements for upstream suppliers of fossil fuels, the proposed rule requires only natural gas local distribution companies to report CO_2 emissions disaggregated into categories that represent residential, commercial, and industrial consumers and electricity generating facilities. In 2007, distillate and residual oil use by residential, commercial, industrial and electricity generating sectors comprise 16.3% of the total CO_2 emissions from fuel combustion in New York State compared to 30% natural gas. The Department recommends EPA also require reporting by end-use sector for petroleum distribution companies such as distillate and residual oil for residential, commercial and industrial use.

Response: EPA does not concur with this comment. Unlike natural gas local distribution companies that already report deliveries to EIA by end-use sector, petroleum product suppliers covered under this rule (refiners, importers, and exporters) do not always have full knowledge of the ultimate end-use of their products. We considered including other entities in this source category that could potentially have more accurate information on the ultimate end-use of petroleum products (e.g., retail gas station owners, terminal operators, blending facilities, and pipeline operators). As discussed in the Notice of Proposed Rulemaking (74FR16570), however, we concluded that it is more efficient to collect data from refiners, importers, and exporters since they represent the fewest number of entities that can provide comprehensive information on CO_2 emissions that would result from the complete combustion or oxidation of petroleum products supplied in the U.S. Furthermore, we are able to easily avoid double-counting individual quantities of petroleum products supplied in the U.S. from these reporting entities by having refineries report feedstocks. (A given quantity of a petroleum product may pass between multiple terminals and blending facilities, so asking terminal or blending facility operators to report information on incoming and outgoing products would likely result in unreliable data for estimating GHG emissions from petroleum products.)

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 236

Comment: API believes petroleum fuel refiners, importers, and exporters should not have to conduct additional reporting on petroleum feed stock, product volumes, and GHG emissions to EPA. API already provides extensive data on the requested volumes of finished petroleum

products and feed stocks to other federal and state agencies on a weekly, monthly, and annual basis. These existing reporting schemes provide essential protection of these competitively sensitive data as Confidential Business Information (CBI). EPA would be able to have access to these data provided they agree to keep that data business confidential. Agreeing to keep the data confidential would not preclude the agency from developing emission profiles from each refinery. The proposed rule would establish duplicative reporting requirements and raises questions regarding EPA's ability to manage sensitive data as CBI. EPA should coordinate with agencies like the Department of Energy (DOE) and Customs and Border Protection (CBP) to make use of existing reporting data and processes to support development of future climate policy. As designed, the current reporting system will result in significant overstatement of emissions for some facilities as clearly some products are not combusted. The concern is twofold. First, there are the products that will not be combusted (asphalt, lubes, etc.). These should be flagged or excluded somehow. The reporting facility could report the volumes, but indicate these would not be combusted. That is, there should be some way to indicate the end use of the product. The second area is those feedstocks that will either have to be further processed or blended (for example, naphtha). The refinery that processes the feedstock and produces the extra volume of product should be the one that reports. If a facility has the ability to determine that the stream will not be combusted they should be able to exclude it from their calculations.

Response: See preamble Section III.MM.3 for our response to comments related to reporting on petroleum products with potential non-emissive uses and using data reported to EIA. Please see Preamble section II.R for more information about CBI.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 93

Comment: If EPA requires the crude characteristics as currently proposed, Marathon requests clarification on where the sample should be taken. Crude properties change from when it is purchased to when it is processed and during the transfer, multiple samples are taken at different points in the process. If reporting this information is mandatory, and sampling is required to meet this, Marathon proposes that the owner or operator determine what sample they receive with each crude batch is best and most representative to use.

Response: We have clarified in the final rule that refiners must report the API gravity and sulfur content of each batch of crude oil at the point of entry at the refinery. We defer to industry to determine when and where they must sample the batch in order to ensure that the properties are those at the point of entry at the refinery. We have also specified that refiners must use an appropriate method published by a consensus-based standards organization to sample each batch of crude oil and measure API gravity and sulfur content. Additionally, we have specified that refiners must adjust the API gravity measurement to the temperature and pressure conditions assumed for determining the volume of the batch.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 63

Comment: ConocoPhillips requests paragraph §98.396(a)(9) be removed from the regulation.

Detailed information regarding crude oil feedstocks used at the refinery is not necessary for quantifying GHG emissions. ConocoPhillips does not understand the intent of EPA's request for data on crude oil (e.g. country of origin, API gravity and sulfur content) and EPA has not provided adequate justification in either the rulemaking or discussions with industry. Industry is currently providing this information to EIA via the EIA 814 report. EIA publishes the crude import information by company. EPA should look to EIA published data for this information rather than require duplicate reporting especially given that this data is not germane to the purpose of this rulemaking.

Response: EPA is collecting data on crude oil processed at refineries for two purposes. We are collecting data on the volume of crude oil to conduct a mass balance assessment of all feedstocks, onsite emissions, and outgoing products at a refinery to assist with quality assurance and verification of data reported under subpart MM. We are collecting data on the API gravity, country of origin, and sulfur content to better understand the upstream emissions associated with the production of each batch of crude oil processed at a refinery; this data is relevant to an evaluation of possible regulation of fuels under title II of the Clean Air Act.

See the EPA-HQ-OAR-2008-0508 Preamble, Section 3 for a discussion of EPA's legal authority under the heading *Clean Air Act.* See preamble Section III.MM.3 for our response to comments related to using data reported to EIA.

Commenter Name: See Table 1
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0433.2
Comment Excerpt Number: 41

Comment: NPRA recommends that EPA should not require the reporting of facility-specific crude batch data. Specifically, section "98.396 Data Reporting Requirements" should be modified to drop (a)(9). Instead the EPA should require refiners on a facility and company-wide basis to report to the EPA the same level of information on crude imports and processing that is currently reported to the EIA. Companies already report to the EIA the monthly total of crude imports at the company level. This data includes the import port, volume, API gravity, sulfur content, and country of origin. In addition, companies already report to the EIA, at the facility level, the monthly average API gravity, and sulfur of crude processed. The vast majority of refineries are complex with numerous upgrading operations. An individual refinery's configuration will have a major impact on the greenhouse gas emissions at the refinery and of its products. The actual crude slate, while it may correlate directionally with emissions in general, will have only a minor impact. For example, a fixed crude slate could be processed at a refinery where the bottoms are used to produce asphalt, or the bottoms are used to produce residual fuel, or the bottoms are processed in a coker. For each of these options, not only the refinery's greenhouse gas process emissions but the greenhouse gas emissions from the refinery's products will vary greatly from facility to facility, even though there has not been a change in the crude slate. Published data by CONCAWE developed by Solomon Associates shows that a simple refinery model based on volumetric inputs has an r2 of only 0.54 in predicting the greenhouse gas (GHG) emissions of the refinery. This indicates that 46% of the variation is unexplained. In addition, unpublished studies had indicated that while crude gravity and sulfur are statistically valid variables, models based on product output that also include crude gravity and sulfur have an r2 of only about 0.8 which means that 20% of the variation is unexplained. Common sense along with these studies demonstrates the crude API gravity and sulfur are unreliable and inaccurate measures of a refinery's GHG emissions and the GHG emissions of the products that it produces. The FY2008 Consolidated Appropriations Act instructed the EPA to implement

regulations requiring mandatory reporting of GHG emissions. The intention of the act was to provide data to be used in potential future GHG emission control programs. Given the studies that show that crude API gravity and sulfur are unreliable and inaccurate measures of a refinery's GHG emissions and the GHG emissions of the products that it produces, NPRA cannot envision any reason why the proposed detailed level of reporting is necessary to support a potential future GHG control program covering refining GHG emissions or GHG emissions from the products that a refinery produces. In addition, batch-specific crude data is extremely confidential. Potential inadvertent or public disclosure raises serious CBI concerns. Even if the EPA proposes that this data is needed to support the possible development of a Low Carbon Fuel Standard (LCFS), which NPRA opposes, economists including Robert Stavins and even CARB (in discussions off the record), have stated that assigning facility-specific crude carbon intensity values will just result in shuffling and a strong potential for an increase in GHG emissions. Crude production economics, not GHG regulations, will determine whether a specific crude source will be developed. The EIA projections show that worldwide crude demand will increase in the future even if the U.S. enacts program(s) to reduce GHGs. Therefore, a LCFS that attempts to account for the changing carbon intensity of different crudes on a facility, company, or regional basis, will only result in shuffling. Shuffling is when crude moves to an alternative destination rather than to its most economical destination because of regulatory programs. For example, if Canadian oil sands crude moves to countries other than the U.S. because of a LCFS, then there will be an increase in GHG emissions as the crude is transported further and replaced with alternative crude that is also further away. The net result is an increase in worldwide GHG emissions due to the regulations as well as higher costs to the public. The only way to avoid this is to base a LCFS baseline on the current U.S. basket of crudes and not change the calculated carbon intensity (CI) of the fuels produced by U.S. refiners. It makes no sense to enact a regulation that provides an incentive to increase GHG emissions if the stated purpose of the regulation is to decrease GHG emissions. Individual facility crude data is not needed to calculate a baseline of the CI of crudes run in the U.S. or the world. Therefore, individual facility crude batch data is not needed even if a LCFS is enacted in the future.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63.

Commenter Name: Sam Chamberlain
Commenter Affiliation: Murphy Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0625
Comment Excerpt Number: 43

Comment: We recommend that a De Minimus factor be included for small volume of products produced at the refinery. We recommend that the reporting requirement for crude and feedstocks to the refinery be eliminated as the data is not critical to our final product derived carbon emissions reported. This exercise requires additional sampling and testing requirements increasing the financial burden of this rule and, further, a derivative of this data is already reported to the DOE/EIA and is publicly available.

Response: Please see Preamble section II.K for more information about de minimis reporting for small emission points. See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63 for a discussion of the purpose of collecting crude data. See preamble Section III.MM.3 for our response to comments related to using data reported to EIA.

Commenter Name: Sally V. Allen
Commenter Affiliation: Gary-Williams Energy Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0982.1
Comment Excerpt Number: 13

Comment: EPA should not require reporting information on crude slates. The actual crude slate at a given plant will have only a minor impact on overall GHS emissions; the measures of the composition of various crude oils are considered to be unreliable and inaccurate measures of GHG emissions from a plant and its products.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63.

Commenter Name: Dan F. Hunter
Commenter Affiliation: ConocoPhillips Company
Document Control Number: EPA-HQ-OAR-2008-0508-0515.1
Comment Excerpt Number: 3

Comment: ConocoPhillips does not understand the intent of EPA's request for data on crude oil (e.g. country of origin, API gravity and sulfur content) and EPA has not provided adequate justification in either the rulemaking or discussions with industry for the collection of this important CBI information. As with the produced fuels, if EPA concludes that it does require this information, EPA should provide assurances in the regulation that this data will be fully protected as CBI. ConocoPhillips instead suggests that EPA work separately and constructively with companies, outside of this rulemaking, to understand crude oil supply information. ConocoPhillips is willing to engage constructively with EPA on this issue.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63 for a discussion of the purpose of collecting crude data. See the preamble for the response on CBI.

Commenter Name: James Greenwood
Commenter Affiliation: Valero Energy Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0571.1
Comment Excerpt Number: 2

Comment: Futhermore, the collection of crude oil information with the goal of determining the "carbon intensity" of crude oil fails to acknowledge the complexity and variation within refineries for producing fuels and is wholly outside of the scope of any "emission inventory" regulation. Refineries are exceptionally complex operations. Two refineries producing the same fuel from the same crude slate can have drastically different process emissions owing to the significant difference in infrastructure that exists between refineries. This is a consequence of age, process design, efficiency, location, and many other conditions that are not adequately captured when attempting to craft "Low-Carbon Crude Standards" ("LCCS"). Consequently, determining life-cycle emissions based on the data collected will not ensure that regulating feedstocks will lower GHG emissions.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63.

Commenter Name: James S. Loving
Commenter Affiliation: National Cooperative Refinery Association (NCRA)

Document Control Number: EPA-HQ-OAR-2008-0508-0609.1
Comment Excerpt Number: 11

Comment: EPA should not require reporting on crude slates. The actual crude slate at a refinery will have a minor impact on overall GHG emissions. NCRA considers information on crude slates to be confidential business information.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63.

Commenter Name: Gregory A. Wilkins
Commenter Affiliation: Marathon Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0712.1
Comment Excerpt Number: 92

Comment: Marathon opposes the unneeded reporting of confidential business information that does not help further estimate GHG emissions. EPA is requiring in this rule for refiners to report crude batches, API gravity, sulfur content, country of origin, and batch volume. Marathon currently reports crude batch information to the EIA. Marathon requests that EPA use data already submitted to EIA or to better align reporting with what is submitted to the EIA to reduce reporting burden or to remove this reporting requirement from the rule, as it is not needed for emissions estimation.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63.

Commenter Name: See Table 3
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0679.1
Comment Excerpt Number: 233

Comment: Refiners should not be required to provide crude data. This data will not be used to determine carbon emissions from the refinery; therefore, it should not be required. If EPA needs this data for some other reason, it is already published by EIA data (EIA form 814). There is no valid reason to require an attest engagement from fuel suppliers for a reporting rule. This requirement is not imposed on any other industry. While other fuels programs have such a requirement, those engagements are intended to ensure that the environment benefits of the various fuel programs are achieved. There is no reason to include this costly and time consuming requirement to a reporting rule.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63 for a discussion of the purpose of collecting crude data. See preamble Section III.MM.3 for our response to comments related to using data reported to EIA. See comment EPA-HQ-OAR-2008-0508-0433.2, excerpt 31 for our response to comments related to attest engagements.

Commenter Name: Karen St. John
Commenter Affiliation: BP America Inc. (BP)
Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 10

Comment: BP recommends that EPA eliminate the reporting of information regarding crude slates, including data on the import port, volume, API gravity, sulfur content, and country of origin. Companies already report to the EIA at the facility level, the monthly average API gravity and sulfur of crude processed. Instead, the EPA should collect the same level of information on crude imports and processing that is currently reported to the EIA. Moreover, if EPA does require the submission of information such as that related to crude slates, the final rule should acknowledge that the data can be designated as CBI since it is not emissions data.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63 for a discussion of the purpose of collecting crude data. Please see Preamble section II.R for more information about CBI.

Commenter Name: Sally V. Allen
Commenter Affiliation: Gary-Williams Energy Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0982.1
Comment Excerpt Number: 7

Comment: EPA should not require reporting information on crude slates. The actual crude slate at a given plant will have only a minor impact on overall GHS emissions; the measures of the composition of various crude oils are considered to be unreliable and inaccurate measures of GHG emissions from a plant and its products.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63.

Commenter Affiliation: BP America Inc. (BP)
Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 10

Comment: BP recommends that EPA eliminate the reporting of information regarding crude slates, including data on the import port, volume, API gravity, sulfur content, and country of origin. Companies already report to the EIA at the facility level, the monthly average API gravity and sulfur of crude processed. Instead, the EPA should collect the same level of information on crude imports and processing that is currently reported to the EIA. Moreover, if EPA does require the submission of information such as that related to crude slates, the final rule should acknowledge that the data can be designated as CBI since it is not emissions data.

Response: See preamble Section III.MM.3 for our response to comments related to using data reported to EIA. Please see Preamble section II.R for more information about CBI.

Commenter Name: See Table 4
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0635
Comment Excerpt Number: 81

Comment: EPA proposes that refiners report “basic information to EPA on the crude oil feedstock type, API gravity, sulfur content and country of origin during the reporting period. This basic information on the feedstock characteristics would provide useful information to EPA to assess the lifecycle GHG emissions associated with petroleum refining.” Assessing the lifecycle GHG emissions associated with petroleum refining is critical to monitoring and

controlling GHG emissions. It is already required under U.S. law in the 2007 Energy Independence and Security Act (EISA), Section 526. More detailed reporting would improve implementation of EISA Section 526 and any future lifecycle GHG emissions assessment requirements. Because petroleum arrives in many forms to refiners and importers, the feedstock characteristics listed in the proposed reporting rule are not sufficient to estimate the lifecycle GHG emissions of a particular type of petroleum product. For example, in order to assess the lifecycle GHG emissions of petroleum, it is necessary to know how the petroleum was extracted, the type of upgrading and refining it had to undergo, and how it was transported. The EPA cannot determine, based on the proposed required characteristics alone, whether the petroleum, for example originated in the Canadian tar sands which carry a heavier production process GHG emission burden than conventional oil and whether, for example, the extraction was done through strip-mining or through steam assisted gravity drainage or a similar in situ process both of which have very different GHG emissions associated with them.[footnote: Mui, Simon, Doug Hannah and Roland Hwang, Lifecycle Analysis of Greenhouse Gas Emissions from Tar Sands. NRDC White Paper. November 2008 (Ex. 53).] The rule should include a way to identify lifecycle emissions from different types of extraction processes. Identification of the petroleum recovery method, or the process used, would allow estimates of the associated upstream emissions to be made for petroleum products. A second tier of information to more accurately identify lifecycle GHG emissions would be to include an additional reporting requirement, requiring refiners and importers to report not only on the feedstock's country of origin, but also on its particular facility of origin. That way, the EPA will have more accurate information of how the petroleum was extracted, the type of upgrading and refining which it underwent, and how it was transported. The EPA could also, in many instances, associate the upstream facility emissions with a particular product. This would allow for the best information to be on hand in order to conduct a more accurate measure of a fuel's lifecycle GHG emissions.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0515.1, excerpt 63 for a discussion of the purpose of collecting crude data. We considered requiring refiners to report additional data (e.g. extraction process, mode of transport, and type of upgrading and refining of the crude oil prior to delivery at the refinery) for purposes of better understanding upstream emissions associated with the production of the crude oil. We determined, however, that refiners would not have full knowledge of these other data points, and that the data we are collecting would help us adequately estimate upstream emissions.

Commenter Name: See Table 4
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0635
Comment Excerpt Number: 82

Comment: Currently, the EPA defines "upstream emissions" as: "[T]he GHG emissions potential of a quantity of industrial gas or fossil fuel supplied into the economy. For fossil fuels, the emissions potential is the amount of CO_2 that would be produced from complete combustion or oxidation of the carbon in the fuel." While the emissions potential of fossil fuels is essential data, the EPA should go beyond combustion potential and require reporting on lifecycle GHG emissions of fossil fuels. This type of reporting is critical to the implementation of EISA Section 526, would provide greater information for petroleum baseline determination under the Renewable Fuel Standard, and would be needed for the development of a low-carbon fuel standard, which the EPA has the authority to do and references as a potential policy. The EPA should expand its definition of upstream emissions to include the full lifecycle of GHG emissions, including direct combustion emissions and associated production emissions. It is critical that any lifecycle assessment of petroleum products distinguish between conventional

petroleum and high carbon fuels. Lifecycle assessment should also include carbon released from clearing of land and disruption of soils. Further, in addition to carbon, any lifecycle assessment should include environmental sustainability criteria for all fuels to assure that fuels regardless of source are produced in a sustainable manner. Such criteria should include water quality and quantity, land degradation, air pollution, and toxic waste.

Response: Collecting complete information on the lifecycle environmental impacts of fossil fuels is beyond the scope of this rule. We are, however, collecting several data points that could potentially be used to better understand the upstream and downstream GHG emissions associated with fossil fuel, including stationary combustion of fossil fuels, characteristics of crude oil processed at a refinery, and information on CO_2 emissions that would result from the complete combustion or oxidation of all petroleum products supplied to the economy.

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8. COST DATA

Commenter Name: Sam Chamberlain
Commenter Affiliation: Murphy Oil Corporation
Document Control Number: EPA-HQ-OAR-2008-0508-0625
Comment Excerpt Number: 48

Comment: The significant cost burden inflicted by this rule was not reflected in EPA's capex and annual O&M costs found in RIA (Docket # EPA-HQ-OAR-2008-0508-0002, Sec 4.36)" for additional capital equipment under Table 4-69.

Response: In the proposed rule, EPA estimated the start up and recurring O&M costs associated with data system registration, data monitoring, archiving and keeping records, and auditing. EPA estimated no capital costs for Subpart MM because the flow meters, scales, and other equipment required to measure quantity are already in operation for the purpose of conducting business.

Since the petroleum product list in Subpart MM of this final rule is different in many ways from the EIA product list, EPA recognizes that entering data into the EPA data system will consist of more effort and cost than merely copying EIA and other agency reporting forms. Therefore, EPA has increased the estimate of O&M costs to further reflect the burden of entering data and keeping records for a different product list.

EPA received many comments on the burden and cost associated with a restricted list of quantity sampling and test methods. As a result, EPA broadened the QA/QC requirements for measuring quantity in Subpart MM of the final rule to allow test methods consistent with a consensus-based standards organization. Where no appropriate standard test method developed by a consensus-based standards organization exists, industry standard practices shall be followed. This change relieves any possible cost burden associated with a restricted methods list.

Therefore, EPA considers the cost estimate in the final rule to reflect accurately the costs associated with compliance under Subpart MM.

Commenter Name: Karen St. John
Commenter Affiliation: BP America Inc. (BP)
Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 6

Comment: As the proposed rule impacts both petroleum industry facility operators and petroleum product suppliers, the rule as proposed would create disproportionate regulatory compliance demands on the petroleum industry compared to other industry sectors. EPA has underestimated the costs of complying with new and highly specific measurement and monitoring requirements. Moreover, the detailed level of data combined with the complexity of the measurement and monitoring requirements present serious data confidentiality and Day 1 compliance concerns. We recommend that EPA align the reporting requirements for fuel suppliers to what is already being provided by the industry to the Energy Information Administration (EIA). More streamlined reporting requirements would lower the economic, CBI and compliance challenges.

Response: In the proposed rule, EPA acknowledged that it provided a list of measurement standards that was incomplete. In Subpart MM of the final rule, EPA has broadened the measurement methods allowed to include any appropriate standard test method published by a consensus-based standards organization where one exists. Where no appropriate standard test method developed by a consensus-based standards organization exists, industry standard practices shall be followed. Therefore, EPA determined that the costs of complying with measurement requirements in the final rule are minimal and appropriately estimated.

See response to comment EPA-HQ-OAR-2008-0508-0625, excerpt 48, for rationale on the cost estimate for monitoring requirements. See preamble Section III.MM.3 for our response to comments related to using data reported by the industry to EIA.

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11. OTHER SUBPART MM COMMENTS

Commenter Name: Don Scott
Commenter Affiliation: National Biodiesel Board (NBB)
Document Control Number: EPA-HQ-OAR-2008-0508-0591
Comment Excerpt Number: 2

Comment: NBB opposes the strategy to require a facility to report GHG emissions indefinitely once it trips the threshold for a single reporting year. This strategy fails to incentivize facilities for reducing GHG emissions overtime. It would also place undue burden on companies to report during years when production is low and therefore GHG emissions are low.

Response: EPA concurs with this comment. See the preamble for the response on reporting frequency and provisions to cease reporting.

Commenter Name: Peter T. Grass

Commenter Affiliation: National Biodiesel Board (NBB)
Document Control Number: EPA-HQ-OAR-2008-0508-0591
Comment Excerpt Number: 3

Comment: The definition of biodiesel in this rule should be amended to correspond to the definition previously adopted by EPA through rulemaking. The term ‘‘biodiesel” means a motor vehicle fuel which: (1) Meets the registration requirements for fuels and fuel additives

established by the Environmental Protection Agency under section 7545 of this title (Clean Air Act Section 211); (2) is a mono-alkyl ester; (3) meets ASTM specification D-6751- 07; (4) is intended for use in engines that are designed to run on conventional, petroleum-derived diesel fuel, and (5) is derived from nonpetroleum renewable resources.

Response: EPA proposed a definition of biodiesel in the rule that was too general, and EPA agrees that this definition should be enhanced for the final rule. In the final rule, EPA has defined biodiesel as a mono-akyl ester derived from biomass and conforming to ASTM D6751-08, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels. EPA prefers this definition over the one recommended by the commenter because it builds on the definition of biomass provided in the rule; it does not rely on the term "renewable" which is not defined in this rule; and it does not rely on the end-use of a product, which a reporter may not know.

Commenter Name: Karen St. John
Commenter Affiliation: BP America Inc. (BP)
Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 36

Comment: Crude Oil §98.6 (p. 16618): The definition is too broad and could be interpreted to include natural gas. BP prefers the definition from the Glossary of Oilfield Production Terminology (GOT): "A mixture of hydrocarbons that exists in the liquid phase in the underground reservoir and remains liquid at atmospheric pressure after passing through surface separating facilities.

Response: EPA concurs with this comment and has updated the definition in the final rule.

Table 1

COMMENTER	AFFILIATE	DCN
James Greenwood	Valero Energy Corporation	EPA-HQ-OAR-2008-0508-0571.1 EPA-HQ-OAR-2008-0508-0571.2
Charles T. Drevna	National Petrochemical and Refiners Association	EPA-HQ-OAR-2008-0508-0433.1 EPA-HQ-OAR-2008-0508-0433.2

Table 2

COMMENTER	AFFILIATE	DCN
Olon Plunk	Xcel Energy Inc.	EPA-HQ-OAR-2008-0508-0444
R. Skip Horvath	Natural Gas Council (NGC)	EPA-HQ-OAR-2008-0508-0530.1

Table 3

COMMENTER	AFFILIATE	DCN
Karin Ritter	American Petroleum Institute (API)	EPA-HQ-OAR-2008-0508-0679.1
James Greenwood	Valero Energy Corporation	EPA-HQ-OAR-2008-0508-0571.1
William W. Grygar II	Anadarko Petroleum Corporation	EPA-HQ-OAR-2008-0508-0459.1

Table 4

COMMENTER	AFFILIATE	DCN
Craig Holt Segall	Sierra Club	EPA-HQ-OAR-2008-0508-0635.1
Melissa Thrailkill	Center for Biological Diversity	EPA-HQ-OAR-2008-0508-0430.1