



Summary of Public Comments and Responses for:

Mandatory Greenhouse Gas Reporting Rule:

2011 Technical Corrections, Clarifying, Other Amendments to Certain Provisions

October 2011

**2011 Technical Corrections, Clarifying,
Other Amendments to Certain Provisions**

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 Technical Corrections, Clarifying, and Other Amendments to Certain Provisions of the Mandatory Reporting of Greenhouse Gases Rule. EPA published a Notice of Proposed Rulemaking in the Federal Register on August 4, 2011 (76 FR 47392). EPA received comments on this proposed rule via one or more of the following methods: regulations.gov, e-mail, fax, mail or courier.

This Response to Comments document provides the verbatim text of comments extracted from the original comment letter. 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.

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 to the final rule. In some cases, a commenter incorporated by reference the comments of another company or organization. Rather than repeat these comment excerpts for each commenter, EPA has listed the comment excerpt only once under the name of the person, company or organization who submitted the comment and including a list of commenters who indicated their support for that comment. Copies of all comment letters submitted are available at the EPA Docket Center Public Reading Room or electronically through <http://www.regulations.gov> by searching Docket ID *EPA-HQ-OAR-2011-0147*.

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For technical questions, please contact the Greenhouse Gas Reporting Rule Hotline at:
http://www.epa.gov/climatechange/emissions/ghgrule_contactus.html.

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 GENERAL COMMENTS ON THE EFFECTIVE DATE	1
1.1 How these amendments apply to 2012 GHG emission reports	1
2.0 COMMENTS ON SUBPART A (GENERAL PROVISIONS).....	2
2.1 Extension of the 2012 Reporting Deadline.....	2
2.3 Definition of supplier.....	13
2.4 Clarification on submission of reports and other information to EPA	14
2.5 Other comments on Subpart A.....	15
3.0 COMMENTS ON SUBPART W (PETROLEUM AND NATURAL GAS SYSTEMS).....	18
4.0 COMMENTS ON SUBPART FF (UNDERGROUND COAL MINES).....	19
4.1 Applicability and threshold for Underground Coal Mines	19
4.2 Use of MSHA data.....	20
5.0 COMMENTS ON SUBPART OO (SUPPLIERS OF INDUSTRIAL GASES)	21
5.1 Revision of data reporting requirement for total mass of each reactant fed into the GHG or nitrous oxide production process to recordkeeping	21
6.0 COMMENTS ON SUBPART TT (INDUSTRIAL LANDFILLS).....	22
6.1 Determination of waste-specific DOC values for closed landfills.....	22
6.3 Table TT-1	29
6.4 Definition of Design Capacity	32
6.5 Other comments on Subpart TT.....	33
7.0 GENERAL COMMENTS ON PART 98.....	37
7.1 General comments on Part 98 not related to the proposed amendments	37

LIST OF COMMENTERS

DCN	Commenter Name	Commenter Affiliation
EPA-HQ-OAR-2011-0147-0007	Amy E. Hendershot	Marshall Miller & Associates, Inc.
EPA-HQ-OAR-2011-0147-0008	Amy E. Hendershot	Marshall Miller & Associates, Inc.
EPA-HQ-OAR-2011-0147-0009	Amy E. Hendershot	Marshall Miller & Associates, Inc.
EPA-HQ-OAR-2011-0147-0010	Brad Upton	National Council for Air and Stream Improvement, Inc. (NCASI)
EPA-HQ-OAR-2011-0147-0011	Anonymous public comment	
EPA-HQ-OAR-2011-0147-0012	Robert Rouse	Global Climate Change Regulatory Affairs Leader, The Dow Chemical Company
EPA-HQ-OAR-2011-0147-0013	Robert A. Reich	DuPont Safety, Health & Environment and Sustainable Growth Center
EPA-HQ-OAR-2011-0147-0014	William W. Grygar II	Anadarko Petroleum Corporation
EPA-HQ-OAR-2011-0147-0015	Amy E. Hendershot	Marshall Miller & Associates, Inc.
EPA-HQ-OAR-2011-0147-0016	Karin Ritter	American Petroleum Institute (API)
EPA-HQ-OAR-2011-0147-0017	Joel R. Hall	Mexichem Fluor, Inc.
EPA-HQ-OAR-2011-0147-0018	David Isaacs	Semiconductor Industry Association (SIA)
EPA-HQ-OAR-2011-0147-0019	Jerry Call	American Foundry Society (AFS)
EPA-HQ-OAR-2011-0147-0020	Grover R. Campbell and V. Bruce Thompson	Chesapeake Energy Corporation (Chesapeake) and American Exploration & Production Council (AXPC)
EPA-HQ-OAR-2011-0147-0021	Jerry Schwartz	American Forest & Paper Association (AF&PA)
EPA-HQ-OAR-2011-0147-0022	Kyle Pitsor	National Electrical Manufacturers Association (NEMA)
EPA-HQ-OAR-2011-0147-0023	Stephen E. Woock	Weyerhaeuser Company
EPA-HQ-OAR-2011-0147-0024	Gary Stahle	General Motors Company
EPA-HQ-OAR-2011-0147-0025	Angie Burckhalter	Oklahoma Independent Petroleum Association (OIPA)
EPA-HQ-OAR-2011-0147-0026	Thomas C. Perry	National Mining Association (NMA)

LIST OF COMMENTERS

DCN	Commenter Name	Commenter Affiliation
EPA-HQ-OAR-2011-0147-0027	Robert A. Reich	DuPont Safety, Health & Environment and Sustainable Growth Center
EPA-HQ-OAR-2011-0147-0028	Pamela A. Lacey	American Gas Association (AGA)
EPA-HQ-OAR-2011-0147-0029	Lisa Beal	Interstate Natural Gas Association of America (INGAA)
EPA-HQ-OAR-2011-0147-0030	Jeff Applekamp	Gas Processors Association (GPA)
EPA-HQ-OAR-2011-0147-0031	Brendan Mascarenhas	American Chemistry Council (ACC)
EPA-HQ-OAR-2011-0147-0032	Willie R. Taylor	Office of Environmental Policy and Compliance, United States Department of the Interior

1.0 GENERAL COMMENTS ON THE EFFECTIVE DATE

1.1 How these amendments apply to 2012 GHG emission reports

Commenter Name: Willie R. Taylor

Commenter Affiliation: Office of Environmental Policy and Compliance, United States
Department of the Interior

Document Control Number: EPA-HQ-OAR-2011-0147-0032

Comment Excerpt Number: 2

Comment: *Section I Background, D. How would these amendments apply to 2012 reports?*

Third paragraph: the EPA proposes to change the threshold for underground coal mines, which will change the reporting requirements for approximately 500 mines. The [National Park Service] suggests adding a guidance document to include specific dates and clarity on the change of the definition "supplier," and clarity on various options for calculating emissions for mines.

Response: The amendment to the definition of "supplier" is a clarification for reporters under subparts MM (Suppliers of Petroleum Products), NN (Suppliers of Natural Gas and Natural Gas Liquids), OO (Industrial Gas Suppliers), PP (Suppliers of CO₂), and QQ (Imports and Exports of Equipment Pre-charged with Fluorinated GHGs or Containing Fluorinated GHGs in Closed-cell Foams) and does not affect entities subject to subpart FF (Underground Coal Mines).

The GHG Reporting Program collects data on GHG emissions from both upstream production and downstream sources, as appropriate. The rule requires reporting by facilities that directly emit GHGs above the selected threshold as a result of combustion of fuel or industrial processes (downstream sources). The rule also requires upstream suppliers of fossil fuels and industrial GHGs to report the GHG emissions that could be emitted from combustion or use of the quantity of certain products supplied into the economy. There are no requirements for coal suppliers in the current rule, because the vast majority of emissions from combustion of coal in the United States is already covered by the rule through reporting by direct emitters (see 75 FR 39736, issued July 12, 2010).

The amendments to Table A-3 and 40 CFR 98.322(f) revise the threshold for direct methane emissions from underground coal mines (downstream sources) subject to subpart FF to include only those that have ventilation emissions of 36,500,000 acf of CH₄ or more per year. The previous threshold would have required reporting from all underground coal mines that are subject to quarterly or more frequent sampling by MSHA of ventilation systems, regardless of size. Furthermore, the amendment clarifies the intended threshold from proposal (74 FR 16553) and ensures the rule captures the gassiest mines that are responsible for the majority of emissions from underground coal mines, without inadvertently requiring less gassy mines to report. Therefore, approximately 500 mines will no longer be required to report. EPA has provided methods and additional information for calculating direct methane emissions from underground coal mines in the final rule, preamble, and accompanying information sheet (see <http://www.epa.gov/climatechange/emissions/subpart/ff.html>).

2.0 COMMENTS ON SUBPART A (GENERAL PROVISIONS)

2.1 Extension of the 2012 Reporting Deadline

Commenter Name: Robert Rouse

Commenter Affiliation: Global Climate Change Regulatory Affairs Leader, The Dow Chemical Company

Document Control Number: EPA-HQ-OAR-2011-0147-0012

Comment Excerpt Number: 1

Comment: EPA has proposed to delay the 2012 reporting for the new source categories until September 30, 2012. As EPA indicates, this will provide additional time for the development and testing of e-GGRT as it is modified to accept the data for these new source categories. This will also provide the affected facilities with additional time to quality check their data and processes for collecting and estimating emissions.

Dow, however, has some concerns regarding the impact of having two separate reporting dates for the same reporting year:

The first and most obvious is that having the two dates will require two separate reporting events that will certainly be less efficient for personnel assembling the data and submitting the reports.

There is also concern as to how e-GGRT will accommodate this situation. Currently any time a reporter switches input methods between XML upload and manual data entry, the existing data is deleted. Having this occur in September with data that has already been submitted and accepted by EPA in March, would be unacceptable.

Although all of Dow's sites used the manual data entry mode this year, but it is our hope that the XML schema can be used next year as we will have had adequate time to review it and adapt our internal system and vendor software. It is not expected that XML schema and associated guidance will be released in time to make these modifications to allow the use of the schema for the new source categories, so manual entry will be used. This use of the manual data entry feature in September must not impact the data that was submitted in March.

Additional confusion could arise as requirements for some portions of a new source category could require additional reporting under an existing source category. For instance, a facility that has an industrial waste landfill subject to reporting (new source category) that captures and combusts its landfill gas, also has some requirements under the stationary combustion source category (old source category). For these reasons it is recommended that EPA delay all reporting of 2011 data until September 30, 2012. Alternatively, it is recommended that this delay until September 30, 2012 apply to all source categories being reported by a facility with reporting obligations for one of the new source categories.

Consistent with previous comment submittals, Dow continues to believe that there is justification for moving the reporting due date for future years until later in the calendar year. Dow currently has a comprehensive program in place to collect and report all emissions and other environmental data. This program is designed to ensure that the company collects complete and accurate data. After submission by the individual manufacturing units, the data goes through

internal review at the site, business and corporate levels to ensure we have the best data possible. With this process, the data is finalized in mid to late April. Additionally, the GHG reporting rule includes significant reporting requirements in addition to the emission values. As such, preparation, review and certification of the report will take considerable time and effort for each facility.

During the first quarter of each year the personnel responsible for GHG reporting are deeply involved in several other environmental data collection and reporting activities. One facility that currently reports under the GHG reporting rule has in excess of 100 stationary combustion units, along with other source categories. At the current time, completion of the first submission is only partially complete, but it is estimated that assembling and inputting all of the data will require in excess of 120 man-hours. Approximately half of this time is for actual entry of the data for just the combustion devices. Dow recognizes that this resource requirement will be reduced in future years, but it will still be require a significant amount of time on the part of certain individuals during the time of year when their workload is also at its peak.

Dow recognizes that the use of e-GGRT helps to streamline the reporting process, but this rule still requires assembling and entering very large amounts of data. Although data is collected throughout the year, the calculations cannot be made and the data cannot be entered until after the first of each year.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

The commenter observed that reporters cannot currently switch between XML and webforms in e-GGRT without losing data. The commenter was concerned that if there are two reporting deadlines in 2012, the facility would lose data if they were to switch between XML for the March deadline and webforms for the September deadline. As noted, we are finalizing only one September deadline for facilities and suppliers with sources required to begin data collection in 2011. However, one deadline does not address the commenter's concern. During the 2011 reporting year, facilities and suppliers could not switch between XML and webforms, and it is possible that this capability will not be available for the 2012 reporting year, even if there is only one deadline. EPA will work to finalize a draft version of the XML schema as early as possible for the source categories required to report in September 2012, which will increase the likelihood that, for interested facilities and suppliers, all data could be submitted via XML.

Commenter Name: William W. Grygar II

Commenter Affiliation: Anadarko Petroleum Corporation

Document Control Number: EPA-HQ-OAR-2011-0147-0014

Comment Excerpt Number: 1

Comment: Anadarko supports the amendments to Subpart A under 98.3(b) changing the reporting date for calendar year 2011 from March 31, 2012 to September 28, 2012. Anadarko strongly believes, however, that if a reporter is applicable to this amended deadline because of their requirement to report under a subpart listed in paragraphs (b)(1)(i) through (b)(1)(xii), the reporter should be able to report under all subparts under which its applicable by the amended September 28, 2012 deadline. For example, if a facility is applicable under Subparts C, W, and

NN, Anadarko respectfully wishes that rather than having to negotiate two reporting deadlines in 2012, this facility/supplier be allowed to report emissions under all applicable subparts by September 28, 2012. For complex exploration and production companies that have significant amounts of data to compile, calculations to perform, and information to report, many resources that are currently devoted to integrating various systems and databases to maximize reporting efficiency in alignment with e-GGRT. Significant resources are also needed to register and prepare facilities in the e-GGRT system before report submittal can take place. Anadarko has dozens of facilities reporting under Subpart C alone, many of which will be also reporting under Subpart W. To establish two reporting periods for these facilities introduces an unnecessary duplication of efforts and reporting burden.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Karin Ritter

Commenter Affiliation: American Petroleum Institute (API)

Document Control Number: EPA-HQ-OAR-2011-0147-0016

Comment Excerpt Number: 2

This comment was additionally incorporated by reference by the following commenters:

Commenter Name: Grover R. Campbell and V. Bruce Thompson

Commenter Affiliation: Chesapeake Energy Corporation (Chesapeake) and American Exploration & Production Council (AXPC)

Document Control Number: EPA-HQ-OAR-2011-0147-0020

Comment Excerpt Number: 3

Commenter Name: Jeff Applekamp

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2011-0147-0030

Comment Excerpt Number: 4

Comment: EPA has proposed to move the reporting date for the first year of reporting under Subparts W, II, RR, TT, and UU (among others) until September 28, 2012.

API supports the delayed reporting date for Subpart W until September 28, 2012. However, this may complicate reporting for facilities managing multiple reporting dates in 2012. A gas plant, for example, may be reporting 2011 direct emissions for the first time in 2012. This facility would have to report Subpart C emissions on March 31, but Subpart W emissions on September 28.

API requests for facilities with reporting obligations for multiple subparts, that reporting be delayed for all subparts, particularly for a facility that did not previously trigger the 25,000 tonne CO_{2e} threshold, and therefore did not report greenhouse gas (GHG) emissions in 2011.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Joel R. Hall
Commenter Affiliation: Mexichem Fluor, Inc.
Document Control Number: EPA-HQ-OAR-2011-0147-0017
Comment Excerpt Number: 1

Comment: Mexichem supports the EPA's proposal to extend the 2012 reporting deadline for facilities and suppliers subject to source categories for which data collection began January 1, 2011. Mexichem Fluor believes that extending the deadline from March 31, 2012 to September 28, 2012 will allow development and testing of the electronic-GHG Reporting Tool (e-GGRT) to ensure that data received under the program are of the highest quality. Mexichem Fluor also wishes to encourage the EPA to consider further extension of the reporting deadline (beyond September 28, 2012) if necessary to allow any development or testing necessary to ensure that the data submitted is of the highest quality.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: David Isaacs
Commenter Affiliation: Semiconductor Industry Association (SIA)
Document Control Number: EPA-HQ-OAR-2011-0147-0018
Comment Excerpt Number: 1

Comment: SIA supports EPA's proposal for a deadline extension from March 31, 2012 to September 28, 2012 for several source categories, including Subpart I. Subpart I covers electronics manufacturing, including semiconductor manufacturing. As explained by the EPA in the preamble to the proposal, an extension of the deadline for the 2011 reporting year is appropriate for Subpart I to allow sufficient time for development stakeholder testing of the electronic-GHG Reporting Tool (e-GGRT). It is our understanding that EPA and stakeholders have encountered problems in the past with the e-GGRT, and an extension for the 2011 reporting year would be useful to provide time to improve the system and avoid problems going forward. As a result, a six month extension of the 2012 reporting deadline for the new 2011 reporting year would be appropriate.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Jerry Schwartz
Commenter Affiliation: American Forest & Paper Association (AF&PA)
Document Control Number: EPA-HQ-OAR-2011-0147-0021
Comment Excerpt Number: 1

Comment: AF&PA agrees that EPA should allow an extension of the reporting deadline from March 31, 2012 until September 28, 2012 regarding Industrial Wastewater Treatment (subpart II) and Industrial Waste Landfills (subpart TT). This will enable our facilities to be better prepared to report, using the electronic GHG Reporting Tool.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Kyle Pitsor

Commenter Affiliation: National Electrical Manufacturers Association (NEMA)

Document Control Number: EPA-HQ-OAR-2011-0147-0022

Comment Excerpt Number: 1

Comment: These comments are submitted on behalf of the Ad Hoc SF₆ Task Group, a coalition of NEMA and non-NEMA member companies that manufacture and distribute SF₆ gas and SF₆ gas-containing products, as well as SF₆ support industries. The NEMA Ad Hoc SF₆ Task Group supports the Agency's proposal of a one-time extension of the reporting deadline from March 31, 2012 to September 28, 2012 for the following source categories: Fluorinated Gas Production (subpart L), Use of Electric Transmission and Distribution Equipment (subpart DD), Imports and Exports of Equipment Pre-charged with Fluorinated GHGs or Containing Fluorinated GHGs in Closed-cell Foams (subpart QQ), and Manufacture of Electric Transmission and Distribution (subpart SS).

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Stephen E. Woock

Commenter Affiliation: Weyerhaeuser Company

Document Control Number: EPA-HQ-OAR-2011-0147-0023

Comment Excerpt Number: 1

Comment: We support the proposed change in §98.3 (b)(1) to provide a one-time, six month extension of the 2012 reporting deadline for the subparts listed, including Subpart TT. This extension provides a similar overall timeline as the reporting deadline deferral to September 2011 that was provided to the other subparts this year. It also should, barring unforeseen circumstances, provide reasonable time for development and testing of the e-GGRT sections for Subpart TT and other subpart data collected first in 2011, so that disruptions to the actual reporting process are minimized.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Jerry Call

Commenter Affiliation: American Foundry Society (AFS)

Document Control Number: EPA-HQ-OAR-2011-0147-0019

Comment Excerpt Number: 1

Comment: AFS appreciates the proposed delay in the reporting deadline from March 31, 2012 until September 28, 2012. AFS requests that EPA consider a one-year extension to the

applicability of the reporting rule until January 1, 2012 (i.e., first reporting year being 2012 instead of 2011) based on the complexity of the rule, as well as the regulatory confusion and uncertainty resulting from the numerous errors and clarification issues associated with the reporting requirements and methodologies. This extension would provide additional time for facilities to more accurately calculate potential GHG emissions from industrial waste landfills.

Response: Please see Section II.A of the preamble to the final rule for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

As described in the preamble to the proposed rule, the extension of the reporting deadline was deemed necessary in order to allow sufficient time for development, and more importantly stakeholder testing, of e-GGRT. Stakeholder testing provided a valuable opportunity for EPA to receive feedback from reporters and other interested stakeholders in 2011 and enabled EPA to test the effectiveness of the user interface of e-GGRT, correct any problems in advance of the 2011 reporting deadline, and ultimately ensure that the data received under the program were of the highest quality.

EPA did not propose to extend the applicability of Part 98 in the proposed rule, nor does EPA find such an extension needed, therefore EPA disagrees with the comment to have the initial date for data collection delayed from January 1, 2011 to January 1, 2012. The requirements for all subparts required to begin data collection on January 1, 2011 were finalized during 2010. The rule for industrial landfills, for example, was finalized in July 2010. Owners and operators at facilities for which data collection for one or more source categories began in 2011, including industrial landfills, had the opportunity to request use of Best Available Monitoring Methods during part or all of 2011 from EPA if they could demonstrate that it would not be reasonably feasible to acquire, install, and operate a required piece of monitoring equipment by January 1, 2011.

Further, since finalization of the rule requirements for these subparts, EPA has conducted significant stakeholder outreach to convey rule requirements and address questions from industry as they implement the rule requirements. The technical corrections, clarifications, and other amendments finalized in this rulemaking are in response to those specific questions.

Commenter Name: Gary Stahle

Commenter Affiliation: General Motors Company

Document Control Number: EPA-HQ-OAR-2011-0147-0024

Comment Excerpt Number: 1

Comment: GM agrees with EPA that a delay in the reporting deadline is warranted, however, we request that EPA provide a one-year extension of the reporting rule until January 1, 2012 (i.e., first reporting year being 2012 instead of 2011). Such an extension is needed due to the complexity of the rule and the uncertainty associated with this new rulemaking. A one-year extension would provide the extra time needed for facilities to digest the changes which will result from this rulemaking and to provide better data.

Response: EPA disagrees that a one-year extension is needed at this time. Please see response to EPA-HQ-OAR-2011-0147-0019, Excerpt 1. Also see preamble Section II.A.2, Subpart A –

General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Angie Burckhalter

Commenter Affiliation: Oklahoma Independent Petroleum Association (OIPA)

Document Control Number: EPA-HQ-OAR-2011-0147-0025

Comment Excerpt Number: 1

Comment: EPA proposes to change the 2012 reporting deadline from March 31, 2012 to September 28, 2012 for a number of subparts, including Subpart W. Many small businesses are struggling to determine applicability. EPA's applicability tool drastically overestimates the emissions from onshore oil and gas production sites requiring operators, sometimes needlessly, to conduct further costly analysis. Smaller operators typically don't have dedicated staff to work air issues and need more time to better understand the rule, train personnel as needed, establish procedures and protocols. They then have the feat of collecting necessary information with limited staff. Many oil and gas sites within a basin are unique based on the type and volume of produced hydrocarbons, the type of equipment at each facility, and are typically located over a broad area that is remote in nature making it more difficult to collect the data in a timely manner. Furthermore, small businesses then have to conduct detailed calculations to determine applicability with the resources they have or hire a consultant to collect and calculate the emissions. We think EPA's schedule of data collection and reporting is not appropriate for reporters of GHG emissions from onshore oil and gas production sites. EPA should reconsider the data collection time period for Subpart W for onshore production sites and begin data collection for calendar year 2012 with reporting due on March 31, 2013. If EPA does not change the data collection time period, at a minimum, EPA should amend the reporting deadline for the 2011 data collection period to be no earlier than March 31, 2013. Subsequently, the reporting deadline for the 2012 data collection period should be delayed.

Response: Please see response to EPA-HQ-OAR-2011-0147-0019, Excerpt 1. See Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011. As described therein, the extension of the reporting deadline was deemed necessary in order to allow sufficient time for development, and more importantly stakeholder testing, of e-GGRT. EPA did not propose to extend the start date for data collection for 40 CFR part 98, subpart W in the proposed rule, nor does EPA find such an extension needed, as discussed in our response to comment EPA-HQ-OAR-2011-0147-0019, excerpt 1. The 2010 final rule requirements for subpart W also responded to concerns about data collection beginning January 1, 2011 (please see 75 FR 74470). Therefore EPA disagrees with the comment to have the beginning of data collection for Subpart W postponed to calendar year 2012.

We disagree with the comment that if EPA decides not to delay the start date for data collection under subpart W that EPA should extend the first reporting deadline to March 31, 2013. EPA responded to a number of comments in the finalization of the 2009 final Mandatory Reporting of Greenhouse Gases rule and the original subpart W rule requirements in November 2010, providing a rationale for retaining a reporting deadline of March 31 of the year following the

year in which the data are collected (please see Section 2.F of the preamble to the final Mandatory Reporting of Greenhouse Gases rule (74 FR 56278) and the Response to Comments: Reporting Rule Subpart W – Petroleum and Natural Gas: EPA's Response to Public Comments, Part 1 and Part 2).

We recognize that the applicability tool may be a conservative estimate of who is required to report under any subpart, including subpart W. As conveyed in the disclaimer on the applicability tool, “[t]he content provided in the applicability tool is intended solely as compliance assistance for potential reporters to aid in assessing whether they are required to report under the Greenhouse Gas Mandatory Reporting Rule... While this tool is designed to help potential reporters comply with the rule, compliance with all Federal, State, and Local laws and regulations remains the sole responsibility of each facility owner or operator subject to those laws and regulations. Use of this tool does not constitute an assessment by EPA of the applicability of the rule to any particular facility. In any particular case, EPA will make its assessment by applying the law and regulations to the specific facts of the case....”

Most facilities will be able to clearly determine if they are subject to the rule using these simplified methods. Those facilities whose emission estimates show CO₂e emissions to be near the 25,000 tons/year threshold may choose to monitor emissions to determine applicability. EPA developed the applicability tool using best available information at the time of the tool development. We may consider updating that tool, if needed, as additional data become available.

Commenter Name: Robert Rouse

Commenter Affiliation: Global Climate Change Regulatory Affairs Leader, The Dow Chemical Company

Document Control Number: EPA-HQ-OAR-2011-0147-0012

Comment Excerpt Number: 5

Comment: In the preamble to the final rule (FR56278, October 30, 2009) EPA stated that it has "determined that the reporting deadline of March 31 allows sufficient amount of time for compiling, reviewing, certifying and submitting annual GHG Reports". It is not clear how EPA made this determination without any analysis of the required work processes or before the reporting system was even close to being defined. It is requested that EPA revisit this determination and take in to account the following:

- Actual resource requirements for large complex facilities (as indicated above)
- Reporting requirements for the source categories added to the rule since the initial rule was finalized
- Other EPA reporting burdens

How this fits with any defined timelines EPA has for using the reported data.

Dow currently participates in a few voluntary GHG reporting programs that have reporting deadlines later in the year. As Dow and other companies already have existing reporting processes developed, EPA should work to fit this rule into those processes. A reporting date of

July 1 is suggested as it is similar to other GHG reporting programs and Toxic Release Inventory reporting, however even moving the date by a month or two would greatly reduce the impact of this reporting burden.

Response: EPA has provided the rationale for the annual March 31st deadline in the 2009 final Mandatory Reporting of Greenhouse Gases rule. Please refer to Section 2.J of the preamble to that final rule (74 FR 56278). Revisiting the annual March 31st deadline would require notice and comment, which was not consistent with the intent or proposed amendatory language in this action.

Commenter Name: Robert A. Reich

Commenter Affiliation: DuPont Safety, Health & Environment and Sustainable Growth Center

Document Control Number: EPA-HQ-OAR-2011-0147-0027

Comment Excerpt Number: 1

Comment: DuPont strongly supports the proposed amendment to §98.3(b)(1) to allow until September 28, 2012, for reporting of 2011 emissions under subparts that were not promulgated or finalized until 2011. This one-time deadline modification is consistent with the modification provided in 2011 for previously promulgated subparts.

We are concerned, however, regarding the capabilities of e-GGRT to handle multiple submittal deadlines. We encourage the Agency to assure that e-GGRT will not create errors when the second set of reporting data is being entered in 2012. Issues such as over-writing should be considered and tested. This should include reporting against the March deadline directly to e-GGRT but reporting using XML upload against the September deadline.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011. For a response to the concerns about reporting directly to EPA using webforms for some source categories and XML for other source categories, please see response to comment EPA-HQ-OAR-2011-0147-0012, excerpt 1.

Commenter Name: Pamela A. Lacey

Commenter Affiliation: American Gas Association (AGA)

Document Control Number: EPA-HQ-OAR-2011-0147-0028

Comment Excerpt Number: 2

Comment: AGA strongly supports EPA's proposal to allow a one-time six-month extension of the 2012 reporting deadline for facilities and suppliers subject to reporting for source categories such as Subpart W for which data collection began Jan. 1, 2011. See 76 Fed. Reg. at 47,396.

The proposed reporting deadline extension from March 31, 2012 until Sept. 28, 2012 is especially critical for Subpart W sources, because EPA recently proposed several significant changes in Subpart W that would alter the universe of locations subject to the annual on-site leak survey requirement in 2011. The current rule requires natural gas local distribution companies (LDCs) to use methane monitoring equipment such as infrared cameras or equipment qualifying under "Method 21" to search for leaking components in meter runs that they operate at "custody

transfer city gate stations." AGA members had a great deal of difficulty and confusion in determining which stations and components would be covered by the undefined terms in the existing rule. They have made their best guess and 'muddled through" for this year, but they will not be able to go back in time to survey different stations for 2011 after EPA issues the final revisions in December 2011. Fortunately, we understand that there will be flexibility to use Best Available Monitoring Methods (BAMM) to cope with the fact that our members cannot use a time machine to go back and survey a different universe of regulator stations in 2011 to comply with a rule that will not be final until December 2011. That will be essential. In addition, our members will need additional time to determine the extent to which their work in 2011 will fit the requirements of the December 2011 rule, and to what extent they will need to use BAMM.

Moreover, as we found this year with respect to reporting 2010 emissions under other portions of Part 98, both the agency and stakeholders will need the additional time to develop and beta-test the electronic reporting forms needed to make e-GRRT conform to the newly revised provisions of the mandatory GHG reporting rules. It will not be possible to complete this process by March 30, 2012 for rule revisions that will not be finalized until December 2011. EPA and stakeholders needed a six month extension for a similar effort in 2011, and we can expect to need the same amount of time in 2012 to incorporate the December 2011 revisions and get e-GRRT ready for reporting under the new requirements by September 28, 2012.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Lisa Beal

Commenter Affiliation: Interstate Natural Gas Association of America (INGAA)

Document Control Number: EPA-HQ-OAR-2011-0147-0029

Comment Excerpt Number: 1

Comment: In Subpart A, proposed revisions to §98.3(b)(1) change the reporting deadline for Subpart W sources to September 28, 2012. INGAA supports this revision. However, T&S sources also include combustion sources that report under Subpart C, and the Proposed Rule retains a March 31, 2012 deadline for reporting those emissions. A single reporting deadline should apply for annual reporting. For 2012, Subpart W affected facilities should not need to file multiple reports and a single reporting deadline of September 28, 2012 should apply. All emission (i.e., both Subpart C and Subpart W sources) would be reported at that time. Multiple reports and deadlines add unnecessary complexity and burden and a single annual report is appropriate.

Moreover, EPA has not adequately explained how multiple reports for a single facility would work or considered implementation complexities. For example, Subpart A information would presumably be included in both Subpart C and Subpart W reports. If Subpart A and C data are submitted in March, the requirements are unclear regarding submittal of these data in September with Subpart W data. Clarifying this issue while retaining two deadlines will result in either multiple partial reports or duplicative reporting. In addition, multiple reporting deadlines will hinder the development and use of the XML reporting format. Most T&S companies that report

under this option will opt to design their reports only once and multiple 2012 reporting deadlines will cause unnecessary problems.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011.

Commenter Name: Jeff Applekamp

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2011-0147-0030

Comment Excerpt Number: 1

Comment: GPA supports the amendments to Subpart A under §98.3(b) changing the reporting date for calendar year 2011 from March 31, 2012 to September 28, 2012. GPA strongly believes, however, that if a reporter is subject to this amended deadline because of its requirement to report under a subpart listed in paragraphs (b)(1)(i) through (b)(1)(xii), the reporter should be able to report under all subparts to which it is subject by the amended September 28, 2012 deadline. For example, if a facility/supplier is subject to Subparts C, W, and NN, GPA respectfully requests that rather than having to report under two separate deadlines in 2012, this facility/supplier be allowed to report emissions under all applicable subparts by September 28, 2012. For midstream companies that have significant amounts of data to compile, calculations to perform, and information to report, many resources are currently devoted to integrating various systems and databases to maximize reporting efficiency in alignment with EPA's electronic greenhouse gas reporting tool (e-GGRT). Significant resources are also needed to register and prepare facilities in the e-GGRT system before report submittal can take place. To establish two reporting periods for these facilities introduces an unnecessary duplication of efforts and reporting burden.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011. Under the final rule, as long as the GHG information for the three subparts, C, W and NN, are submitted by a single designated representative (DR) in the same annual GHG report, the extension to September 28, 2012 would apply to all three subparts so as to avoid duplicative reporting. There may be instances where the DR for a facility reporting C and W emissions might be different than the DR reporting GHG information under subpart NN, and therefore two separate annual GHG reports are submitted. In this latter example, the facility reporting on their C and W emissions would report by September 28, 2012, but the GHG information from subpart NN would still be required to be reported by March 31, 2012.

Commenter Name: Brendan Mascarenhas

Commenter Affiliation: American Chemistry Council (ACC)

Document Control Number: EPA-HQ-OAR-2011-0147-0031

Comment Excerpt Number: 1

Comment: We fully support EPA's proposal to delay 2012 reporting for selected new source categories until September 30, 2012. As the Agency indicates, this delay would provide

additional time for EPA to develop and test its electronic greenhouse gas reporting tool (e-GGRT) as the tool is modified to accept data for these new source categories. The extension would also allow affected facilities more time to quality check their data and processes in order to more accurately collect and calculate emissions data.

While the proposal provides certain benefits, it also raises some considerations that deserve further attention before it is made final. ACC and its members are concerned about the potential confusion and burden of having two separate reporting dates in the same reporting year. A number of facilities required to submit a report in 2012 will be reporting for multiple subparts. If some subpart reporting dates are required by September 30, 2012, while other subparts meet a March 31, 2012 deadline, the personnel responsible for data collection and submission at these facilities will be burdened by duplicative efforts and inefficiency. In order to avoid this, we request that the Agency simply establish one reporting deadline for all subparts on September 30, 2012. A single deadline would allow for the effective facilitation of the phase-in period for new subparts, simplifying the reporting process and making it more efficient without sacrificing accuracy.

ACC also has concerns as to how e-GGRT will accommodate the proposed dual deadline. Currently, a switch in input methods between XML upload and manual data entry causes any existing data to be deleted. The two reporting dates create the possibility of deletion of data that has already been submitted and accepted by EPA during the first reporting period. The Agency might expect a facility to use the XML upload feature for the new subparts if it has been used for the first reporting period. However, this expectation raises a new set of concerns as the XML schema and its associated guidance documents for the new subparts may not be released in enough time to allow for use of the XML upload for new subparts in 2012. Additional confusion could arise as requirements for some portions of a new source category could require reporting under an existing source category. For instance, a facility that has an industrial waste landfill that captures and combusts its landfill gas will be reporting both by March 31, 2012 (combustion of gas) and again by September 30, 2012 (landfill).

ACC and its members request that EPA establish September 30, 2012 as the only deadline for all reporting of 2011 data. Alternatively, we request that EPA consider allowing those sources subject to both the existing and new source categories to defer their reporting until September 30, 2012.

Response: See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on the 2012 reporting deadline for facilities and suppliers with a source category required to begin data collection in 2011. For a response to the concerns about reporting directly to EPA using webforms for some source categories and XML for other source categories, please see response to comment EPA-HQ-OAR-2011-0147-0012, excerpt 1.

2.3 Definition of supplier

Commenter Name: Robert Rouse

Commenter Affiliation: Global Climate Change Regulatory Affairs Leader, The Dow Chemical Company

Document Control Number: EPA-HQ-OAR-2011-0147-0012

Comment Excerpt Number: 2

Comment: The proposed change to the definition of "supplier" and the modification to table A-5 do indeed clarify EPA's intention for applicability to Subpart MM, however Dow recommends that the applicability of this subpart be further modified. EPA has stated that reporting of imported petroleum products is required, even if the materials are not used as a fuel or otherwise combusted.

Dow imports petroleum feedstocks used exclusively to produce ethylene. Even though these materials are used only as feedstocks and not combusted, the rules require the reporting of hypothetical emissions as if they were combusted. It is not clear what, if any, useful information is conveyed by reporting hypothetical emissions that are known not to exist. Additionally, Dow is required to report any actual GHG emissions associated with the use of these feedstocks under subpart X.

It is recommended that the language or the applicability of subpart MM be modified to exclude importers meeting the following criteria:

- All of the imported material is used exclusively by the importer and is not sold or distributed to any non-affiliated companies, and
- The materials are not combusted, and
- The material is used in a process required to report its emissions under 40 CFR Part 98

Absent these changes, EPA should clearly articulate their reasoning for requesting these hypothetical emissions that are known to be incorrect and how this will aid in the formation of climate policy.

Response: EPA has considered this comment and concludes it is out of scope with the technical corrections, clarifying, and other amendments to certain provisions of the GHG Reporting Rule. The commenter requests changes to the applicability of subpart MM to imported petroleum products not used as fuel or otherwise combusted. As stated in the proposal preamble to this rule (76 FR 47397), the proposed clarification was necessary because during 2010 EPA changed the definition of fossil fuels in a final rule (75 FR 79092) that could wrongly be interpreted to exclude some suppliers that are clearly subject to the rule. During that 2010 final rulemaking, as well as the proposal to this rule (see 76 FR 47397), it was clear in the respective preambles that we did not intend to change applicability under subpart MM. We intended to maintain the coverage that was in the 2009 final rule. Please see the preamble to the final 2009 rule (74 FR 56343) where we describe EPA's rationale for requiring reporting on products with potentially non-emissive uses.

2.4 Clarification on submission of reports and other information to EPA

Commenter Name: Robert Rouse

Commenter Affiliation: Global Climate Change Regulatory Affairs Leader, The Dow Chemical Company

Document Control Number: EPA-HQ-OAR-2011-0147-0012

Comment Excerpt Number: 3

Comment: The proposed changes to 40 CFR 98.9 provides additional clarity to where and how various documents, reports and requests should be submitted to EPA. The fact that subparts LL and MM are required to submit reports using the DCFuels program rather than the electronic greenhouse gas reporting tool, and are not mentioned in this portion of the rule, could lead to some confusion. It is recommended that the use of DCFuels for subparts LL and MM be reflected in this portion of the rule. It should also be noted that while the DCFuels system easily facilitates the electronic submission of documents, it does allow that they be mailed in and that the address for these submissions is different than that listed in 40 CFR 98.9.

Response: The new language at 40 CFR 98.9 states in part that "[a]ll requests, notifications, and communications to the Administrator pursuant to this part must be submitted electronically and in a format as specified by the Administrator." The Administrator has specified for subparts LL and MM how reporters should register for the GHG Reporting Program as well as how reports should be submitted (see <http://www.epa.gov/otaq/fuels/reporting/programsregistration.htm> and <http://www.epa.gov/otaq/fuels/reporting/ghg-llmmreporting.htm> respectively). The alternate filing method for reports, which allows reporters to submit electronic reports by mail, will not be available in subsequent years. The new language covers subparts LL and MM as well as the remainder of 40 CFR 98.

2.5 Other comments on Subpart A

Commenter Name: Karin Ritter

Commenter Affiliation: American Petroleum Institute (API)

Document Control Number: EPA-HQ-OAR-2011-0147-0016

Comment Excerpt Number: 3

This comment was additionally incorporated by reference by the following commenters:

Commenter Name: Grover R. Campbell and V. Bruce Thompson

Commenter Affiliation: Chesapeake Energy Corporation (Chesapeake) and American Exploration & Production Council (AXPC)

Document Control Number: EPA-HQ-OAR-2011-0147-0020

Comment Excerpt Number: 3

Commenter Name: Jeff Applekamp

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2011-0147-0030

Comment Excerpt Number: 4

Comment: EPA clarified that recordkeeping retention begins when the data are submitted to EPA.

This revision implies that if a facility submitted GHG reporting data on, for example February 1, recordkeeping retention would begin on February 1. For a company with multiple reporting

facilities, this could result in many different record retention periods where reporting submittals are staggered. Tracking many different record retention time periods will complicate internal reviews conducted by companies as well as EPA audits. API requests that EPA establish a consistent starting date of December 31, corresponding to the reporting year, for the retention of all applicable MRR records.

Response: EPA has finalized the clarification on the recordkeeping retention requirements, as proposed. See preamble Section II.A.2, Subpart A – General Provisions: Summary of Comments and Responses, for the response on recordkeeping retention timelines for companies with multiple reporting facilities.

Commenter Name: Karin Ritter

Commenter Affiliation: American Petroleum Institute (API)

Document Control Number: EPA-HQ-OAR-2011-0147-0016

Comment Excerpt Number: 4

This comment was additionally incorporated by reference by the following commenters:

Commenter Name: Grover R. Campbell and V. Bruce Thompson

Commenter Affiliation: Chesapeake Energy Corporation (Chesapeake) and American Exploration & Production Council (AXPC)

Document Control Number: EPA-HQ-OAR-2011-0147-0020

Comment Excerpt Number: 3

Commenter Name: Jeff Applekamp

Commenter Affiliation: Gas Processors Association (GPA)

Document Control Number: EPA-HQ-OAR-2011-0147-0030

Comment Excerpt Number: 4

Comment: EPA is proposing to allow information to be submitted to EPA on the next business day in the event that a regulatory deadline falls on a weekend or Federal holiday.

API supports this revision. This would prevent a situation similar to the facility and Designated Representative registration that was originally due on Sunday, January 30 (60 days before the original March 31, 2011 reporting deadline) for 2010 GHG emissions data.

Response: EPA has finalized the computation of time provisions, as proposed. See preamble Section II.A.1, Subpart A – General Provisions: Summary of Final Amendments and Major Changes Since Proposal, for the provisions for computation of time.

Commenter Name: Robert A. Reich

Commenter Affiliation: DuPont Safety, Health & Environment and Sustainable Growth Center

Document Control Number: EPA-HQ-OAR-2011-0147-0027

Comment Excerpt Number: 2

Comment: DuPont appreciates the recognition of weekends and holidays under §98.3(b)(4) in the reporting deadlines.

Response: EPA has finalized the computation of time provisions, as proposed. See the preamble Section II.A.1, Subpart A – General Provisions: Summary of Final Amendments and Major Changes Since Proposal, for the provisions of computation of time.

Commenter Name: Pamela A. Lacey
Commenter Affiliation: American Gas Association (AGA)
Document Control Number: EPA-HQ-OAR-2011-0147-0028
Comment Excerpt Number: 1

Comment: We support the clarification that where a deadline for submitting information falls on a weekend or Federal holiday, the information may be submitted to EPA on the next business day. See 76 Fed. Reg. at 47,396. This will be consistent with the familiar rule for computation of time used by the federal courts and other EPA programs. It will also ensure that facilities and suppliers have the time intended for developing good quality data rather than cutting that time short by forcing them to file early (on the day before the holiday or weekend), and it will remove a potential trap for the unwary.

Response: EPA has finalized the computation of time provisions, as proposed. See the preamble Section II.A.1, Subpart A – General Provisions: Summary of Final Amendments and Major Changes Since Proposal, for the provisions of computation of time.

Commenter Name: Karin Ritter
Commenter Affiliation: American Petroleum Institute (API)
Document Control Number: EPA-HQ-OAR-2011-0147-0016
Comment Excerpt Number: 5

This comment was additionally incorporated by reference by the following commenters:

Commenter Name: Grover R. Campbell and V. Bruce Thompson
Commenter Affiliation: Chesapeake Energy Corporation (Chesapeake) and American Exploration & Production Council (AXPC)
Document Control Number: EPA-HQ-OAR-2011-0147-0020
Comment Excerpt Number: 3

Commenter Name: Jeff Applekamp
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2011-0147-0030
Comment Excerpt Number: 4

Comment: EPA is amending §98.2(d) to require that emissions from the quantity of GHGs imported and exported should be calculated separately for comparison to the 25,000 metric ton CO₂e threshold. API supports this revision.

Response: EPA has finalized the clarification on the reporting threshold for importers and exporters, as proposed. See preamble Section II.A.1, Subpart A – General Provisions: Summary of Final Amendments and Major Changes Since Proposal, for the clarification regarding applicability of the 25,000 mtCO₂e threshold to importers and exporters separately.

Commenter Name: Robert A. Reich

Commenter Affiliation: DuPont Safety, Health & Environment and Sustainable Growth Center

Document Control Number: EPA-HQ-OAR-2011-0147-0027

Comment Excerpt Number: 3

Comment: The only apparent change to §98.3(b)(10) related to NAICS code reporting is the change from “reporting entity” to facility or supplier” at a number of locations. However, there remains an unreasonable expectation where a supplier must report aggregated information at the corporate level, such as under the importer or exporter reporting requirements under Subpart OO. In such cases, suppliers are required to “[r]eport *all* additional NAICS codes that describe *all* product(s)/activity(s)/service(s) at the facility or supplier that are not related to the principal source of revenue.” [emphasis added] A company that is required to aggregate its imports or exports specifically for N₂O or fluorinated greenhouse gases could have any number of sites that are or are not reporting under the MRR. It is unreasonable and irrelevant to require that the corporation report all NAICS codes across its enterprise simply because it is required to report as an N₂O or F-GHG importer or exporter. NAICS reporting makes sense for individual facilities; not for corporations.

Response: EPA has considered this comment, and concludes it is out of scope with the technical corrections, clarifying, and other amendments to certain provisions of the GHG Reporting Rule. The commenter is correct that the proposed amendment was limited to changing the term "reporting entity" to "facility or supplier." The clarified amendment to 40 CFR 98.3(b)(10) provides consistency across the individual subparts of the rule and clarifies that the obligation is on the owner or operator of any such facility or supplier. EPA has previously explained the rationale for corporate level reporting requirements in Section II.F of the preamble to the final rule (see 74 FR 56260, October 9, 2009) and the response to comment EPA-HQ-OAR-2008-0508-0408.1, excerpt 26 in the Response to Comments, Volume 40.

3.0 COMMENTS ON SUBPART W (PETROLEUM AND NATURAL GAS SYSTEMS)

EPA has decided not to finalize the proposed technical corrections, clarifying, and other amendments for the petroleum and natural gas sector under 40 CFR part 98, subpart W in this action. In order to allow for additional analysis and consideration of comments from the September 9, 2011 proposal that may affect the proposed technical corrections to subpart W, EPA has decided not to finalize these amendments at this time. See preamble Section II.B, Subpart W – Petroleum and Natural Gas Systems, for more information.

The following commenters provided input on subpart W:

Commenter Name: Amy E. Hendershot

Commenter Affiliation: Marshall Miller & Associates, Inc.

Document Control Number: EPA-HQ-OAR-2011-0147-0007, EPA-HQ-OAR-2011-0147-0008, and EPA-HQ-OAR-2011-0147-0015

Commenter Name: William W. Grygar II
Commenter Affiliation: Anadarko Petroleum Corporation
Document Control Number: EPA-HQ-OAR-2011-0147-0014

Commenter Name: Karin Ritter
Commenter Affiliation: American Petroleum Institute (API)
Document Control Number: EPA-HQ-OAR-2011-0147-0016

Commenter Name: Grover R. Campbell and V. Bruce Thompson
Commenter Affiliation: Chesapeake Energy Corporation (Chesapeake) and American Exploration & Production Council (AXPC)
Document Control Number: EPA-HQ-OAR-2011-0147-0020

Commenter Name: Angie Burckhalter
Commenter Affiliation: Oklahoma Independent Petroleum Association (OIPA)
Document Control Number: EPA-HQ-OAR-2011-0147-0025

Commenter Name: Pamela A. Lacey
Commenter Affiliation: American Gas Association (AGA)
Document Control Number: EPA-HQ-OAR-2011-0147-0028

Commenter Name: Lisa Beal
Commenter Affiliation: Interstate Natural Gas Association of America (INGAA)
Document Control Number: EPA-HQ-OAR-2011-0147-0029

Commenter Name: Jeff Applekamp
Commenter Affiliation: Gas Processors Association (GPA)
Document Control Number: EPA-HQ-OAR-2011-0147-0030

4.0 COMMENTS ON SUBPART FF (UNDERGROUND COAL MINES)

4.1 Applicability and threshold for Under ground Coal Mines

Commenter Name: Thomas C. Perry
Commenter Affiliation: National Mining Association (NMA)
Document Control Number: EPA-HQ-OAR-2011-0147-0026
Comment Excerpt Number: 1

Comment: On June 9, 2009, NMA filed comments on EPA's proposal to require subpart FF (underground coal mines) to comply with the mandatory GHG reporting requirements. *See* Docket No. EPA-HQ-OAR-2008-0508. NMA voiced its concern that EPA's reporting threshold requiring all underground coal mines, regardless of size, that are subject to quarterly or more frequent sampling by the Mining Safety and Health Administration ("MSHA") of ventilation systems to report GHG emissions would result in a tremendous paperwork and financial burden on these regulated entities. Moreover, EPA's proposed threshold would do little to further agency's environmental policy objectives. Accordingly, NMA is supportive of EPA's decision to revise the threshold for underground coal mines to include only those that liberate 36,500,000 actual cubic feet (acf) of methane (CH₄) or more per year (equivalent to 100,000 acf of CH₄ or more per day). 76 Fed. Reg. at 47,394. NMA encourages EPA to finalize this revision.

Response: EPA has finalized the threshold for underground coal mines, as proposed. See preamble Section II.C.2, Subpart FF – Underground Coal Mines: Summary of Comments and Responses, for the response on the revision to the threshold for underground coal mines.

4.2 Use of MSHA data

Commenter Name: Amy E. Hendershot

Commenter Affiliation: Marshall Miller & Associates, Inc.

Document Control Number: EPA-HQ-OAR-2011-0147-0009

Comment Excerpt Number: 1

Comment: We feel that the added requirement for the coal mines to collect a temperature reading at the same time and place as the MSHA samples are collected is an added burden and generally unnecessary. If (as proposed) the EPA allows pressure readings, which will be used in the calculations of the GHG emissions, to come from an above - ground NOAA weather station somewhat in proximity to the mine, then a general temperature reading should also be sufficient. Requiring a temperature reading at EACH MSHA sampling location after allowing for a less precise pressure reading introduces a level of accuracy that is inconsistent with the data the EPA is using to calculate emissions. We would recommend using a temperature reading from either at central location in the mine—as there is relatively consistent temperatures within the mine—or possibly an average annual temperature from the same NOAA weather station that is being used for the pressure reading.

Response: See preamble Section II.C.2, Subpart FF – Underground Coal Mines: Summary of Comments and Responses, for the response on the requirements for temperature sampling when using MSHA data.

Commenter Name: Thomas C. Perry

Commenter Affiliation: National Mining Association (NMA)

Document Control Number: EPA-HQ-OAR-2011-0147-0026

Comment Excerpt Number: 2

Comment: NMA is not supportive of EPA's decision to require companies to collect temperature data at the same time and location as the MSHA samples of volume and concentration of methane. 76 Fed. Reg. at 47,400. If the agency permits pressure readings from

an above-ground NOAA weather station in general proximity to the mine, then EPA should also allow mines to establish temperature data either through readings at a central location in the mine, or potentially through an average annual temperature from the same NOAA weather station. Such a revision will reduce an unnecessary reporting burden.

Response: See preamble Section II.C.2, Subpart FF – Underground Coal Mines: Summary of Comments and Responses, for the response on the requirements for temperature sampling when using MSHA data.

5.0 COMMENTS ON SUBPART OO (SUPPLIERS OF INDUSTRIAL GASES)

5.1 Revision of data reporting requirement for total mass of each reactant fed into the GHG or nitrous oxide production process to recordkeeping

Commenter Name: Robert A. Reich

Commenter Affiliation: DuPont Safety, Health & Environment and Sustainable Growth Center

Document Control Number: EPA-HQ-OAR-2011-0147-0013

Comment Excerpt Number: 1

Comment: DuPont concurs with the Agency's proposal to change reporting of business confidential data such as mass of reactants to a records retention requirement. However, it is not clear that the change will be finalized in time to impact the reporting of 2010 data. We urge EPA to promulgate a direct final rule that will implement the proposed changes to Subpart OO reporting and recordkeeping in advance of the September 30, 2011, deadline for reporting 2010 data.

Response: See preamble Section II.E.2, Subpart OO – Suppliers of Industrial Greenhouse Gases: Summary of Comments and Responses, for the response on promulgating a direct final rule to implement the changes to Subpart OO.

Commenter Name: Joel R. Hall

Commenter Affiliation: Mexichem Fluor, Inc.

Document Control Number: EPA-HQ-OAR-2011-0147-0017

Comment Excerpt Number: 2

Comment: Mexichem supports the EPA's proposal to require recordkeeping, rather than reporting, of data elements currently listed under 40 CFR 98.416(a)(8) and (a)(9). Mexichem agrees with the EPA's conclusion that the mass of reactants fed into the process and the mass of reactants, by - products, and other wastes permanently removed from the process have limited, if any, usefulness in verifying production levels because the relationship between these parameters can vary. In addition, and as the EPA points out in the preamble, the accuracies and precisions of various instruments used to measure these masses (where instruments are used) may all vary, further complicating comparisons among these parameters.

Response: EPA has finalized the removal of the two data elements from the reporting requirements, as proposed. See preamble Section II.E.2, Subpart OO – Suppliers of Industrial Greenhouse Gases: Summary of Comments and Responses, for the response on requiring recordkeeping, rather than reporting, of the data elements listed under 40 CFR 98.416(a)(8) and (a)(9).

Commenter Name: Robert A. Reich

Commenter Affiliation: DuPont Safety, Health & Environment and Sustainable Growth Center

Document Control Number: EPA-HQ-OAR-2011-0147-0027

Comment Excerpt Number: 4

Comment: DuPont concurs with the Agency's proposal to change reporting of business confidential data such as mass of reactants to a records retention requirement. In this way, such data will be available to EPA inspectors if needed, but will be protected from public disclosure that would compromise global competitiveness. However, it is not clear that the change will be finalized in time to impact the reporting of 2010 data. We urge EPA to promulgate a direct final rule that will implement the proposed changes to Subpart OO reporting and recordkeeping in advance of the September 30, 2011, deadline for reporting 2010 data.

Response: See preamble Section II.E.2, Subpart OO – Suppliers of Industrial Greenhouse Gases: Summary of Comments and Responses, for the response on promulgating a direct final rule to implement the changes to Subpart OO.

6.0 COMMENTS ON SUBPART TT (INDUSTRIAL LANDFILLS)

6.1 Determination of waste-specific DOC values for closed landfills

Commenter Name: Robert Rouse

Commenter Affiliation: Global Climate Change Regulatory Affairs Leader, The Dow Chemical Company

Document Control Number: EPA-HQ-OAR-2011-0147-0012

Comment Excerpt Number: 4

Comment: Dow supports EPA's proposed changes to 40 CFR 98.464(c) which provides additional options for characterizing historical wastes disposed of in industrial landfills. Previously sampling and testing was the only mechanism available to calculate waste specific DOC values or to exclude from reporting industrial landfills not specifically mentioned in 40 CFR 98.460(c). Sampling of historical wastes from a closed landfill is impractical and could impact the integrity of the landfill. It may also yield results different than if the material had been analyzed at the time of its disposal.

Allowing the testing of an existing similar waste or the use of processes knowledge is supported by Dow and should result in improved emission estimates. If the proposed changes are not finalized it will require that Dow report methane emissions from landfills that only received inert, non-carbon containing wastes.

Response: EPA has finalized the additional options for sampling of historical wastes, as proposed. See the preamble Section II.G.1, Subpart TT – Industrial Waste Landfills: Summary of Final Amendments and Major Changes Since Proposal, for the final changes to 40 CFR 98.464(c).

Commenter Name: Robert A. Reich

Commenter Affiliation: DuPont Safety, Health & Environment and Sustainable Growth Center

Document Control Number: EPA-HQ-OAR-2011-0147-0027

Comment Excerpt Number: 5

Comment: The EPA amendments definitely ease the reporting burden on facilities that are required to report landfill emissions from historical material. The proposed option to use process knowledge for estimating Degradable Organic Content (DOC) of historical waste streams that no longer have a “similar waste stream” being generated is a welcomed change, since facilities can no longer measure volatile solids and DOC content of these historical waste streams.

Response: EPA has finalized the additional options for sampling of historical wastes, as proposed. Section II.G.1, Subpart TT – Industrial Waste Landfills: Summary of Final Amendments and Major Changes Since Proposal, for the final changes to 40 CFR 98.464(c).

Commenter Name: Robert A. Reich

Commenter Affiliation: DuPont Safety, Health & Environment and Sustainable Growth Center

Document Control Number: EPA-HQ-OAR-2011-0147-0027

Comment Excerpt Number: 6

Comment: EPA has not offered any “process knowledge” or “alternate test method” options for determining DOC concentration for solid waste streams that are currently being generated where their anaerobic biodegradability is known. Table TT-1 is a very short list of DOC factors for general types of waste material. The list of exempted “inert waste material” in §98.460(c)(2) is longer, but still extremely short compared to the universe of solid waste that is classified by this regulation as “other industrial solid waste”.

The only method provided in Subpart TT [§98.464(b)] to determine DOC for a landfill-specific waste material or a waste material known to be inert by process knowledge is Standard Method 2540G – Total, Fixed, and Volatile Solids in Solid and Semi-solid Samples. This 550°C high temperature muffle furnace test was suggested in EPA's Technical Support Document for Subpart TT as being a quick (and easy) analytical test procedure which would determine the bio-Degradable Organic Carbon (DOC) content in a solid waste sample. The Subpart TT Technical Support Document (See EPA Technical Support Document For the Industrial Waste Landfill Sector: Final Rule For Mandatory Reporting of Greenhouse Gases; June 9, 2010) on page 21, Section 6.2.4 states:

“Method 2540G ‘Total, Fixed, and Volatile Solids in Solid and Semi-solid Samples’ of the Standard Methods for the Examination of Water and Wastewater (21st Edition, 2005)

may be a reasonable, quick, and inexpensive means to estimate the DOC content of solid waste.”

Unfortunately this statement is not true for the huge universe of “other industrial solid waste materials”. This test procedure does not distinguish between biodegradable (soluble) and nonbiodegradable (fixed) carbon. It only provides the weight percent (wt %) of volatile solids in a sample which can be indicative of carbon content, but it does not determine whether the volatile solids portion will be able to be decomposed in a landfill.

EPA has correlated Method 2540G results to the carbon content of several organic landfill solid waste streams, but the method basically only determines the high temperature weight loss of volatiles, regardless of the carbon content or type of carbon in the sample. If a sample of plastic polymer solid waste (defined as inert material per [§98.460(c)(2)(xi)]) were to be analyzed by Method 2540G, the results would most likely show it to be 98-99% DOC, which is totally incorrect. Most plastic polymers do not biodegrade, especially the types listed as “inert” in Subpart TT.

Therefore, Subpart TT needs a “process knowledge” option or allowance for alternate test methods that can be used to determine the actual DOC content of a solid waste material that is known from historical process knowledge, Biochemical Methane Potential (BMP) testing, or direct measurement. The Technical Support Document refers to these alternatives in the beginning of Section 6.2.4:

“Traditionally, DOC values (or ‘methane generation potential, Lo’ values) are estimated from landfills with gas collection systems or from long-term laboratory studies. Values for k are generally estimated using best fit regression analysis of methane generated over time once the ‘measured’ methane generation potential is established.”

However, these more accurate methods for determining DOC are dismissed in the Technical Support Document as “not suitable for reasonably quick” determinations. Facilities subject to GHG reporting under Subpart TT should have the option to conduct 60-day to 90-day “long-term laboratory studies” to determine BMP as a more accurate basis for GHG reporting. The Technical Support Document (TDS) refers to a seminal 1998 paper¹ by Dr. Morton A. Barlaz related to his research for EPA on biodegradative analysis of municipal solid waste in laboratory scale landfills² in which both papers include description of the experimental approach used by Barlaz to assess anaerobic biodegradation in landfills. But the TDS fails to indicate that performance of laboratory-scale anaerobic biodegradation studies is an acceptable alternative as the basis for Subpart TT GHG reporting. There are also several standard BMP test methods that are available to evaluate anaerobic biodegradability, such as ASTM Method E2170-01 and OPPTS 835.3400.^{3,4}

[Footnote 1: Morton A. Barlaz; “Carbon storage during biodegradation of municipal solid waste in laboratory-scale landfills”; *Global Biochemical Cycles*, Vol 12, pp. 373-380 (June 1998)]

[Footnote 2: M.A Barlaz, W.E. Eleazer, W.S.Odle, X.Qian, and Y-S Wang; “Biodegradative Analysis of Municipal Solid Waste in Laboratory-Scale Landfills”; Project Summary Report EPA/600/SR-97/071, U.S. EPA Research and Development, RTP, NC.]

[Footnote 3: ASTM Method E2170-01 – “Standard Test Method for Determining Anaerobic Biodegradation Potential of Organic Chemicals Under Methanogenic Conditions”.]

[Footnote 4: OPPTS 835.3400 – Fate, Transport and Transformation Test Guidelines. Anaerobic Biodegradability of Organic Chemicals (EPA 712-C-98-090).]

Another option would be to allow the direct measurement of methane and CO₂ generation rates from landfills that do not have gas collection systems. There are several test protocols that can measure landfill gases by using a flux chamber on its surface and determining methane and CO₂ emissions quantitatively.

A DOC alternate test method option is important to DuPont as well as other facilities that are part of the Inorganic Chemicals industry. DuPont operates several inorganic chemical plants that produce Titanium Dioxide (TiO₂) white pigment. These facilities are classified under SIC code 2816 and are a representative of the “Inorganic Chemicals” industrial category referred to in the Subpart TT Technical Support Document on pages 8 through 11 and the referenced “EPA Report to Congress - Solid Waste Disposal in the U.S.” (EPA/530-SW-88-011B, October 1988). The Technical Support Document on page 10 identifies seven industrial categories that produce only “inorganic waste”, one of which is “Inorganic Chemicals”. The Technical Support Document further states on page 11, Section 5.2 that:

“The wastes produced by these industries would generally have minimal degradable organic content (DOC)”... “At DOC levels below approximately 0.5 wt %, even the largest industrial landfills would not generate enough methane to exceed a 25,000 tonne CO₂ equivalent (tCO_{2e}) emissions threshold. Consequently, while there is no industry accepted definition of ‘inorganic waste’, for the purposes of this analysis, ‘inorganic waste’ (*i.e.*, waste generated by the above 7 industry categories) was assumed to have a DOC of 0.5 weight percent (wt%) or less.”

DuPont has “process knowledge” that the inorganic solid waste stream from its TiO₂ inorganic chemical manufacturing process is not biodegradable, even though it contains carbon. DuPont’s TiO₂ process uses petroleum coke as one of its raw materials along with other major ingredients (ilmenite ore and chlorine). Petroleum coke is almost pure carbon and is discharged from the process along with other metallic salts (chlorides, hydroxides) that are separated from the titanium containing ore in the reaction phase of the process. DuPont process knowledge includes observations that no landfill gas is generated at any of the Company’s TiO₂ plant onsite landfills, in addition to DuPont experience with operating a Powdered Activated Carbon (PAC) wastewater treatment system which uses activated carbon along with active biomass elsewhere in the Company. The activated carbon does not add any biochemical oxygen demand (BOD) to the industrial wastewater being treated in the activated sludge aeration tanks in this PAC wastewater treatment system.

In an attempt to confirm that TiO₂ process solid waste is “inert” per Subpart TT definition, several samples of our TiO₂ process waste were tested for DOC_x using Method 2540G. Method 2540G results showed a false positive 19->29% DOC_x via volatile solids weight loss, which approximated the petroleum coke content of the samples. This is consistent with the fact that coke (almost pure carbon) will burn when subjected to 550°C with ample oxygen and react to form CO₂.

DuPont’s only recourse to showing TiO₂ process inorganic waste material to be “inert” was to conduct a long-term 90-day laboratory study, performed in triplicate, in order to determine the

actual biodegradable organic carbon (DOC_x) content using a recognized Biochemical Methane Potential (BMP) test protocol that is also mentioned in Subpart TT Technical Support Document page 21. The results of DuPont BMP testing (as described in Attachment A [see DCN EPA-HQ-OAR-2011-1047-0027]) showed beyond a doubt that the DOC content of process solid waste from the production of TiO₂ definitely categorizes this waste as “inert waste material” since there was no measurable difference in methane generation from the waste samples versus test blanks. As Attachment A indicates, the total gas production of TiO₂ process waste material was no different than the total gas production of the blanks containing only anaerobic seed plus nutrients. Therefore the DOC content of TiO₂ process solid waste is < 0.1 wt % (DOC_x is < 0.001).

In order to provide accurate GHG reporting and additional flexibility for sources calculating methane generation from industrial solid waste for the purpose of reporting GHG emissions under Subpart TT, DuPont strongly recommends that EPA adopt one or more of the regulatory changes below:

Under Section 98.460 – Definition of Source Category

- modify (2)(vii) to read “(2)(vii) Clay, gypsum, pottery cull, or process solid waste from the production of TiO₂,”
- or add TiO₂ process solid waste as a separate listing “(2)(xiii) process solid waste from the production of TiO₂.”

Under Section 98.464 – Monitoring and QA/QC

Modify (b)(3) to include alternate test methods that measure Biochemical Methane Potential (BMP) directly of a waste material using either ASTM E2170 or OPPTS 835.3400

Under Table TT-1 Default DOC and Decay Rate Values

Add default value for TiO₂ process solid waste: where DOC = .001

Response: See the preamble Section II.G.2, Subpart TT – Industrial Waste Landfills: Summary of Comments and Responses, for the response to comments on alternative test methods for determining DOC.

Commenter Name: Jerry Call

Commenter Affiliation: American Foundry Society (AFS)

Document Control Number: EPA-HQ-OAR-2011-0147-0019

Comment Excerpt Number: 2

Comment: For determining volatile solids and degradable organic content (DOC) values, EPA has proposed to delete Equation TT-7 and amend Equation TT-8. This proposed change would allow the use of Standard Method 2540G to determine the total carbon that is degradable within a foundry residual waste landfill (foundry landfills) or DOC. EPA appears to assume that ignitable carbon, or other constituents that may be lost when the foundry wastes are heated from 105°C to 550°C, is either bio-available to bacteria present in the foundry landfill or that the foundry landfills may occasionally catch fire, and thus emit this carbon as greenhouse gases.

This is simply does not occur. Compared to municipal waste landfills, there are only small amounts of bacteria present in foundry landfills. In addition, foundry landfills have not been known catch fire.

EPA states in the July 12, 2010 Federal Register preamble to the final rule that the intent of a number changes related to industrial waste landfills was “to focus on industrial waste landfills that have a potential to generate significant quantities of methane rather than all landfills.” AFS is not aware of any foundry landfills that have been designed with gas venting or gas extraction systems. More importantly, AFS is not aware of any instance where a foundry landfill has experienced cap damage caused by gas pressure generated by the foundry wastes placed in the landfill. If methane gas was generated to any significant degree in foundry landfills, or if methane generation was causing damage to impermeable landfill caps in foundry landfills, state environmental regulatory agencies would have required these landfills to be designed with gas venting or gas extraction-collection systems. It is, therefore, reasonable to conclude that methane or other GHGs are not being generated in any significant amounts in foundry landfills. EPA is also proposing to limit the reporting requirements of coal mines to only those venting 36,500,000 acf per year of methane (Subpart FF). By specifically exempting smaller coal mines, EPA is making it clear that it is only interested in larger more gassy coal mines with actively venting systems. Similarly, EPA is proposing that the gas and petroleum industry only report those workovers with hydraulic fracturing that are actively venting gas to the atmosphere or flaring gas at the surface §98.236 (c)(6)(ii)(B).

The proposals for coal mines and the gas and petroleum industry confirm that EPA should only be interested in those landfills with significant methane generation. Accordingly, EPA should not require reporting on landfills with impermeable composite cover systems and no gas venting, as the gas production at these landfills is normally too low to require active venting. AFS requests that industrial waste landfills that are no longer active (*i.e.*, capped) and do not have active gas venting should be exempt from reporting. AFS can find no data or references to foundry landfills in the Agency’s technical support document to this rule that foundry landfills generate methane gas. It appears that EPA has not conducted any tests such as gas formation fermentation test (GB21) to determine if foundry sand emits methane. Foundry sand has historically been considered inert. It is, therefore, inappropriate to place this mandatory GHG reporting burden on an industry if the Agency cannot demonstrate that it has any data to warrant the need for reporting.

Response: EPA identified the method for determining DOC values based on volatile solids content as a simple and inexpensive way to determine degradable organic content, such as contained in wood and other wastes that may slowly degrade. Subpart TT already contains several provisions to exclude landfills that do not have a significant potential to produce GHG emissions with both size and waste composition thresholds, and several foundry waste streams are already considered inert based on these provisions. Specifically, nonchemically bonded foundry sand and furnace slag are both considered inert for the purposes of Subpart TT [see 40 CFR 98.460(c)(v) and (ix)]. As such, we anticipate that many foundries will produce primarily inert wastes. However, some foundries use organic chemical binders in their sand molds, so we expect that some foundry waste streams may contain some degradable organic carbon. Given the wastes specifically identified as inert in Subpart TT and the additional alternatives for determining DOC values in the final amendments, we expect that facilities will be able to

properly characterize their wastes and that GHG reporting will only be required for industrial waste landfills that have appreciable GHG emissions.

Commenter Name: Jerry Call

Commenter Affiliation: American Foundry Society (AFS)

Document Control Number: EPA-HQ-OAR-2011-0147-0019

Comment Excerpt Number: 3

Comment: Replacing “F_x” with “F”, the “Fraction by volume of methane in landfill gas ...” for foundries is unfounded because foundry landfills do not produce methane and do not have gas collection systems. The “F” should, therefore, be replaced with 0.5 percent, if the Agency insists on using this formula for GHG emissions that do not exist.

As part of this rule EPA asserts that (fly ash) is inert and produces less than 0.5 percent volatile solids in accordance with Standard Method 2540G. It does not appear that EPA has published data to demonstrate that ash is inert, but rather has relied on the other facts and data that has not been published that ash is not bio-available and ash landfills do not burn. A similar conclusion should be established for foundry landfills.

Response: We replaced “F_x” with “F” because the term F refers to the fraction of methane in the generated landfill gas in the reporting year, not the year in which the waste was placed in the landfill, so the subscript for year disposed was incorrect for this term. Equation TT-1 is a carbon balance equation. Under anaerobic conditions, approximately half of the degraded carbon is released as CH₄ and half is released as CO₂. The value of “F” is therefore 0.5 (or 50 percent), as opposed to 0.5 percent. Fly ash is expected to be inert and have no volatile solids because fly ash is produced as a product of burning under similar conditions as the muffle furnace used in Standard Method 2540G. As noted in our response to Comment No. EPA-HQ-OAR-2011-0147-0019, Excerpt 2, Subpart TT already includes similar exemption provisions for several foundry waste streams. If the waste steams do not contain significant organic carbon, the DOC value will appropriately account for the lack of methane generation; it is inappropriate to adjust the “F” term as suggested by the commenter.

Commenter Name: Gary Stahle

Commenter Affiliation: General Motors Company

Document Control Number: EPA-HQ-OAR-2011-0147-0024

Comment Excerpt Number: 2

Comment: EPA stated in its July 12, 2010 Federal Register Final Rule that the intent of a number of the changes in these rules related to industrial waste landfills was “to focus on industrial waste landfills that have a potential to generate significant quantities of methane rather than all landfills.” In order to make that determination, EPA has proposed to delete Equation TT-7 and amend Equation TT-8. This proposed change requires the use of Standard Method (SM) 2540G to determine the amount of total carbon that is degradable within a foundry residual waste landfill, or DOC. The use of Standard Method 2540G to predict GHG emissions from foundry sand landfills is inappropriate. This method involves heating the landfill material to 550°C in order to consume any volatile organic matter that may be present in the material, and convert it to CO₂. This does not accurately predict the GHG emissions from these landfills because no

conditions exist within them that would allow the organic carbon material to be consumed and the gas released.¹ [Footnote 1: Replacing “Fx” with “F”, the “Fraction by volume of CH₄ in landfill gas ...” for foundries is unfounded because foundry landfills do not produce methane and do not have gas collection systems. The “F” should, therefore, be replaced with 0.5 percent, if the Agency insists on using this formula for GHG emissions that do not exist.] Unlike municipal solid waste or other similar landfills, foundry sand landfills do not contain more than negligible amounts of biodegradable organic materials. Therefore, release of greenhouse gas from these landfills is also negligible and is not properly measured by SM 2540G.

In addition, any formation of methane or other by-products in a foundry landfill is so minimal that none of our landfills have been required to be designed to manage or control emitted gas, with either flares or vents. In fact, the American Foundry Society has stated that it knows of no foundry sand landfills designed to manage or control emitted gas. Nor is AFS aware of any instance where a foundry landfill has experienced cap damage caused by gas pressure generated by the foundry wastes placed in the landfill. If methane gas was generated to any significant degree in foundry landfills, or if methane generation was causing damage to impermeable landfill caps in foundry landfills, state environmental regulatory agencies would have required these landfills to be designed with gas venting or gas extraction-collection systems. It is, therefore, reasonable to conclude that methane or other GHGs are not being generated in any significant amounts in foundry landfills.

In addition, we were unable to find references in the Agency’s technical support document indicating that foundry sand or foundry landfills generate GHGs. It appears that EPA has not reported, or conducted any tests, such as the more appropriate gas formation fermentation test (GB21), to determine whether foundry sand emits methane. In fact, foundry sand has historically been considered inert. EPA has asserted, as part of this rulemaking, that (fly ash) is inert and produces less than 0.5 percent volatile solids in accordance with Standard Method 2540G. As GM has been unable to find data in the record supporting this statement, can EPA share how it appears to have made this determination? If flash is considered inert, then the same conclusion should be established for foundry sand.

As part of this rule, therefore, GM requests that EPA exempt foundry sand landfills from GHG calculation and reporting requirements.

Response: See responses to Comment No. EPA-HQ-OAR-2011-0147-0019, Excerpts 2 and 3, above.

6.3 Table TT-1

Commenter Name: Brad Upton

Commenter Affiliation: National Council for Air and Stream Improvement, Inc. (NCASI)

Document Control Number: EPA-HQ-OAR-2011-0147-0010

Comment Excerpt Number: 1

Comment: Proposed revisions to the United States Environmental Protection Agency (EPA) greenhouse gas (GHG) reporting rule published in the August 4, 2011 Federal Register fail to address errors in the default degradable organic carbon (DOC) parameter for pulp and paper

industry waste. NCASI has identified technical errors in the methods EPA used to develop this parameter, as detailed below. EPA should revise Subpart TT to include a more appropriate default DOC value for pulp and paper mill industrial waste. The appropriate Intergovernmental Panel on Climate Change (IPCC) DOC value is that for industrial sludge, 0.09 wet basis at 65% moisture. (See 2006 IPCC guidelines for national greenhouse gas inventories. Hayama, Kanagawa, JP: Intergovernmental Panel on Climate Change, Institute for Global Environmental Strategies. <http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html>.)

On July 12, 2010, EPA published Subpart TT, Industrial Waste Landfills, to the mandatory GHG reporting rule in the Federal Register. EPA did not provide an opportunity to comment on Subpart TT prior to publication in the Federal Register. The EPA GHG reporting rule methods for estimating methane emissions from industrial landfills in Subpart TT are drawn directly from IPCC. Equation TT-1 in the EPA rule, for calculating methane generation, is consistent with IPCC’s Equations 3.2 and 3.3 for calculating methane generation. Subpart TT includes a default DOC value for pulp and paper industry waste that is inappropriately high and, when used with Equation TT-1, will result in overestimated landfill methane emissions.

EPA’s suggested default values for DOCF, MCF, and F [as shown in Eq. TT-1] are the same as those provided by IPCC. EPA also provides default values of DOC for a variety of industry waste types in Table TT-1 of the rule. These values were drawn from the IPCC guidance as well.

However, the EPA rule default DOC value for pulp and paper industry waste, 0.2 wet basis, appears to be based on a misinterpretation of the IPCC guidance. IPCC provides default DOC values for a variety of materials, a selection of which is listed in Table 1. In the Technical support document for the industrial waste landfill sector: Final rule for mandatory reporting of greenhouse gases (TSD), EPA describes how IPCC’s DOC value for “pulp and paper [industrial waste] (other than sludge)” was adopted for use in estimating landfill methane emissions from pulp and paper industry waste. This IPCC value is not appropriate for pulp and paper mill wastes, because the majority of non-inert landfilled waste from pulp and paper mills is sludge from wastewater treatment operations and the IPCC DOC value is not applicable to industrial sludge. EPA apparently neglected IPCC’s default DOC value for industrial sludge, 0.09 wet basis at 65% moisture, which would be appropriate for application to pulp and paper industry wastes that are landfilled. [Note that in addition to the default values reproduced in Table 1, IPCC provides “examples of carbon contents in some organic sludge” from Japan, one of which is for pulp and paper industry sludge at 27% carbon on a dry basis, which corresponds to 9.5% on a wet basis with 65% water content.]

Table 1. Default DOC Values from IPCC (2006)

Type of Material	Default DOC (wet basis)	Assumed Moisture Content
Industrial waste from pulp and paper manufacturing (“other than sludge”)	0.4	10%
Domestic sludge	0.05	90%
Industrial sludge	0.09	65%

Pulp and paper in municipal solid waste	0.4	10%
Wood in municipal solid waste	0.43	15%

EPA’s TSD includes a list of published carbon content and moisture content parameters for pulp and paper industry wastes (sludges and bark) that are inconsistent with the IPCC DOC value for “pulp and paper (other than sludge).” This led the agency to assume that the moisture content of the IPCC DOC value (10%) was erroneous. After “correcting” the IPCC default DOC value by recalculating a carbon content as if the moisture content was 50% rather than 10%, EPA obtained a DOC value of 0.22. EPA rounded this to 0.2 (wet basis, assuming 50% moisture) and established it as the default DOC value for pulp and paper industry waste, including sludge. Detailed information on how EPA misinterpreted IPCC guidance in developing the default DOC value of 0.2 (wet basis) for pulp and paper industry waste was not available before the TSD was published on June 9, 2010 (EPA did not provide an opportunity to comment on the TSD). Regardless, the American Forest and Paper Association (AF&PA) submitted comments in 2009 noting a problem with the default DOC value for pulp and paper industry waste included in the then-proposed Subpart HH (municipal landfills). The data submitted with the 2009 AF&PA comments support a DOC of 9% (wet basis) for pulp and paper industry waste, which is the IPCC default DOC for industrial sludge. (See American Forest and Paper Association Comments (Rhea Hale) on EPA Mandatory Reporting of Greenhouse Gases Proposed Rulemaking. June 9, 2009. Docket EPA-HQ-OAR-2008-0508.)

EPA should revise the GHG reporting rule Subpart TT to include a more appropriate default DOC value for pulp and paper mill industrial waste. The appropriate IPCC DOC value is that for industrial sludge, 0.09 wet basis at 65% moisture.

Response: Although we did propose changes to Table TT-1, we did not propose revisions to the default DOC values for pulp and paper waste in Table TT-1, so this comment is not within the scope of the proposed technical corrections, clarifying and other amendments. We do note, however, that the final rule provides simple methods for individual facilities to determine site-specific DOC values for their waste streams as an alternative to using the default values in Table TT-1.

Commenter Name: Jerry Schwartz

Commenter Affiliation: American Forest & Paper Association (AF&PA)

Document Control Number: EPA-HQ-OAR-2011-0147-0021

Comment Excerpt Number: 2

Comment: As noted in the letter from Brad Upton of NCASI to Sean Hogan (EPA), the pulp and paper industry is very concerned about the default value for degradable organic carbon DOC assigned to pulp and paper industry waste. We appreciate that Rachel Schmeltz, in her September 7, 2011 letter to Dr. Upton has indicated that EPA will consider revising the default values. We want to reiterate how important this revision is to the industry. We believe it is critical for the Agency to amend the equation so that individual mills do not need to undertake measurement of methane, when the IPCC default value is appropriate. We believe that the default value should be 0.09.

Response: See response to Comment No. EPA-HQ-OAR-2011-0147-0010, Excerpt 1, above.

6.4 Definition of Design Capacity

Commenter Name: Jerry Call

Commenter Affiliation: American Foundry Society (AFS)

Document Control Number: EPA-HQ-OAR-2011-0147-0019

Comment Excerpt Number: 6

Comment: EPA has proposed to add the definition of “design capacity” to provide further clarification of the rule. Based on this definition of design capacity, unpermitted landfills as well as state regulated landfills without a specified capacity limit are not covered by this rule. AFS requests clarification from EPA on this issue.

Response: See the preamble Section II.G.2, Subpart TT – Industrial Waste Landfills: Summary of Comments and Responses, for the response to comments received on the definition of “design capacity.”

Commenter Name: Gary Stahle

Commenter Affiliation: General Motors Company

Document Control Number: EPA-HQ-OAR-2011-0147-0024

Comment Excerpt Number: 4

Comment: EPA has proposed to add the definition of “design capacity” to provide further clarification of the rule. Based on this definition of design capacity, unpermitted landfills as well as state regulated landfills without a specified capacity limit are not covered by this rule. GM requests clarification from EPA on this issue.

Response: See the preamble Section II.G.2, Subpart TT – Industrial Waste Landfills: Summary of Comments and Responses, for the response to comments received on the definition of “design capacity.”

Commenter Name: Stephen E. Woock

Commenter Affiliation: Weyerhaeuser Company

Document Control Number: EPA-HQ-OAR-2011-0147-0023

Comment Excerpt Number: 2

Comment: Regarding the proposed section §98.463 (a)(2)(ii)(C), we agree that for open or closed landfills the waste deposited can be based on the landfill’s design capacity, as shown in Equation TT-4’s “LFC” parameter description (emphasis added):

LFC = Capacity of the landfill used (or the total quantity of waste-in-place) at the end of the “YrData” from design drawings or engineering estimates (metric tons). For closed landfills for which waste quantity data are not available, use the landfill’s design capacity.

However, in §98.468 *design capacity* is defined as (emphasis added):

Design capacity means the maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent permit issued by the State, local,

or Tribal agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass to determine its design capacity, the calculation must include a site specific density, which must be recalculated annually.

It is unclear as to what EPA means by the term "recalculated" in the last sentence. If it means verifying the density factor by tracking the types of waste going to the landfill then the rule's language should state that, i.e. if the types of waste does not change then the waste density factor should not change. But if it means weighing each delivered load and measuring the volume, then that is unreasonable for industrial landfills routinely receiving particular waste types, does not provide a more accurate value, and creates an unnecessary compliance burden.

We suggest the last sentence of the definition be changed to the following language:

If the owner or operator chooses to convert the design capacity from volume to mass to determine its design capacity, the calculation must include a site specific density, which should be verified each year.

Response: See the preamble Section II.G.2, Subpart TT – Industrial Waste Landfills: Summary of Comments and Responses, for the response to comments received on the definition of “design capacity.”

6.5 Other comments on Subpart TT

Commenter Name: Anonymous public comment

Commenter Affiliation:

Document Control Number: EPA-HQ-OAR-2011-0147-0011

Comment Excerpt Number: 1

Comment: The proposed revisions to Section 98.463(a)(2)(ii)(C) revise the definition of LFC and YrData to allow closed landfills that have some measurement data to appropriately calculate Wx only for years for which the closed landfill does not have waste disposal data available from company records or from Equation TT-3. Based on the proposed definition of YrData, it seems Equation TT-4 is intended to apply when missing data occurred up to a certain date, and then data was available for all subsequent years. However, if data is available for only some of the years, and data is missing for years prior to and after the dates the data is available for, this equation does not appear to accurately reflect the total waste disposal. For example, if a facility has a closed landfill and they know how much waste was placed in the landfill, and they have data for 3 years, but do not have data for 5 years before and 5 years after that data, and Equation TT-4 is applied, the sum of the total waste disposed (by adding the known annual disposal quantity data to the calculated annual disposal quantity data from Equation TT-4) could be higher or lower than what was actually disposed. In this circumstance, it seems the most accurate method would be to use actual data for the years it was available, subtract that from the total waste disposed, and then evenly distribute the remaining waste disposed over the years when data was not available. This would provide a total waste when all years were added together that matched the total waste that was present when the landfill was closed.

Response: See the preamble Section II.G.2, Subpart TT – Industrial Waste Landfills: Summary of Comments and Responses, for the response to the comment received on the definition of the term “YrData” in Equation TT-4.

Commenter Name: Jerry Call

Commenter Affiliation: American Foundry Society (AFS)

Document Control Number: EPA-HQ-OAR-2011-0147-0019

Comment Excerpt Number: 4

Comment: EPA has asserted that due to a typographical error, it is revising the applicable time period for landfills from January 1, 1980 to January 1, 1960. Revising 1980 to 1960 may be an inadvertent typographical error for the Agency, but this is a significant change and requires the metalcasting industry to try to gather disposal information or production records for an additional *twenty years*. Prior to the 1980's, many states did not have regulations covering the design, permitting and construction of industrial landfills, let alone municipal solid waste landfills. As a result, industrial facilities typically did not keep good records for the quantity of industrial waste disposed in on-site landfills, nor do many industrial facilities have good production records that date back to the 1960's and 1970's. Accordingly, this change would impose a significant burden on facilities with landfills that are subject to the GHG reporting requirements.

Given the amount of effort required to comply with this proposed change to Subpart TT, the Agency should demonstrate the need for gathering this information relative to the quantity of GHG generation for the years between 1960 and 1980 before nonchalantly imposing such a significant regulatory burden on impacted facilities.

As an illustration of why this proposed change is unnecessary, AFS has calculated the additional GHG emissions from the period 1960 to 1980 for a hypothetical industrial waste landfill site.

Using just the default values in the Equation TT-1, and a disposal rate of 23,750 metric tons of foundry waste per year (from 1960 to 2011), the additional metric tons of methane emissions between 1960 and 1980 is 252 metric tons compared to a total of 1377 metric tons for the whole 51 years, which is 18.3 percent of the total. Given that the quantity of waste disposed between 1960 and 1980 in this hypothetical example is close to 40 percent of the total of the waste disposed over the life of the site, the burden on facilities to gather (and perhaps more appropriately recreate) the data necessary to compute GHG emissions prior to 1980 appears to exceed the benefits from reporting such historical information.

Response: The correction to 40 CFR 98.463(a)(2) was correcting a typographical error. We have always intended for facilities to account for waste quantities back to 1960 as suggested by the start year of calculation (S) in Equation TT-1. 1960 was used because the contribution to methane emissions from landfills for years more than 50 years ago typically makes little contribution to the current year's emissions. EPA's intent for data to be collected back to 1960 is consistent with the Technical Support Document for subpart TT- (see page 16 of http://www.epa.gov/climatechange/emissions/archived/downloads/tsd/TSD%20Landfills_EPA_02%2004%2009_2.pdf) “As methane generation occurs slowly over a number of years, waste disposal data are needed for approximately a 50 year period prior to the year of the emissions estimate.” The 50-year time period is also consistent with the original proposed subpart HH in 2009 (which included both industrial and municipal landfills) which stated that, “We propose

that the landfills use site-specific data to determine waste disposal quantities (by type of waste material disposed when material-specific waste quantity data are available) and use appropriate EPA and IPCC default values for all other factors used in the emissions calculation. To accurately estimate emissions using this method, waste disposal data are needed for the 50 year period prior to the year of the emissions estimate.”

In the example provided by the commenter, not including waste quantities disposed of in years 1960 to 1979 resulted in an 18 percent reduction in the estimated GHG emissions. We find this to be a significant bias in the emission results. Furthermore, the underestimate will be even greater for landfills that closed near 1980. There would be a very significant underreporting of GHG emissions if landfills that closed in 1981 only had to consider the quantities of waste disposed of in 1980 and 1981. The importance of these historical waste disposal years is dependent on the decay rate constant (k). Many industrial waste streams are expected to have slow degradation rates, which increase the importance of the historical waste disposal quantities. Please note that the rule provides a number of simple options for estimating the historical quantities of waste disposed in order to minimize the burden for reporters, while still providing reasonable estimates of waste quantities.

Commenter Name: Gary Stahle

Commenter Affiliation: General Motors Company

Document Control Number: EPA-HQ-OAR-2011-0147-0024

Comment Excerpt Number: 6

Comment: EPA has asserted that due to an inadvertent error (page 47404, 1st column), it is revising the applicable time period for landfills from January 1, 1980 to January 1, 1960. While the revision from 1980 to 1960 may be simply the correction of an inadvertent error for the Agency, it is a significant and substantive change and requires that will require facilities to attempt to gather disposal information or production records for an additional *twenty years*. Prior to the 1980’s many states did not have regulations covering the design, permitting, and construction of industrial landfills. As a result, in many cases good records do not exist for the quantity of industrial waste disposed in on-site landfills, nor do many industrial facilities have good production records that date back to the 1960’s and 1970’s. Accordingly, this change would impose of significant burden on our facilities with landfills that are subject to the GHG reporting requirements.

Given the amount of effort required to comply with this proposed change to Subpart TT, the Agency should demonstrate the need for gathering this information relative to the quantity of GHG generation for the years between 1960 and 1960 before imposing such a significant regulatory burden on impacted facilities.

Response: See response to Comment No. EPA-HQ-OAR-2011-0147-0019, Excerpt 4, above.

Commenter Name: Jerry Call

Commenter Affiliation: American Foundry Society (AFS)

Document Control Number: EPA-HQ-OAR-2011-0147-0019

Comment Excerpt Number: 5

Comment: EPA has proposed to add the parenthetical Phrase, “as received at the landfill” to 40 CFR § 98.464(b)(1). This proposed change does more than clarify that closed landfills are not to be sampled. For foundry landfills, the phrase appears to prevent the foundry from testing individual waste streams that may be commingled for shipment to the landfill. This is a concern because some of these individual waste streams may be exempted under § 98.460.

Response: See the preamble Section II.G.2, Subpart TT – Industrial Waste Landfills: Summary of Comments and Responses, for the response to comments on the parenthetical term “as received at the landfill” in 40 CFR 98.464(b)(1).

Commenter Name: Gary Stahle

Commenter Affiliation: General Motors Company

Document Control Number: EPA-HQ-OAR-2011-0147-0024

Comment Excerpt Number: 5

Comment: EPA has proposed to add the parenthetical phrase, “as received at the landfill” to 40 CFR §98.464(b)(1). This proposed change does more than clarify that closed landfills are not to be sampled. For foundry landfills, the phrase appears to prevent the foundry from testing individual waste streams that may be commingled for shipment to the landfill. This is a concern because some of these individual waste streams may be exempted under § 98.460, and GM would like to preserve the opportunity to sample them separately.

Response: See the preamble Section II.G.2, Subpart TT – Industrial Waste Landfills: Summary of Comments and Responses, for the response to comments on the parenthetical term “as received at the landfill” in 40 CFR 98.464(b)(1).

Commenter Name: Gary Stahle

Commenter Affiliation: General Motors Company

Document Control Number: EPA-HQ-OAR-2011-0147-0024

Comment Excerpt Number: 3

Comment: EPA is proposing that the Gas/Petroleum industry only report those workovers with hydraulic fracturing that are actively venting gas to the atmosphere or flaring gas at the surface (B.98.236 (c)(6)(ii)(B)). This suggests that EPA is only interested in those landfills with significant methane generation and would not be inclined to require reporting on landfills with impermeable composite cover systems and no gas venting. This is further supported by EPA’s proposal to limit the reporting requirements of coal mines to only those venting 36,500,000 acf per year of methane (Subpart FF), which indicates that EPA is concerned with larger, gassier coal mines with active venting. GM requests that all industrial waste landfills or landfill cells which are no longer active (i.e. capped) and which do not have active gas venting be exempt from reporting.

Response: Subpart TT already includes several provisions (regarding size of landfill, age of closed landfills, type of material disposed of) to limit the applicability of Subpart TT to industrial waste landfills that have a potential for significant GHG emissions that have a similar intent and affect as the reporting requirement provisions for coal mines. In addition, a lack of active gas venting is not necessarily synonymous with low GHG emissions. It is possible for landfills that do not have active gas venting (i.e., active gas collection) to have higher CH₄ emissions than

landfills that have active gas collection and destruction. As such, we disagree that all industrial waste landfills or landfill cells which are no longer active (i.e. capped) and which do not have active gas venting should be exempt from reporting.

7.0 GENERAL COMMENTS ON PART 98

7.1 General comments on Part 98 not related to the proposed amendments

Commenter Name: Jerry Schwartz

Commenter Affiliation: American Forest & Paper Association (AF&PA)

Document Control Number: EPA-HQ-OAR-2011-0147-0021

Comment Excerpt Number: 3

Comment: Although not the subject of the August 4th Federal Register notice, AF&PA continues to be concerned about the emission factors used for spent pulping liquor (also known as black liquor). NCASI has shown that EPA's emission factor is inconsistent with previously developed black liquor emission factors, such as the one developed through the World Resources Institute/World Business Council for Sustainable Development (WRI/WBCSD), which the pulp and paper industry has been using for years. We believe that EPA's approach will cause significant misinformation and be out of line with actual emissions. We would like to see EPA revisit this issue and revise the emission factor for black liquor in the very near future.

Response: No rule change has been made as a result of this comment. The subject of the emission factors used for spent pulping liquor in the pulp and paper industry is outside the scope of the specific amendments proposed for public comment in the Federal Register notice of August 4, 2011.

Commenter Name: Willie R. Taylor

Commenter Affiliation: Office of Environmental Policy and Compliance, United States Department of the Interior

Document Control Number: EPA-HQ-OAR-2011-0147-0032

Comment Excerpt Number: 1

Comment: Overall, the Department agrees with the technical analyses, which support a need to collect GHG reports from various emitters. Scientific studies have shown that GHGs, when emitted into the atmosphere, normally stay in the atmosphere for a long period of time. These "greenhouse gases" have been on the rise since the 19th century, and their effect on climate will persist for many more decades. Levels of carbon dioxide and methane (another greenhouse gas) in the atmosphere are higher now than in the last 650,000 years. As humans continue burning more and more fossil fuels, scientists believe the impacts of global warming will accelerate in the future.

The increase in atmospheric GHGs is linked directly to rising global temperatures and resultant wetland impacts, ecosystem impacts, aquatic habitat impacts, and wildlife impacts in national

park units. Mandatory GHG reporting will assist with efforts to reduce emissions and prevent various climate change related effects on national park units.

Response: EPA thanks the commenter for their remarks.