



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

Volume No.: 23

**Subpart O—HCFC-22 Production and
HFC-23 Destruction**

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Subpart O—HCFC-22 Production and HFC-23 Destruction

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

FOREWORD

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

Due to the size and scope of this rulemaking, EPA prepared this document in multiple volumes, with each volume focusing on a different broad subject area of the rule. This volume of the document provides EPA's responses to significant public comments received for 40 CFR Part 98, Subpart O—HCFC-22 Production and HFC-23 Destruction.

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

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

While every effort was made to include significant comments related to 40 CFR Part 98, Subpart O—HCFC-22 Production and HFC-23 Destruction in this volume, some comments inevitably overlap multiple subject areas. For comments that overlapped two or more subject areas, EPA assigned the comment to a single subject category based on an assessment of the principle subject of the comment. For this reason, EPA encourages the public to read the other volumes of this document with subject areas that may be relevant to 40 CFR Part 98, Subpart O—HCFC-22 Production and HFC-23 Destruction.

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1. Reporting Threshold	1
2. Selection of Proposed GHG Emissions Calculation and Monitoring Methods	2
3. Detailed GHG Emission Calculation Procedures/Equations in the Rule.....	2
4. Monitoring and QA/QC Requirements.....	3
5. Cost Data.....	3

SUBPART O—HCFC-22 PRODUCTION AND HFC-23 DESTRUCTION

1. REPORTING THRESHOLD

Commenter Name: Rich Raiders

Commenter Affiliation: Arkema Inc.

Document Control Number: EPA-HQ-OAR-2008-0508-0511.1

Comment Excerpt Number: 8

Comment: EPA should amend the fluorinated GHG source categories to more completely describe the manufacturing and supply categories and better document the amount of fluorinated GHGs in the United States economy. EPA proposed to require that two groups of fluorinated GHG manufacturing facilities emitting more than 25,000 metric tons (“mt”) per year (“mtpy”) of carbon dioxide equivalent (“CO₂e”) be included in the fluorinated GHG manufacturing source category at proposed 40 CFR 98 Subpart L. EPA also proposed to require that hydrofluorocarbon (“HFC”) 23 (“HFC-23”) destruction facilities processing more than 2.14 million metric tons CO₂e per year participate in the proposed GHG reporting rule. However, EPA appropriately required all hydrochlorofluorocarbon (“HCFC”) 22 (“HCFC-22”) facilities to report in the proposed system as an “all-in” source category, with no minimum production or GHG emissions thresholds. Because of the very high GWPs exhibited by several fluorinated GHGs, we request that EPA require reporting of all facilities manufacturing, processing, or destroying fluorinated GHGs. EPA believes that it has captured all currently known operating fluorochemical manufacturers (EPA-HQ-OAR-2008-0508-0012, Page 4), HCFC-22 production, and HFC-23 destruction (EPA-HQ-OAR-2008-0508-0015, Page 4) facilities in the proposed rule. Should an additional fluorinated GHG manufacturing or importing facility commence operation after the effective date of a final GHG reporting rule, such a facility should be offered the regulatory certainty of their status in the reporting system. EPA should encourage market fairness by not creating any incentives for potentially small manufacturers or HFC-23 disposal facilities to commence operations that would escape the GHG reporting system.

Response: As proposed, EPA is requiring all producers of industrial greenhouse gases to report their production, transformation, and destruction of these gases. With the exception of facilities that destroy more than 2.14 metric tons of HFC-23, however, EPA is not requiring reporting of transformation or destruction from facilities that do not produce these gases. EPA is concerned that such requirements could require reporting from facilities that transform or destroy only small amounts of these gases and/or that destroy these gases only as a small part of their business (e.g., cement kilns). For example, small amounts of contaminated HFC-23 may be recovered from refrigeration or fire protection systems and destroyed; EPA does not consider it worthwhile to require reporting from facilities that destroy only these small quantities.

Moreover, EPA’s research indicates that the reporting requirements of Subparts O and OO capture most industrial GHG transformation and destruction. Facilities producing industrial GHGs will often also transform them, and even if they do not, they are required to report the quantities that they ship to other facilities for transformation. Similarly, EPA believes that facilities producing industrial GHGs or destroying large quantities of HFC-23 are likely to account for a large percentage of the destruction of fluorinated GHGs in the U.S. Again, even if producers do not destroy all of their fluorinated GHGs themselves, they are required to report the quantities that they ship off site for destruction.

As discussed in the preamble, EPA is not going final with Subpart L at this time.

2. SELECTION OF PROPOSED GHG EMISSIONS CALCULATION AND MONITORING METHODS

Commenter Name: Lorraine Krupa Gershman
Commenter Affiliation: American Chemistry Council (ACC)
Document Control Number: EPA-HQ-OAR-2008-0508-0423.2
Comment Excerpt Number: 98

Comment: EPA should focus Subpart O on the destruction efficiency of HFC-23, not on the variety of other issues included in Subpart O, such as the leak detection and repair discussion more appropriately discussed in Subpart L. Facilities that have determined DRE for the destruction device using historical data should be authorized to utilize this information to determine removal. Production related Subpart O requirements at proposed §98.156(c) through (e), if necessary, should be standardized with modified Subpart L requirements suggested in this letter, or all process activities should be regulated under a modified Subpart L.

Response: Please see Section O of the final rule for a response to this comment.

Commenter Name: Matthew Frank
Commenter Affiliation: Wisconsin Department of Natural Resources
Document Control Number: EPA-HQ-OAR-2008-0508-1062.1
Comment Excerpt Number: 12

Comment: The protocol in the rule appears adequate to cover both fluorinated GHGs and CO₂, N₂O and CH₄ emissions from these facilities. The Department recommends the IPCC Tier 3 method, as it should yield the most precise results.

Response: As discussed in the proposed rule and in the Technical Support Document, the monitoring requirements of subpart O are consistent with the IPCC Tier 3 method.

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

Commenter Name: Sarah B. King
Commenter Affiliation: DuPont Company
Document Control Number: EPA-HQ-OAR-2008-0508-0604.1
Comment Excerpt Number: 38

Comment: In §98.153(e), the proposed methods of calculating HFC-23 generated from each HCFC-22 production process have a tendency to over-estimate actual emissions (i.e., Eq. O-6 and Table O1). A more accurate way to determine emission factors for equipment leaks is to conduct sampling campaigns using EPA Method 204.

Response: Facilities that themselves destroy the HFC-23 that they generate are required to use Equation O-6 and Table O1 to estimate emissions from equipment leaks. EPA recognizes that Equation O-6 and Table O1 may overestimate actual emissions from equipment leaks. However, the proposed approach is currently used by the facility that has historically destroyed (on-site) the HFC-23 that it generates. For this facility, the calculated emissions from equipment leaks make up a small fraction of the facility's total HFC-23 emissions, which are themselves negligible on a national scale as long as the facility's destruction device continues to function properly. Thus, EPA anticipates that any error associated with the use of Equation O-6 and Table O1 will be quite small.

Commenter Name: Sarah B. King

Commenter Affiliation: DuPont Company

Document Control Number: EPA-HQ-OAR-2008-0508-0604.1

Comment Excerpt Number: 37

Comment: In §98.153(c), the calculation (Eq. O-4) for HFC-23 emitted from production facilities with no thermal oxidizer should be modified as follows. This modification to the formula accounts for changes in inventory level over the period.: $E_{23} = G_{23} - ((\text{Inventory end} - \text{Inventory begin}) + S_{23} + OD_{23})$

Response: EPA has accepted this comment. Please see Section O of the preamble to the proposed rule for more discussion.

4. MONITORING AND QA/QC REQUIREMENTS

Commenter Name: Sarah B. King

Commenter Affiliation: DuPont Company

Document Control Number: EPA-HQ-OAR-2008-0508-0604.1

Comment Excerpt Number: 39

Comment: §98.154(j) – The requirement to annually conduct emissions tests at process vents is overly burdensome and unnecessary as it is unlikely that the data would deviate from an initial process vent test, unless there was a significant change in the process. The testing requirements should be changed to at least every 5 years or after a significant change in the process.

Response: As discussed in the preamble, EPA has accepted this comment. Please see Section O of the preamble to the proposed rule for more discussion.

5. COST DATA

Commenter Name: Rich Raiders

Commenter Affiliation: Arkema Inc.

Document Control Number: EPA-HQ-OAR-2008-0508-0511.1

Comment Excerpt Number: 23

Comment: EPA concluded that the cost for industrial GHG manufacturers to comply with this rule “would not impose an undue burden.” (EPA-HQ-OAR-2008-0508-0041, Page 6) EPA also noted on Table VIII-1, 73 Fed. Reg. 16597, that the regulated community should expect to invest \$0 in Subpart L, O, OO, and PP compliance capital costs. One Arkema facility developed a cost estimate that this proposal, as written today, would cost over \$27,000,000 in capital cost, based on a preliminary cost estimate excluding safety system, foundation and concrete, and in-plant labor contribution costs. The annual compliance cost of the existing proposal for this one facility would reach \$2,600,000, not including lost production, process downtime, and required infrastructure maintenance. Because the cost estimate contains confidential business information, Arkema has submitted CBI paper copies of the cost calculations to the docket and the EPA project manager under separate cover per 40 CFR 2. Because typical chemical process units lose several thousands of dollars per hour when not operating, operators work to minimize the amount of unplanned downtime and endeavor to conduct required equipment verification during scheduled shutdowns. The cost estimates do not include any allocation for production opportunity cost. EPA should review the cost estimates developed for the proposal, update as appropriate, and review the cost of implementation with the Office of Management and Budget. We propose several cost-saving options EPA could implement to reduce the burden to more manageable cost levels, while providing EPA with comparable, or in some cases, more accurate, GHG emissions and supply information.

Response: This commenter does not produce HCFC-22; thus, EPA is assuming that this comment is primarily applicable to proposed subparts L and OO. As discussed in Section L of the preamble, EPA is not going final with Subpart L at this time. As discussed in Section OO of the preamble, EPA has significantly revised the proposed monitoring requirements for industrial gas suppliers producing industrial GHGs. Given these revisions, EPA believes that producers of industrial gases should not incur any costs beyond those anticipated by EPA in the RIA for the proposed rule.
