



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

**Volume No.: 26**

**Subpart R—Lead Production**

September 2009

## **Subpart R—Lead Production**

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

## FOREWORD

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

Due to the size and scope of this rulemaking, EPA prepared this document in multiple volumes, with each volume focusing on a different 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 R—Lead Production.

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 R—Lead Production 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 R—Lead Production.

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## SUBPART R—LEAD PRODUCTION

### 1. DEFINITION OF SOURCE CATEGORY

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**Commenter Name:** Robert N. Steinwurtzel

**Commenter Affiliation:** Bingham McCutchen LLP on behalf of Association of Battery Recyclers (ABR)

**Document Control Number:** EPA-HQ-OAR-2008-0508-0660.1

**Comment Excerpt Number:** 5

**Comment:** Lead Production in the U.S. is certainly not a source of most significant GHG emissions. Even using overinflated EPA's estimates, only from 0.002 to 0.004% of the national total GHG emissions is emitted from Lead Production processes. EPA also cannot assert that the Lead Production sector is a significant part of the stationary source combustion sector. Based on EPA's estimates in the TSDs for the proposal, estimated emissions from the Lead Production sector (865,945 mtCO<sub>2e</sub>) are 0.02% of the total estimated nationwide emissions from stationary fossil fuel combustion (approximately 3,750 million mtCO<sub>2e</sub>). [Footnote: We believe EPA's estimates of emissions from Lead Production are too high.] See Technical Support Document for Reporting Thresholds: Proposed Rule for Mandatory Reporting of Greenhouse Gases, at 3 (Mar. 8, 2009) ("Reporting Threshold TSD") (OAR-2008-0508-0046); Lead Production TSD, at 7. It is unreasonable to consider a group of facilities that emit such relatively small amounts as a source of most significant GHG emissions. When evaluating these emissions levels against the first criterion to include only source categories that emit the most significant amount of GHG emissions, the proper and obvious conclusion is that Lead Production is not a source of most significant emissions and should have been eliminated from further consideration.

**Response:** The response has been provided in section III of the preamble to this rule (see section R, Lead Production).

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### 2. REPORTING THRESHOLD

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**Commenter Name:** Robert N. Steinwurtzel

**Commenter Affiliation:** Bingham McCutchen LLP on behalf of Association of Battery Recyclers (ABR)

**Document Control Number:** EPA-HQ-OAR-2008-0508-0660.1

**Comment Excerpt Number:** 6

**Comment:** Notwithstanding the overstatement of GHG emissions and the error in applying the first criterion, EPA had additional information to indicate that Lead Production in the U.S. is not a most significant source, hence not warranting inclusion in the Proposed Rule. In the Reporting Thresholds TSD, Table 58 summarizes the impacts of selected emissions-based thresholds on source categories. Reporting Threshold TSD, at 19-22 Table 5-8. The thresholds evaluated are 1,000, 10,000, 25,000 and 100,000 metric tons of CO<sub>2e</sub> per year. Id. For several source categories, no matter what the threshold, EPA has estimated that the majority of facilities in the category would remain covered by the Proposed Rule (e.g., adipic acid, petroleum refineries,

pulp and paper). Id. However, Lead Production is the only category evaluated where raising the threshold to the 100,000 ton level results in no facilities being covered. Id. This analysis demonstrates that Lead Production facilities in the U.S. are not significant GHG emitters. Accordingly, when the analysis shows that all facilities in a particular source category are not covered at the 100,000 ton threshold level, no insignificant GHG emitters in the category should be required to report under the Proposed Rule. In such cases, this is most efficiently accomplished by establishing a reporting threshold of 100,000 metric tons CO<sub>2</sub>e per year for the entire source category. Using the 100,000 threshold, moreover, would not significantly reduce the coverage of emissions of EPA's rule, as the majority of sources identified would still have well over 90% of emissions from that source category covered under the 100,000 threshold. Reporting Threshold TSD, at 19-22 Table 5-8. EPA estimated that at the 100,000 threshold, the median share of entities covered falls to 66%, but the median share of emissions covered remains high at 98%. See EPA, Regulatory Impact Analysis for the Mandatory Reporting of Greenhouse Gas Emissions Proposed Rule (GHG Reporting), Final Report, at 4119 (Mar. 2009). This analysis makes clear that EPA is targeting several industry sectors, such as the Lead Production sector, and numerous facilities that have insignificant contributions to the national total of GHG emissions. EPA provides no justification for imposing substantially more costs on industry for limited estimated benefits and small likelihood for regulation under the CAA. For these reasons, the Lead Production sector should be eliminated as a source category, and EPA should raise the threshold to 100,000 for non-source category facilities.

**Response:** The response has been provided in section III of the preamble to this rule (see section R, Lead Production).

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**Commenter Name:** Robert N. Steinwurtzel

**Commenter Affiliation:** Bingham McCutchen LLP on behalf of Association of Battery Recyclers (ABR)

**Document Control Number:** EPA-HQ-OAR-2008-0508-0660.1

**Comment Excerpt Number:** 4

**Comment:** EPA's analysis with regard to Lead Production resulted in inclusion as a listed source category in the Proposed Rule with a threshold of 25,000 metric tons CO<sub>2</sub> equivalent (mtCO<sub>2</sub>e) per year for reporting GHG emissions from Lead Production facilities. Id. at 16,520. A closer look at EPA's analysis with regard to Lead Production reveals that the first criterion could not have been properly applied, as discussed below, and therefore Lead Production is included as a source category in the Proposed Rule simply because there was available information for identifying a facility-specific methodology for estimating emissions. The analysis EPA performed to determine that Lead Production should be included as a source category in the Proposed Rule is also flawed because, in part, it is based on overstated estimates of GHG emissions. Combustion emissions from secondary lead smelting are calculated using an emission factor developed in Table 4 on page 6 of the Lead Production TSD, using combustion device capacities listed in the Title V permit of a single facility which EPA assumes to be representative of all 26 of the secondary smelters considered in the analysis. Lead Production TSD at 6 Table 4. Use of such an assumption is contradicted by EPA's own reasoning against using a simplified emission calculation methodology to estimate CO<sub>2</sub> emissions found in Section 5.1 of the Lead Production TSD. Id. at 9. Here EPA states that the differences in the number and types of furnaces, and other site-specific factors among the lead smelters in the U.S. introduces too much uncertainty in applying a single default emission factor to all facilities. Furthermore, the emission factor developed in Table 4 assumes that the combustion devices at secondary lead

smelters operate 24 hours per day, 365 days per year at 90% of their capacity. Id. at 6 Table 4. This assumption of operating time and level of performance is a gross overstatement of the reality of operations at U.S. secondary lead smelters. No smelter operates 24 hours per day, 365 days per year at 90% capacity. Smelters are shut-down annually for average periods between 40 to 60 days for maintenance and other reasons. Moreover, market conditions impact capacity levels. In Table 5 on page 7 of the Lead Production TSD, process emissions from Lead Production which are to be used in the threshold analysis are estimated using a simplified calculation methodology which applies emission factors from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories to a national total production value and then allocates the emissions among the facilities based on annual facility Lead Production capacity values. Id. at 6. This approach again ignores EPA's conclusion that use of a single factor for the range of operations at the different facilities in the U.S. is not appropriate. Furthermore, the source of emission factors in the IPCC guidelines is a 2003 thesis attributed to Milo Sjardin of the University of Utrecht, The Netherlands. See Intergovernmental Panel on Climate Change, 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Vol. III, at 4.71 (2006) (citing Milo Sjardin, CO<sub>2</sub> Emission Factors For Non-Energy Use In The Non-Ferrous Metal, Ferroalloys And Inorganics Industry (June 2003) (hereinafter referred to as "Sjardin (2003)"). The analysis in Sjardin (2003) is based on numerous assumptions that do not reflect the Lead Production industry in the U.S. For example, Sjardin starts with an assertion that 50% of total Lead Production comes from primary raw material, but in the U.S. over 90% actually comes from secondary material. Sjardin (2003) at 22; EPA GHG Inventory, at 4-55. Sjardin's emission factors are based on the assumption that 80% of Lead Production (both primary and secondary) is smelted using a blast furnace/imperial smelting type furnace, Sjardin (2003) at 26, but in the U.S. approximately 70% is produced using other combinations of furnaces (e.g., reverberatory and electric) with blast furnaces. For secondary smelting Sjardin arbitrarily reduces the emission factor developed for primary smelting by 50% and then adds a significant CO<sub>2</sub> emission factor associated with the pretreatment of raw materials. Sjardin (2003) at 26. However, in the U.S. approximately 45% of the smelters do not pretreat lead materials prior to smelting. The incorrect assumptions in Sjardin (2003) compound to result in the overstatement of CO<sub>2</sub> emissions when using the emission factors as presented. This overstatement is known and supported by EPA. For example, as a reference to the use of the Sjardin (2003) emission factors in Section 4.18 of the EPA GHG Inventory states that applicability of the Sjardin emission factors to plants in the U.S. "is uncertain." EPA GHG Inventory, at 4-56. EPA's analysis is further flawed, thus resulting in an overstatement of the potential GHG emissions from the industry. EPA relies on Table 5 of the Lead Production TSD to claim the existence of 26 secondary lead smelters in the United States and . To the best of ABR's knowledge, it represents the entire existing capacity within the industry which consists of only 14 secondary lead smelting facilities. EPA is aware of the current construction of the secondary lead industry through comments received during promulgation of the Lead NAAQS by the agency in October 2008. Despite this information, EPA chose to rely on an unsubstantiated personal communication in effort to boost the calculation of potential GHG emissions from the industry.

**Response:** The response has been provided in section III of the preamble to this rule (see section R, Lead Production).

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### 3. SELECTION OF PROPOSED GHG EMISSIONS CALCULATION AND MONITORING METHODS

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**Commenter Name:** Robert N. Steinwurtzel

**Commenter Affiliation:** Bingham McCutchen LLP on behalf of Association of Battery Recyclers (ABR)

**Document Control Number:** EPA-HQ-OAR-2008-0508-0660.1

**Comment Excerpt Number:** 9

**Comment:** Because the currently available default factors for GHG process emissions from Lead Production are overstated, provisions should also be included in the rule to allow the ABR, or individual facilities, to develop and use accurate emissions factors that reflect current Lead Production operations in the U.S. Further requiring direct emissions measurements should not be required for any sources at Lead Production facilities, including stationary source combustion, except at the option of the facility.

**Response:** The response has been provided in section III of the preamble to this rule (see section R, Lead Production).

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**Commenter Name:** Robert N. Steinwurtzel

**Commenter Affiliation:** Bingham McCutchen LLP on behalf of Association of Battery Recyclers (ABR)

**Document Control Number:** EPA-HQ-OAR-2008-0508-0660.1

**Comment Excerpt Number:** 8

**Comment:** Lead Production is one the smallest sources of GHG emissions included in the Proposed Rule, yet EPA has not provided a simplified emissions estimation method that it states addresses the concern of unduly burdening small sources. The Proposed Rule at §98.183 should be revised to allow the use of the simplified emission estimation method described as Option 1 on page 16,520 of the Proposed Rule. Id. at 16,520. Facilities could then apply a default emission factor for process related emissions to the lead production rate to estimate process-related CO<sub>2</sub> emissions. Because the levels of GHG emissions that will be reported by the Lead Production group are so relatively small, the uncertainty inherent in the simplified estimation method will be of little consequence. Conversely, elimination of the burdensome monitoring, recordkeeping and quality assurance requirements of the currently proposed methodology will provide significant relief to the Lead Production minor emission source category.

**Response:** The response has been provided in section III of the preamble to this rule (see section R, Lead Production).

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### 4. MONITORING AND QA/QC REQUIREMENTS

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**Commenter Name:** Robert N. Steinwurtzel

**Commenter Affiliation:** Bingham McCutchen LLP on behalf of Association of Battery Recyclers (ABR)

**Document Control Number:** EPA-HQ-OAR-2008-0508-0660.1

## **Comment Excerpt Number: 10**

**Comment:** The Proposed Rule at §98.184 requires that Lead Production facilities determine and record the mass of each solid carbon-containing furnace input material for each calendar month, by direct measure or by calculations using process information. 74 Fed. Reg. at 16,670. For each of the input materials identified, facilities must determine and record the carbon content for each calendar month using supplier information or by collecting and analyzing representative samples of the material. Id. When the material carbon content is not provided by a supplier, the analysis of samples must be performed by an independent certified laboratory each calendar month. Id. Feed materials processed at U.S. secondary lead smelters are predominantly used lead-acid batteries. This material source is of a highly known and consistent nature and therefore the content of carbon and other constituents will not vary over time. Likewise, the other types of furnace input materials used at each secondary lead smelter facility, such as limestone and coke, are consistently sourced and have low variability. Therefore, the frequent monitoring of furnace input materials in the Proposed Rule is unnecessary and burdensome. The Proposed Rule should be revised to require determination and recording of the carbon content for each calendar quarter for an initial period of one (1) year. Provided that this monitoring shows reasonable consistency of carbon content for each material, the required frequency of monitoring should be automatically reduced to a semiannual basis for reporting years thereafter. Should EPA choose to retain the monthly monitoring requirements in the Proposed Rule, then a provision should be added to automatically allow a reduction in monitoring frequency after a period of one (1) year shows consistency. For example, if it is determined that carbon content is within 10% +/- of the prior year's evaluation, the monthly monitoring requirement should be reduced to a semiannual basis.

**Response:** The response has been provided in section III of the preamble to this rule (see section R, Lead Production).

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## **5. OTHER SUBPART R COMMENTS**

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**Comment:** Generally across the rule, commenters requested clarification on use of standards and in some cases proposed alternative standards for determining particular parameters used to estimate emissions.

**Response:** For Subpart R, we have proposed a specific list of standards for determining a key parameter, i.e. carbon contents of process inputs. We also allow facilities to use supplier data on carbon contents of inputs/outputs if available to minimize the testing burden. There are limited available methods for determining carbon contents of the inputs and they are listed in the rule. For the purposes of this rulemaking, the use of these standards assures consistency and comparability in estimates from sources. The response to comments proposing the use of defaults as an alternative to proposed standards for determining actual carbon contents based actual material consumption in processes is provided in the preamble section III, section R. Lead Production.