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Information Quality Guidelines Staff (Mail Code 2811R)
U.S. Environmental Protection Agency
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Re: Request for Correction, Technical Support Document, "Greenhouse Gas Emissions Reporting from the Petroleum and Natural Gas Industry"

The U.S. Chamber of Commerce ("Chamber") submits this request for correction (RFC) of information developed by the Environmental Protection Agency (EPA) in a background technical support document titled, "Greenhouse Gas Emissions Reporting from the Petroleum and Natural Gas Industry,"[1] and relied upon for various rulemakings over the past two years. As described by this RFC, EPA's technical support document contains information that erroneously overestimates methane emissions, volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) from gas wells by orders of magnitude. The Chamber seeks correction of the erroneous information, as it does not comply with the Information Quality Act[2] (IQA) as implemented under Office Management and Budget (OMB) guidelines[3] and EPA guidelines.[4]

[1] *Available at* http://www.epa.gov/climatechange/emissions/downloads10/Subpart-W_TSD.pdf.
[2] Section 515(a) of the Treasury and General Government Appropriations Act for Fiscal Year 2001, P.L. 106-554; 44 U.S.C. §3516 (notes).
[3] Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by Federal Agencies, 67 Fed. Reg. 8452 (Feb. 22, 2002) ("OMB Guidelines").
[4] Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by the Environmental Protection Agency, EPA/260R-02-2008 (October 2002) ("EPA Guidelines").

Requester Identity and Information

The Chamber is the world's largest business federation, representing the interests of more than three million businesses and organizations of every size, sector, and region. The Chamber's broad membership base includes large and small companies—more than 96 percent of Chamber members are small businesses with 100 employees or fewer—trade associations, and chambers of commerce. The Chamber has member companies engaged in the exploration and production of crude oil and natural gas, including the completion of natural gas wells. Many of these companies will be directly affected by EPA regulations, guidance and other actions that utilize the erroneous information this RFC seeks to correct. And virtually every Chamber member uses natural gas or products from it—from plastics to fertilizer—and would be subject to increased costs if higher prices resulted from lower production because of unnecessary or cumbersome new rules.

Pursuant to the IQA, the Chamber is an affected person that seeks to obtain correction of information maintained and disseminated by the agency that does not comply with OMB and EPA Guidelines. The Chamber's main point of contact for this RFC shall be:

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Description of Errors

In 2010, EPA disseminated a background technical support document titled, "Greenhouse Gas Emissions Reporting from the Petroleum and Natural Gas Industry" (GHG TSD).[5] This document was developed by EPA's Climate Change Division in the course of promulgating Subpart W of EPA's Mandatory Greenhouse Gas Reporting Rule.[6] In this technical support document, EPA altered the methodology it had previously used to estimate natural emissions from completion of natural gas wells and found that 9,175 thousand cubic feet (MCF) of natural gas and

[5] *Available at* http://www.epa.gov/climatechange/emissions/downloads10/Subpart-W_TSD.pdf.
[6] *Available at* http://www.epa.gov/climatechange/emissions/subpart/w.html.

its associated methane, VOCs and HAPs are emitted from the completion of unconventional shale gas wells.

The well completion emission factor of 9,175 MCF/completion in the 2010 GHG TSD is an overestimate of emissions from the natural gas industry. EPA's 9,175 MCF methane emission estimate is based on:

- Unverified information from a limited number of wells regarding gas volumes captured by green completions[7] and gas emitted from non-green completions obtained through Natural Gas Star Program;

- An assumption by EPA that the volume of gas vented during non-green completions equals the amount of gas captured from green completions;

- An assumption that gas emissions are controlled by green completions for only 15% of gas well completions; and

- An assumption that gas is vented for 49% of the non-green well completions.

IHS CERA, a highly respected research firm with specific expertise in the oil and natural gas production sector, reviewed EPA's technical support document on natural gas emissions from unconventional shale well completions. IHS CERA's findings are chronicled in a report titled, "Mismeasuring Methane: Estimating Greenhouse Gas Emissions from Upstream Natural Gas Development." The IHS CERA study is enclosed hereto as Attachment "A". IHS CERA concluded that the EPA Climate Change Division's methodology and results were flawed.

Among the errors IHS CERA discovered were that:

- **EPA based the estimate on a simple average of four data points taken from presentations at technical conferences in 2004 and 2007.** Three of these data points describe natural gas captured for sale, not methane emitted.

- **EPA assumes that gas produced during completion is vented, rather than flared, unless flaring is required by state regulation.** This assumption is at odds with industry practice and with safe operation of drilling sites.

[7] Green completion techniques are methods that minimize the amount of natural gas and oil vapors that are released into the environment when a well is being flowed during the completion phase of a well.

IHS CERA concluded that, "[a]s a result of these questionable assumptions, the overall amount of methane that EPA assumes is emitted during well completion activities does not pass a basic test of reasonableness."

In addition, URS Corporation conducted a survey of gas well completions and emissions from unconventional shale wells. Seven companies participated in this data collection effort and provided data on approximately 1200 wells. The survey showed that ***actual*** gas emissions from the completion of unconventional shale gas wells were more than 1200% lower than EPA's gas emission estimate. This study also revealed that green completions were used on 92% of surveyed wells and 55% of the non-green completed wells were flared rather than vented. The URS report is enclosed hereto as Attachment "B".

Explanation of How the Information Does Not Comply with OMB or EPA Guidelines

The information described in this RFC is by definition "influential," because EPA could "reasonably determine that dissemination of the information will have or does have a clear and substantial impact on important public policies or important private sector decisions."[8] EPA currently maintains a web page devoted to sources of methane emissions in the United States,[9] as well as a "Technical Note" linking to the GHG TSD and explaining that the agency has revised its unconventional natural gas extraction emissions figures upward.[10] EPA has also based a proposed rule on the erroneous information. For all of these reasons, the information described in this RFC meets the definition of "influential" information under the IQA and must be protected accordingly. By issuing a notice of proposed rulemaking based in part on this erroneous information, EPA has "disseminated" the information within the meaning of the EPA Guidelines.[11]

The discussion contained in this RFC and the attachments hereto demonstrate that the 9,175 MCF natural gas emissions estimate disseminated by EPA for unconventional shale gas well completions is in error. EPA's use of limited and unverified data and reliance on unsupported assumptions do not facially meet the requirements for quality, utility, objectivity and integrity imposed by the IQA and the

[8] OMB Guidelines at 8455.
[9] http://www.epa.gov/outreach/sources.html.
[10] http://www.epa.gov/outreach/downloads/TechNote_Natural%20gas_4-15-11.pdf.
[11] EPA Guidelines at 32.

guidelines for information disseminated by EPA and other federal agencies. In particular, basing its 9,175 MCF natural gas emissions estimate on this data and these assumptions does not meet the IQA requirement that information disseminated by EPA be accurate, complete, reliable and unbiased.[12] Moreover, the use of the above-referenced information and assumptions does not meet the IQA requirement that scientific information regarding health, safety or environmental risk assessments be based on the best available science, data and supporting studies conducted in accordance with sound and objective scientific practices and methods.[13]

The erroneous information detailed in this RFC is statistical information that EPA has based several assessments of environmental and human health risks upon. The Guidelines require that influential information concerning an analysis of risks to human health, safety, or the environment must meet the standard for risk assessments adopted by Congress in the Safe Drinking Water Act Amendments of 1996 that has been adopted government-wide by OMB[14] and individually by EPA.[15] Under the standard, EPA must ensure that the information it disseminates is based on the best available, peer-reviewed science and supporting studies conducted in accordance with sound and objective scientific practices, and that all data is collected by accepted methods or best available methods.[16] As IHS CERA makes clear in its analysis, EPA's flawed methodology and questionable assumptions fail to meet the test for reasonableness. EPA has therefore failed to satisfy the IQA's heightened standard for influential information.

Recommendation of Corrective Action, Effect of the Error on the Chamber, and How a Correction would Help

Based on the foregoing discussion, the Chamber recommends that EPA correct its erroneous calculations and return to the methane emissions estimates it used prior to the 2010 Greenhouse Gas Emissions Reporting from the Petroleum and Natural Gas Industry technical support document.

Inaccurate estimates by a government body are highly problematic, because policy decisions are made in reliance on the trust supposedly inherent in EPA's data. In fact, critical regulatory initiatives and proposals are being based, in part, on EPA's

[12] OMB Guidelines at 8453.
[13] EPA Guidelines at 22.
[14] OMB Guidelines at 8460.
[15] EPA Guidelines at 21-22.
[16] OMB Guidelines at 8457.

flawed estimates. Currently the proposed new source performance standards for the oil and natural gas industry are founded in part on what are now seen to be EPA's seriously inflated estimates of methane, VOC and HAP emissions from unconventional shale gas well completions. EPA used the faulty overestimate in its economic analysis to erroneously conclude that green completion requirements will save a company six thousand dollars each time it performs one. However, more accurate measurements indicate that EPA's proposed green completion requirements could ***cost*** a company 25 thousand dollars each. Faulty assumptions about emissions have provided EPA the basis to enact unnecessarily strict regulations on the natural gas industry. These faulty assumptions affect the Chamber's members in the natural gas extraction industry through increased production costs, and affect all users of natural gas through increased energy prices and the resulting impact on jobs. The correction requested by the Chamber in this RFC could help avoid a great deal of this economic hardship.

Effect of Errors

Researchers, financial analysts and other governmental bodies have relied on EPA's flawed estimates of natural gas emissions from unconventional shale gas well completions in a number of research reports and policy consideration. Those concerned about overall global climate change policy see the revised EPA methane emission numbers as calling into question the emissions benefits to using natural gas. For example, Dr. Robert Howarth of Cornell University led a team that released a study this past spring questioning whether natural gas was a cleaner fuel than coal. Certainly Dr. Howarth's study included several inaccurate assumptions of his own making, but a key part of his review was reliance on the overestimation of methane emissions developed by EPA.

The Cornell study and EPA's methane emission estimates are also finding voice in other government studies. The U.S. Department of Energy SEAB Natural Gas Subcommittee 90-day Report released in August 2011 even mentions the "pessimistic conclusion about the greenhouse gas footprint of shale gas production and use."[17] In October 2011, DOE's National Energy Technology Lab cited EPA's 9,175 MCF figure throughout its report, "Life Cycle Greenhouse Gas Inventory of Natural Gas Extraction, Delivery and Electricity Production."[18]

[17] Secretary of Energy Advisory Board, "Shale Gas Production Subcommittee 90-Day Report," August 18, 2011, *available at* http://www.shalegas.energy.gov/resources/081811_90_day_report_final.pdf.
[18] *Available at* http://www.netl.doe.gov/energy-analyses/pubs/NG-GHG-LCI.pdf.

The deficiencies and errors that are the subject of this RFC were also raised in public comments to EPA for the rulemaking titled "Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews," Docket ID No. EPA-HQ-OAR-2010-0505. This RFC echoes those concerns and seeks correction of the aforementioned errors.[19] Because EPA's dissemination of erroneous methane, VOC and HAP emissions information from gas wells has crept into multiple rulemakings and across agencies over the course of the past two years, the Chamber is entitled to submit this stand-alone RFC. Pursuant to EPA Guidelines, the Chamber requests within 90 days the correction requested by this RFC. If EPA requires more than 90 calendar days, please provide the Chamber notice that more time is required, an explanation, and an estimated decision date.

Sincerely,

William L. Kovacs

Attachment A: IHS CERA "Mismeasuring Methane" Report
Attachment B: URS Shale Gas Emissions Analysis

[19] Moreover, because EPA has failed to satisfy the IQA's requirements for quality, utility, objectivity and integrity, the proposed rulemaking based on this erroneous information could potentially be arbitrary and capricious.