



July 21, 2023

Submitted electronically to docket No. EPA-HQ-OAR-2019-0424

U.S. Environmental Protection Agency
EPA Docket Center, Air and Radiation Docket
Mail Code 28221T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Re: Revisions and Confidentiality Determinations for Data Elements under the Greenhouse Gas Reporting Rule; Docket No. EPA-HQ-OAR-2019-0424

These comments are filed on behalf of the Independent Petroleum Association of America (IPAA). IPAA represents the thousands of independent oil and natural gas explorers and producers, as well as the service and supply industries that support their efforts, that will be significantly affected by the actions resulting from this regulatory proposal. Independent producers drill about 91 percent of American oil and natural gas wells, produce 83 percent of American oil and produce 90 percent of American natural gas.

In addition to the specific comments made herein, IPAA has joined comments submitted separately by the American Petroleum Institute (API).

These IPAA comments will focus on proposed Subpart B (Energy Consumption). The Environmental Protection Agency (EPA) argues that its initiation of Subpart B is:

...to improve the completeness of the data collected under the GHGRP, add to the EPA's understanding of GHG data, and to better inform future EPA policy under the CAA, such as informing potential future EPA actions with respect to GHGs. Once collected, such data would also be available to improve on the estimates provided in the Inventory, by providing more information on the allocation of electricity use to different end use sectors.

In fact, it does not collect information on greenhouse gas (GHG) emissions. Instead, it requires operators to collect and submit information on the electricity and thermal energy used. Not only does this new Subpart effectively make these operators meter readers, it also misdirects their resources to obtain information far more readily available from electricity and thermal energy suppliers. From IPAA's perspective it does not provide GHG emissions information because, for example, the electric energy source could be composited from numerous types of generation options.

The EPA Subpart B proposal is a clear-cut example of mission creep. For EPA to gain any GHG emissions related information from this data, it must conduct detailed analyses of the sources of the electricity or thermal energy and somehow allocate estimates to individual sources. This is an unnecessary demand on limited EPA resources.

EPA should set aside its initiative to create Subpart B and address long standing and emerging issues associated with the current elements of the GHGRP. When it was initiated, the GHGRP

and the Inventory of U.S. Greenhouse Gas Emissions and Sinks (GHGI) presented a substantial challenge and required the redirection of resources to manage it. Most of IPAA's experience with the GHGRP relates to Subpart W. The primary sources for Subpart W emissions factors (EF) come from limited emissions studies in the mid-1990s. This history is common for the reporting subparts that comprise the GHGRP. Over the years, while EPA has made additions to increase reporting requirements, EPA has not fundamentally redone the analyses that created the initial emissions factors.

Even now, this proposal is a supplement to a 2022 proposal to make major modifications to numerous subparts that comprise the GHGRP. EPA has yet to finalize those proposals, but if the changes proposed therein for Subpart W are any indication of the quality of the effort, it falls well short of meaningful revisions.

Each EF carries with it a history of its development and evolution. Intermittent pneumatic controllers used in oil and natural gas production have been an example of the challenge of developing accurate information. Intermittent pneumatic controllers operate only when they activate. Correspondingly, they emit when they activate unless they are failing for some reason. Intermittent pneumatic controllers are one of the most pervasive pieces of equipment at oil and natural gas production facilities. Consequently, they are one of the largest emissions sources for these operations. At issue is the validity of the EF for this equipment.

The current EF for intermittent pneumatic controllers is 13.5 scf/hour/component. This EF was developed in the mid-1990s based on data collected from 19 controllers. It is hardly an example of robust data acquisition. Since then, the validity of this EF has been consistently questioned. It has become a higher profile issue as various environmental lobbying groups have produced reports based on the GHGI that is largely developed using the GHGRP.

Over the years other studies have been done to address this EF. EPA only in 2022 proposed some new options. However, the quality of its analysis of this EF that has been such a target is wanting. In general, EPA discusses six studies that have been done with information on intermittent pneumatic controllers for production operations (GRI/EPA 1996, Allen, Thoma, Prasino, OIPA and API 2019). Additionally, EPA assessed a Department of Energy study on gathering and boosting operations (DOE G&B). In each case EPA discusses the limitations of the studies – short sampling times with assumptions about the activation period for intermittent controllers, emissions that are calculated rather than measured, and classification issues. Then, EPA eliminates two studies (Thoma, OIPA) apparently because of their use of calculated emissions (which were far lower than some of the other studies). Subsequently, it produced the following summary table:

Table 2-9. Comparison of Population Emission Factors for Natural Gas Pneumatic Device Venting for Production and G&B Industry Segments

Device Type	Whole Gas Emission Factor (scf/hr/device)					
	Subpart W ^a	GRI/EPA (1996e) ^b	Allen <i>et al.</i> (2015)	Prasino Group (2013a) ^c	DOE G&B Study (2019)	API Field Study (2019)
Low continuous bleed pneumatic devices	1.39	27.3 ^b	13.6 ^d	6.1	7.6	2.6
High continuous bleed pneumatic devices	37.3		22.8	10.4	19.3	16.4
Intermittent bleed pneumatic devices	13.5	13.5	6.0 ^d	4.2	11.1	9.2

Next, EPA averaged the intermittent factors for these studies to produce a new EF of 8.8 scf/hr. However, this appears to include the EF from the DOE G&B study; if it had not, the EF would appear to be 8.2 scf/hr. If EPA had included the Thoma and OIPA studies instead of the DOE G&B study, the EF would be 6.8 scf/hr. None of these calculations appear to be weighted based on the number of controllers tested. Consequently, for example, the 19 controllers in the GRI/EPA 1996 study are treated equally with the 128 controllers in the Prasino report. If EPA had weighted the data and used the Thoma and the OIPA studies, the EF would be closer to 3.7 scf/hr.

In addition to proposing the new EF of 8.8 scf/hr for intermittent pneumatic controllers at production sites, EPA suggested the possibility of a bifurcated calculation breaking apart malfunctioning controllers (24.1 scf/hr) and properly functioning controllers (0.3 scf/hr).

The consequences of these revised EF can be seen in this table prepared by the Arkansas Independent Producers and Royalty Owners and included in its comments to the 2022 proposal. As it shows, the current GHGRP EF (13.5 scf/hr) overstates intermittent pneumatic controller methane emission by approximately 35 percent compared to the EF in this proposal (8.8 scf/hr). The disparity is far larger using the bifurcated calculation where the difference would be about 80 percent.

Comparison of Methane Emissions Associated with Intermittent-Bleed Pneumatic Devices as Determined by Current GHGRP "Eq. W-1" v. Proposed GHGRP "Eq. W-1A" v. Proposed GHGRP "Eq. W-1B"	
Assumptions: <ul style="list-style-type: none"> - One Subpart W Reporter - 100 Intermittent-bleed Pneumatic Devices @ 20 Locations - Performs compliant OGI leak surveys at all 20 locations one-time per annum - Identifies 10 malfunctioning (i.e. leaking) Devices (10% leak rate) - Remaining 90 Devices, verified to be operating normally - Uses default of 8760 hours for device "operating" (current rule) and "In-service" (proposed rule) times - Produces dry gas with a 98% CH4 Fraction 	
Current – "Eq. W-1"	$E_{i,j} = \sum_{i=1}^3 Count_i * EF_i * GHG_i * T_i \quad (\text{Eq. W-1})$ <p>100 devices x 13.5 scf/hr/device x 0.98 CH4 % x 8760 hours = 11,589,480 scf CH4 emissions</p>
Proposed – "Eq. W-1A"	$E_{i,j} = \sum_{i=1}^3 Count_i * EF_i * GHG_i * T_i \quad (\text{Eq. W-1A})$ <p>100 devices x 8.8 scf/hr/device x 0.98 CH4 % x 8760 hours = 7,554,624 scf CH4 emissions</p>
Proposed – "Eq. W-1B"	$E_i = GHG_i * \left[\left(24.1 * \sum_{i=1}^n T_z \right) + (0.3 * Count * T_{op}) \right] \quad (\text{Eq. W-1B})$ <p>0.98 CH4 % x [(24.1 scf/hr/device x 10 leaking devices x 8760 hours) + (0.3 scf/hr/device x 90 non-leaking devices x 8760 hours)] = 2,300,726 scf CH4 emissions</p>
<p>Summary – In the scenario above, current GHGRP requirements ("Eq. W-1") overstate methane emissions associated with intermittent-bleed pneumatic devices by approx. 35% compared to proposed GHGRP alternative 1 ("Eq. W-1A") and by approx. 80% compared to proposed GHGRP alternative 2 ("Eq. W-1B"). This is based on an assumed leak rate of 10% of devices. The disparity would be approx. 96% if a 1% leak rate (1 leaking device out of 100 total devices) was assumed and "Eq. W-1B" was used.</p>	

EPA's Technical Support Document (TSD) for the 2022 proposal fails to recognize that other quantification methods are potentially just as valid as measurements for purposes of EF development. Other methodologies with similar or better uncertainties when scaling a smaller sample up to a larger population are valid. Engineering calculations, based on volumetric

measurements, pressure measurements, and measurements of actuation counts, are as good as, or better, than volumetric rates derived from devices that use mass flow meters and calibration curves. EPA's 2022 proposal TSD discounts studies that did not use "measurements" by removing them from the basis for proposed EF without explaining the technical basis for this position. Similarly, EPA should allow for reporters to consider control devices when applied to pneumatic devices in the calculation methodology similar to other sources.

These are fundamental issues that need to be addressed by EPA, not only for intermittent controllers, not only for Subpart W, but for the entire GHGRP. Over the years, the GHGRP and the GHGI have produced an oversized influence on the deliberations and understanding of greenhouse gas management analysis. Advocacy groups have taken GHGRP information and used it to suggest an accuracy well beyond what can be justified from the building block EF that were used to develop it, while at the same alleging it understates emissions. These seemingly incongruous arguments should compel EPA to engage in its own efforts to improve the accuracy of both the GHGRP and the GHGI. Instead, it merely throws other uncontrolled studies into the mix of calculating emissions with limited or nonexistent critical analysis.

Now, the Inflation Reduction Act (IRA) has fundamentally changed the role of Subpart W EF. Subpart W EF are no longer emissions estimates that can be debated regarding their accuracy; they will be "taxable events" subject to audits, enforcement actions and fines under the Clean Air Act (CAA). Given the history of issues over the accuracy of Subpart W EF, the IRA makes a profound change.

Under the IRA, emissions reported under the Greenhouse Gas Reporting Program (GHGRP) shift from being estimates that are questionably accurate and for which there are legitimate differences over the details of their calculation. Instead, these reported amounts become "taxable events". That is, each emission bears a specific cost for the operator. Those values then become subject to audit by EPA, and differences between EPA's calculations and operators' calculations become subject to enforcement action under the CAA by the Office of Enforcement and Compliance Assurance (OECA) and ultimately fines.

This change places a much larger burden on EPA to assure that the EF are accurate. No more should EPA be using 19 intermittent pneumatic controls in the mid-1990s as the basis of EF. Similarly, the process must be straightforward and clearly understood. Unfortunately, this change will also serve to suppress individual operators from developing new and better emissions estimating techniques. Why? If an operator uses a different approach – unless it is given a specific sanction by EPA, including OECA – that choice becomes an obvious target for review by OECA. Past history with Subpart OOOO shows that OECA can develop its own approach to compliance even if the operator is using the recommendations of EPA's technical staff. OECA then threatens or imposes massive fines until the operator adheres to the OECA approach. Given the magnitude of emissions calculations under Subpart W and the structure that it is solely a non-delegated federal requirement, OECA will have vast powers to challenge any reported emissions value, with the burden of validation falling on the operator.

The IRA mandates that EPA revise the Subpart W EF to improve their accuracy by the time that the tax is imposed – 2024 emissions. EPA has now released a proposal to revise Subpart W, but it not only falls short of true revisions, EPA proposes that its changes will not be effective until the calculations of the 2025 emissions – a full year after the tax will be imposed under the current flawed emissions calculation process.

This mandate under the IRA raises serious issues regarding EPA's continuing pursuit of the essentially interpretive EF process where EPA is relying on studies that EPA frequently criticizes as falling short of the quality of information that it wants for EF. EPA needs to develop and execute analyses of emissions that produce a robust data assessment, but it has not.

Both the 2022 proposed revision of the GHGRP EF process and the newly proposed revisions to Subpart W demonstrate that EPA does not have the resources to carry out its primary tasks regarding the GHGRP, the GHGI and the IRA. There is no way that it can viably justify expanding its scope of activities to unmandated initiatives like the creation of a new Subpart B.

EPA must drop its pursuit of such ancillary and discretionary explorations of data collection unrelated to its fundamental and mandatory requirements under the GHGRP, the GHGI and the IRA. Instead, it needs to direct its resources to the compelling demands of its current tasks.

IPAA appreciates the opportunity to submit these comments. If there are questions, please contact Dan Naatz at dnaatz@ipaa.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Naatz", written in a cursive style.

Dan Naatz
Chief Operating Officer and
Executive Vice President