

October 25, 2024

The Honorable Michael S. Regan, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

VIA-EMAIL

Re: Greenhouse Gas Reporting Rule: Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems, Docket No. EPA-HQ-OAR-2023-0234

Dear Administrator Regan,

The Producer Associations hereby submit this petition for changes to the Final Rule entitled “Greenhouse Gas Reporting Rule: Revisions and Confidentiality Determinations for Petroleum and Natural Gas Systems” Docket No. EPA-HQ-OAR-2023-0234 due to the immediate compliance and implementation issues described herein.

The Producer Associations is comprised of Independent Petroleum Association of America, Arkansas Independent Producers and Royalty Owners, Domestic Energy Producers Alliance, Eastern Kansas Oil & Gas Association, Gas and Oil Association of West Virginia, Illinois Oil & Gas Association, Independent Petroleum Association of New Mexico, Indiana Oil and Gas Association, International Association of Drilling Contractors, Kansas Independent Oil & Gas Association, Kentucky Oil & Gas Association, Michigan Oil and Natural Gas Association, National Stripper Well Association, North Dakota Petroleum Council, Ohio Oil and Gas Association, Panhandle Producers & Royalty Owners Association, Pennsylvania Independent Oil & Gas Association, Permian Basin Petroleum Association, Petroleum Alliance of Oklahoma, Petroleum Association of Wyoming, Texas Alliance of Energy Producers, Texas Independent Producers & Royalty Owners Association, and Western Energy Alliance. These organizations are national, regional, and state associations representing thousands of American independent oil and natural gas producers that are significantly affected by revisions to Subpart W promulgated by EPA and to the provisions of the Methane Emissions Reductions Program (MERP) generally.

This document presents issues related to changes in Subpart W particularly in its new context as the primary source for determining the Waste Emissions Charge (WEC) as a part of the MERP.

Prompt consideration of this request would be appreciated. The Producer Associations look forward to continuing constructive engagement with EPA to ensure the Final Rule is cost-effective, technically feasible, and accomplishes a shared goal of reducing emissions.

Subpart W Reconsideration Issues

The Producer Associations request that EPA reconsider its revisions to Subpart W reporting requirements under the Greenhouse Gas Reporting Program (GHGRP). There are several significant reasons for reconsideration. First, Subpart W cannot be viewed solely in the context of GHGRP reporting; it is now the linchpin to the calculation of the WEC under the MERP. Inaccuracies and inadequacies in Subpart W will translate into taxation of the submitters of emissions estimates. Second, many of the most significantly affected parties under both revised Subpart W reporting and WEC payment will be small business producers operating principally low production marginal oil and natural gas wells. Third, EPA has failed to meet the Congressional mandate to improve the empirical basis for emissions calculations in Subpart W. Fourth, EPA has arbitrarily and capriciously failed to develop any method for small producers to cost effectively estimate emissions to determine whether they will be subject to Subpart W and/or subject to WEC. Fifth, these failures expose thousands of small business producers to potential harassing enforcement actions by EPA's Office of Enforcement and Compliance Assurance (OECA) and EPA makes no effort to protect these stakeholders from such actions.

1. Subpart W Must be Considered in the Context of its New Role in MERP.

Since 2010, oil and natural gas producers and other components of the industry have reported emissions under the requirements of Subpart W. These new revisions to Subpart W amend that Subpart. While EPA asserts that it recognizes the importance of Subpart W's role in the MERP, there is no indication that its actions here are constrained in any way. Failure to meet the Congressional mandates regarding the quality of reporting under Subpart W means that inaccuracies in its calculations can mean excessive estimates that will result in significant numbers of small producers that did not report in the past being arbitrarily pulled into the taxing mechanisms of the WEC.

These consequences run directly counter to Congressional intent to limit the impact of MERP on small businesses. In June 2023, Senator Joe Manchin wrote to EPA regarding the MERP and reminded the agency:

The statute clearly intends to exempt marginal wells and smaller producers from the fee. EPA must make it clearly understood that those entities not subject to the current Subpart W Greenhouse Gas Reporting Program are not subject to EPA fees under MERP.

EPA needs to revise its Subpart W structure to assure that small businesses and marginal wells are not inappropriately captured by the MERP because EPA failed to comply with the congressional mandate to base Subpart W factors base on empirical data.

2. The Subpart W Definition of Facility Creates an Excessive Burden on Small Producers Operating Low Production Wells.

When EPA created Subpart W in 2010, it faced the issue of devising the appropriate facility for reporting. EPA chose to ignore the logical facility approach that reflects oil and natural gas production – a well site with its associated supporting operations such as storage tanks. Instead, an artificial facility definition was created whereby all the wells under the

ownership of a company in an American Association of Petroleum Geologist (AAPG) basin are aggregated for Subpart W for reporting purposes as one facility. Members of the Producer Associations opposed this definition in 2010 because it does not represent a logical operating entity and is inconsistent with any facility definition used in the Clean Air Act (CAA). However, because the GHGRP is not a component of the CAA, EPA adopted a definition of “facility” that does not comport with that of the CAA. Now, with the MERP written as sections of the Clean Air Act, the issue of a proper facility definition becomes critical because it affects the calculation of the methane tax in two ways – whether the emissions from a facility exceed 25,000 metric tonnes of CO₂eq and the amount of the tax thereafter.

This definitional issue is particularly significant for low production well operations. These wells are typically in the range of zero to three barrels per day of oil production. The small businesses that operate these wells may have hundreds to thousands of them scattered throughout an AAPG basin. Each well is an individual operation; few are even contiguous with other well sites. However, continued use of the historic Subpart W facility definition forces these distinctive well sites to be aggregated as if they were one huge operating facility. As a result, operations that would never be considered a Clean Air Act facility can be pulled into the methane tax. EPA needs to revise its Subpart W facility definition – and thereby its MERP definition – to exclude these marginal wells from the scope of its definitional structure.

3. EPA Failed to Meet the Congressional Mandate to Improve the Empirical Basis for Emissions Calculations.

Congress expressed a clear intent for EPA to improve the empirical basis for Subpart W emissions calculations. Embracing the concept of using empirical data to improve emissions estimates faces a fundamental challenge. Most emissions from oil and natural gas production operations come from diverse emissions points rather than structured point discharges. These are difficult to measure because they cannot be funneled to a measurable sampling point. Many are intermittent. Consequently, elaborate capturing systems must be put in place to measure emissions that cannot remain in place during normal operations. Therefore, emissions calculations must ultimately rely on emissions factors. Historically, the factors have not been based on robust sampling. Even where emissions factors have better accuracy, the manpower necessary to obtain information can be demanding and create significant challenges for marginal well operations that have minimal daily monitoring.

Unfortunately, the revised Subpart W falls well short of an acceptable inclusion of meaningful revisions that improve the Subpart’s empirical basis. While EPA chose to consider multiple studies performed by others, it did nothing to validate those studies. Some examples are illustrative.

a. Use of the Rutherford Study.

A major source of EPA’s efforts to evaluate alternative emissions factors is the Rutherford Study. At its heart this study is problematic. Its conceptual basis is that facility-based emissions calculations – like the historical Subpart W emissions factors – understate emissions because its authors believe that they produce lower emissions calculations than those projected by top-down studies. Consequently, the Rutherford Study searches different studies – many of

which have been generated by anti-fossil energy advocates – and seeks out higher emissions factors. Not surprisingly, using the Rutherford Study, EPA found higher emissions factors for Subpart W. Perhaps some are correct, but here is where EPA failed to meet its Congressional mandate. It did nothing to independently validate either the Rutherford Study or the underlying studies that were used. As a result, the use of these new factors is not more empirical than the previous ones. These new factors are just as subject to challenge as the previous factors.

b. Intermittent Bleed Pneumatic Controllers.

Emissions factors for intermittent bleed pneumatic controllers have been contentious for many years. Because these controllers have frequently comprised as much as fifty percent of Subpart W emissions from oil and natural gas production facilities in the GHGRP, they have been used to castigate the industry for excessive methane emissions. However, the historic Subpart W emissions factor is based on a small 19 controller 1995 study.

EPA began to address the validity of its emissions factor in its 2022 GHGRP revisions proposal. It proposed alternative calculation methods. One would use a single emissions factor that conceptually included both properly operating controllers and improperly operating controllers. Another would bifurcate the emissions factor calculation with different factors based on properly or improperly operating controllers. In this approach the operator would need to know the operations of each of its controllers throughout the reporting year. Clearly, the second option requires substantially greater manpower for a facility.

When EPA proposed its revisions to Subpart W it offered three options, including the bifurcated option above. It did not include a single emissions factor option – the type of option that a small business producer might need to determine compliance obligations without the costs of hiring consultants. EPA solicited comments on such an option and included one in its final regulation. But, this option fails to meet the Congressional mandate. While EPA revised the emissions factor by using more studies than the original emissions factor, it merely appears to have averaged emissions factors from a half dozen studies without even weighting the average based on the scope of the studies. Additionally, it excluded studies based on calculations of emissions while accepting studies that arbitrarily assumed emissions would occur at set intervals even if no data was taken. Importantly, EPA failed to independently validate the studies it used.

c. Gathering and Boosting Emissions Factors.

Gathering and Boosting operations have potential emissions from controllers, compressors, pumps as well as fugitive leaks. EPA makes changes to several of these from the historic Subpart W, but it retains the current emissions estimating process for fugitive leaks – a factor based on the mileage of pipelines – another departure from the CAA. This factor fails to reflect actions by companies to monitor and repair leaks. It creates distinctions between protected and unprotected pipelines that may have little merit. It is based on limited studies, some of which date back to the 1990s. Again, as it uses these studies for emissions factors, EPA fails to validate their accuracy. For Gathering and Boosting operations, particularly those operated by smaller businesses as a part of their production operations, these emissions factors produce estimates that can push them above the reporting threshold and into a methane tax with no recourse to provide

better information, and perhaps, limit the incentive to actually reduce emissions since there would be no credit for effort.

4. EPA has Ignored Requests to Provide an Estimating Mechanism for Small Producers.

EPA suggests that there are about 478 current onshore oil and natural gas producers submitting Subpart W and that another 269 will be added because of these revisions. While this is about a 60 percent increase in reporters – suggesting that there are many near the 25,000 tonnes/year of CO₂eq threshold, it pales compared to the estimates of about 9,000 oil and natural gas producers operating in the United States. These numbers suggest that less than 10 percent of producers will be reporting under the revised Subpart W. But which ones?

This is a key question – a question that EPA has done nothing to help answer. Certainly, these small producers will not be required to report. At issue is how these entities can cost effectively determine that they fall below the 25,000 tonnes/year threshold. It is costly and cumbersome for small businesses to undertake the Subpart W inventory and calculation process. Moreover, the enactment of the MERP creates a new risk – EPA enforcement actions under the Clean Air Act.

Producer Associations and others have sought throughout the Subpart W development process for EPA to provide a simple, straightforward screening process for small producers to use and estimate whether they need to undertake a full-blown calculation of Subpart W emissions. Certainly, with more than a decade of GHGRP Subpart W emissions reports in its files, on its computers, used in its annual analyses, EPA has the capacity to frame the types of oil and natural gas production facilities that generate 25,000 tonnes/year of emissions. And, it would have the capacity to adjust these parameters based on its revised emissions factors in the new Subpart W regulations. How else could it determine that 269 new reporters would be affected?

EPA has been requested to create a framework for oil and natural gas producers to assess their status regarding reporting under Subpart W. It has never responded. EPA has been asked to clarify what actions producers must take in determining whether they are subject to Subpart W to assure that they are not open to harassing EPA enforcement actions. EPA has ignored this issue. EPA needs to address these issues and provide clarity.

5. EPA Needs to Create a Clear Compliance Framework to Avoid Inappropriate Enforcement Actions.

In some ways this issue is a mirror of the prior issue; in others it is not. Because the MERP is amendments to the Clean Air Act, it changes the status of compliance with Subpart W. Enforcement is managed by OECA and its relationship with the oil and natural gas production industry has been contentious. Consequently, because the potential that OECA's use of its enforcement authority is unpredictable, EPA needs to structure clear boundaries and guidance regarding the standards it will apply to reporting under Subpart W and to the determination of whether reports are required. It has not done so in the current regulations.

6. Improving Other Large Release Events (OLRE).

To improve Other Large Release Events implementation within Subpart W and to promote measurement, innovation, and the use of advanced monitoring technologies, the Producer Associations request that EPA reconsider the framework finalized in §98.233(y) as detailed herein. EPA is requiring operators with any type of onsite monitoring, including advanced technology utilized for voluntary emissions monitoring, to report “instantaneous” emission events of 100 kg/hr or greater of methane. However, the “one size fits all” approach in this rule is not appropriate for determining an emissions rate from the various types of monitoring technologies being utilized by oil and natural gas operators today.

While the proposed rule, which describes the threshold trigger as “events with an instantaneous methane emission rate of 100 kg/hr or higher,” is well-suited for technologies that capture emissions using snapshot measurements, such as aerial technology, there are important considerations for continuous emissions monitoring technologies that EPA should take into account.

The main concern is that companies will have to make a determination of whether the 100 kg/hr threshold was exceeded during an emission event, which will be burdensome to the operator given how many estimates of rates these systems make each year and the uncertainty associated with each individual measurement.

Below are key points for EPA’s consideration:

a. Continuous Monitoring Technology Characteristics.

Continuous monitoring systems, such as those developed by members of the Producer Associations, such as Qube Technologies, differ significantly from traditional snapshot-based measurement systems, such as aerial monitoring. For example, Qube’s system collects gas concentration and wind data every 3-5 seconds, generating approximately 525,000 site-level estimates of emissions per year. Due to the high frequency of these measurements, individual estimates may carry inherent uncertainty.

As a result, when the system reports an instantaneous rate of 100 kg/h, it does not necessarily indicate that the facility is emitting at or above this threshold at that specific moment.

b. Unsuitability of Instantaneous Data for OLRE Reporting.

The inherent variability in continuous data makes it less suitable for OLRE reporting in Subpart W based on single instantaneous estimates of rate from these systems. Further, academic research has shown that short-term emissions estimates from continuous monitoring systems tend to be highly uncertain when compared to known release rates.¹ Relying on momentary data points for OLRE reporting could result in significant inaccuracies, potentially misrepresenting the nature of emissions events at a facility. Particularly since Subpart W data is

¹ C. Bell, C. Ilonze, A. Duggan, and D. Zimmerle, “Performance of Continuous Emission Monitoring Solutions under a Single-Blind Controlled Testing Protocol,” ACS Publications, Environmental Science and Technology, Vol. 57, Issue 14, 2023.

directly tied to the WEC and accuracy in quantified emissions is paramount, this could disincentivize the use of continuous monitoring by operators and stifle innovation, measurement, and emission reductions. This is also inconsistent with Congress' mandate in the Inflation Reduction Act that EPA shall, within two years, revise the requirements of Subpart W to ensure the reporting is based on empirical data and accurately reflects the total methane from applicable facilities.

c. Long-Term Emissions Quantification Accuracy.

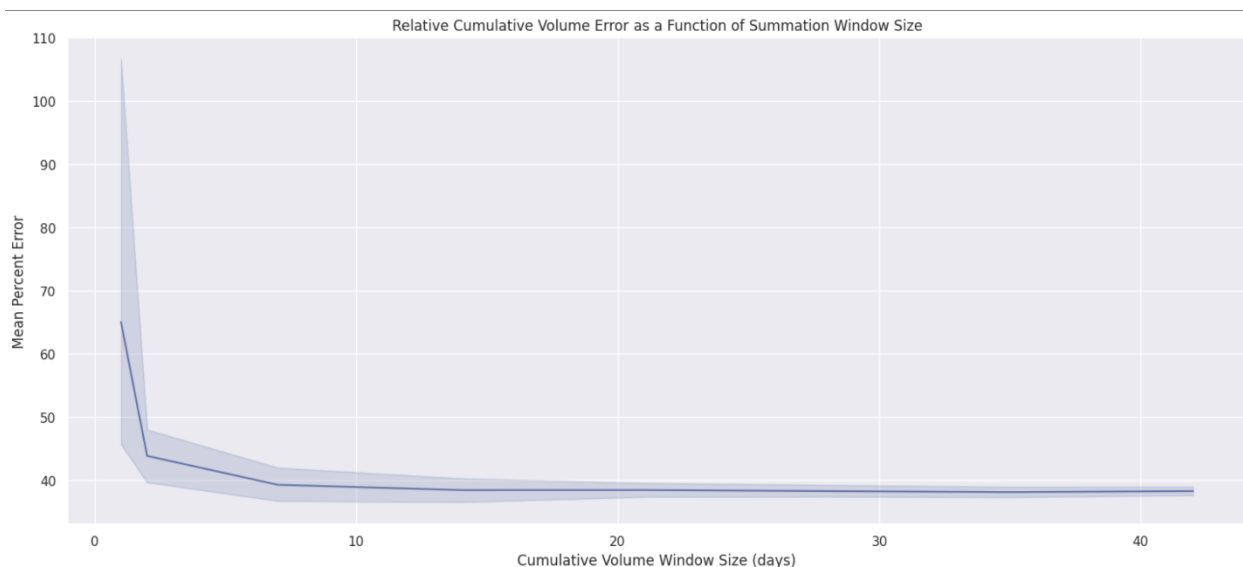
Despite the challenges posed by short-term data, continuous monitoring technologies offer strong advantages in terms of long-term emissions quantification. For instance, during the 2022 METEC ADED campaign, which lasted 15 weeks, Qube's system's cumulative emissions estimate was within 12 percent of the known released volume.

Furthermore, as the measurement period extends beyond a single day, error margins for continuous systems decrease significantly. After about a week, errors stabilize, which aligns with the principle of the law of large numbers, where the high frequency of estimates compensates for individual uncertainties over time.

A goal to establish a suitable timeframe for continuous monitoring data, ensuring confidence that the system's output reflects emissions consistently exceeding the 100 kg/h threshold would help ensure accurate reporting for large release events.

Last, it is counterintuitive that the quantification from continuous monitor systems will be used for reporting OLRs when the output is highly uncertain but not for annual reporting under Subpart W where the error or uncertainty would be substantially less.

See graph below on error over different time periods from the 2022 METEC ADED test:



As illustrated by the graph, continuous monitoring quantification error reduces with window size (*e.g.*, quantification error plateaus using a seven-day rolling average which is consistent with continuous monitoring methodology for leak detection under OOOOb).

In light of the above, we first respectfully ask that EPA remove the requirement that alternative technologies that operators are voluntarily utilizing at their sites be required to measure and report "instantaneous releases of 100 kg/hr" as an OLRE in Subpart W. The OLRE requirement should not include data gathered and quantified by alternative technologies until alternative technologies are allowed by EPA to be utilized for data gathering and quantification in other categories in Subpart W.

Alternatively, we strongly recommend that EPA consider revising the OLRE reporting framework to better accommodate the characteristics and advantages of continuous monitoring systems. Specifically, we recommend that the EPA establish a suitable timeframe for continuous monitoring systems to ensure confidence in reporting emissions exceeding 100 kg/hr. At a minimum, to quantify at 100 kg/hr rate with confidence, the continuous monitoring system would require a rolling average site rate for 24 hours.

It would also be helpful to know how EPA intends for operators to determine the baseline of the facility.

Thank you for considering these comments. The Producer Associations would welcome the opportunity to further discuss our concerns and provide additional data or analyses that may be useful to EPA. Please contact the undersigned if you have any questions.

Respectfully submitted,

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