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U.S. Environmental Protection Agency
The Honorable Lee Zeldin, Administrator
The Honorable David Fotouhi, Deputy Administrator
EPA-HQ-OAR-2025-0162
Extension of Deadlines Oil and Natural Gas Sector Climate Review IFR
August 11, 2025

On behalf of the nearly 1,000 members of the Illinois Oil & Gas Association (IOGA), I submit these comments to the United States Environmental Protection Agency (EPA) to address concerns related to methane emission compliance issues.

The oil and natural gas industry in Illinois supports 16,000 direct jobs in Illinois, over \$750 million in family income, and over \$700 million in state and local tax revenue. The average Illinois oil well produces about 2 barrels of oil per day.

The following comments are offered to address issues of significant concern regarding the EPA's Oil & Gas Methane Rule for the small businesses that make up the Illinois oil and gas industry and the independent oil and gas industry across the nation. I am willing to provide additional details, upon request, related to any of the comments that have been submitted. The comments highlight several issues that we believe should be reviewed and corrected. These areas have a much greater impact on the small businesses within the Illinois oil and gas industry and across the nation than they do with large companies. I submit these comments to address opportunities for the small businesses that make up the oil and gas industry in Illinois and across the nation to work with regulators. Protecting the environment is in the best interest of our industry. Taking care of the environment is part of our goal as good corporate citizens. The owners and employees of Illinois oil and gas producing companies live in the same communities that they drill and operate oil and gas wells. They have a vested interest in not polluting the environment in which they and their families live.

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Executive Summary

The Illinois Oil & Gas Association (IOGA) is committed to working with EPA to craft legally justified regulations that protect the environment and do not place unnecessary burdens on the small businesses that make up the American oil and gas industry. IOGA submits the following comments addressing methane emission compliance issues.

Extension of Annual Reporting Requirements Under EPA's Oil & Gas Methane Rules: The EPA released its Interim Final Rule on July 29, 2025 providing extensions for several compliance provisions. However, reporting obligations were not among them. IOGA and others urgently requested the EPA to extend the compliance deadline for submitting the annual report in our correspondence on May 19th and July 25th. We urge the EPA to revisit the reporting deadline to make the reporting deadline consistent with the State Plan submittal extension by issuing a Federal Register notice extending the annual reporting deadline, or by issuing a direct final rule, to extend the annual reporting deadline for 540 days under its general authorities.

Extension of the reporting requirements is not only necessary but also crucial to enable EPA to align its plans for the Methane Rule with other related actions taken by the Agency and Administration regarding the growth of the energy sector. It would also be consistent with the stay of the litigation challenging the Methane Rules in the D.C. Circuit Court of Appeals, obtained by EPA based on EPA's announcement that it is reconsidering the Methane Rule.

The process of collecting the data and preparing these reports is highly onerous and resource-intensive, imposing significant burdens on the small businesses that make up the independent oil and gas industry. As the rule is under reconsideration, enforcement of the associated compliance deadlines is inconsistent with the President's policies for achieving Energy Dominance, particularly when the EPA is reconsidering the Methane Rule, a process whose results might ultimately render the onerous requirement moot.

Extending this compliance deadline would be consistent with several other compliance deadline extensions issued by the EPA for other Clean Air Act regulations, as the Agency reconsiders significant changes to Biden-EPA policies (including the air toxics rule for the iron and steel sector and the aerosol coatings rule). EPA has recently extended several other major reporting deadlines under different regulations, such as the Greenhouse Reporting Rule and TSCA reporting requirements. In addition, EPA has initiated formal steps to reverse the "endangerment" finding for greenhouse gases, an action that goes to the heart of the Methane Rule.

We respectfully urge EPA to act swiftly and extend the reporting requirement for 540 days to provide regulatory certainty for our industry during this period of policy reconsideration.

Oil & Gas Methane Rule Summary: In 2016, the EPA published a final rule to amend Standards at subpart OOOO to reduce methane emissions from new and modified oil and gas facilities. The updated standards included requirements for marginal well sources - oil wells that produce less than 15 bopd or gas wells that produce less than 90 mcfpd - which were not previously addressed. EPA's decision was based on limited data. The Agency presumed emissions from marginal and non-marginal well sites were comparable, but that conclusion was derived from data amassed from studies employing a wide variety of technical approaches, none of which were designed to assess emissions specifically from marginal well sites.

The U.S. Department of Energy (DOE) completed a study in 2022 titled [Quantification of Methane Emissions from Marginal \(low Production Rate\) Wells](#). We believe the DOE study provides credible data allowing EPA to develop a baseline that shows distinctions between large wells and low production wells and the differences that exist between types of wells.

Methane Rule Recommendations: EPA should make the following changes. First, EPA should retain a low production well distinction in the regulations. Regulations designed for large wells do not function appropriately for low production wells. Second, EPA should restructure the regulation to provide that as wells decline to the low production well threshold, these wells would move into the low production well requirements. Third, EPA should use the results of the U.S. Department of Energy (DOE) study of low production well emissions profile - [Quantification of Methane Emissions from Marginal \(low Production Rate\) Wells](#) - to exempt marginal wells from the EPA's oil and gas methane rule or develop low production well regulations, if any are cost effective.

Fugitive Emissions Monitoring of "Low Production Wells" Misses the Mark. EPA's continued focus on "component" counts creates a number of problems for regulators and the regulated. State regulators and owners/operators do not make decisions based on component counts. Nonetheless, EPA relies on component counts to determine the type and frequency of fugitive emissions monitoring. EPA defines four categories of sources/sites: a fifth category is needed - an Intermediate Well Site. As proposed below, an Intermediate Well Site would allow certain wells sites, historically considered to be a "low production well", to utilize industry practices to identify leaks at substantially less cost than EPA's proposed framework. EPA's proposal places an economic burden on owners/operators of low production wells that is not justified or supported.

EPA should develop a regulatory strategy for low production well regulations, if any are cost effective, by first applying an Audio-Visual Olfactory (AVO) control approach and determining its cost effectiveness. Next, EPA should assess the impact of adding an Optical Gas Imaging (OGI) component. EPA should then evaluate the incremental costs per ton of these additions to determine whether such requirements were cost effective. In other words, the baseline for control would be a periodic AVO requirement and any OGI would be judged on its incremental costs and benefits.

EPA could follow the path that it took regarding a fugitive emissions program in the October 2016 CTG for existing oil and natural gas production facilities in Ozone nonattainment areas. In that action, EPA deferred the fugitive emissions program until an undefined future date. Given that the results of the DOE project are essential to developing sound regulations, if any are justified, this approach would be consistent with the CTG decision. The Optical Gas Imaging (OGI) requirements are inappropriate for low production wells. Instead, EPA needs to develop an approach that limits the regulatory burden on low production wells, limits the recordkeeping requirements that are so burdensome in most parts of the Subpart OOOO regulations. EPA could be instructed by other EPA regulations such as the Clean Water Act Spill Prevention, Control and Countermeasure (SPCC) plan requirements that require annual facility inspections without extensive reporting requirements to EPA. A similar approach might be appropriate here. And, like the SPCC plan requirements, an annual visual inspection could provide for whatever maintenance was necessary to limit possible emissions. But the key to any action must be to limit the regulatory burden unless and until appropriate low production well regulations are developed.

General Regulation Comments

We (IOGA) offer these comments as suggestions for meeting the methane emission goals and protecting the small businesses that are critical to the economies of Illinois and many other states around the nation.

EPA's decision to regulate methane in 2016 was a political decision driven by environmental activists and lobbying groups like the Environmental Defense Fund. These groups demanded methane regulation for a single purpose — to use a little utilized provision of the Clean Air Act (Section 111(d)) to regulate low production existing wells out of business.

Because 111(d) uses new source Best Systems of Emissions Reductions (BSER) technology for existing sources instead of Reasonably Available Control Technology like other sections of the Act, these groups saw 111(d) as a pathway to require the cost ineffective fugitive emissions requirements to push low production wells to shut down.

Understanding the scope of the issue is essential. Oil and natural gas production systems account for about 1.2% of the US Green House Gases Inventory (GHGI). Low production wells account for about 10-11% of U.S. production. Their emissions would be in the 0.10-0.20% range of the GHGI.

There are about 1,000,000 existing oil and natural gas wells. Approximately 150,000 of these wells have been regulated under Subpart OOOO. That number grows each year. Of the remainder, 770,000 are low production wells.

Nationally, low production wells average about 2.5-2.7 barrels per day if they are oil wells and 22-24 mcf/d if they are natural gas wells.

Subjecting these wells to the NSPS LDAR requirements puts them in severe economic jeopardy. Even EPA recognized this reality when it did not impose this LDAR program on low production wells in its October 2016 Control Techniques Guidelines (CTG) for existing oil and natural gas production facilities operating on Ozone Nonattainment areas.

EPA never took any significant data to identify the emissions profile of low production wells. It has relied on specious studies by environmentalists, used outdated studies from the mid-1990s that were never designed for regulations, and relied on data from about 25 wells in one area, half of which do not appear to be low production wells. Only the DOE conducted a study of emissions from low production wells. That study was complete in December 2021.

If any federal agency is creating regulations that have the capability of wiping out three-quarters of the facilities in an industry, it must have a full understanding of the industry and its regulatory actions. This has not been done.

Finding a Regulatory Pathway Based on Emission Data Where None Exists for Low Production Wells

The small businesses that make up the independent oil and natural gas industry recognize the importance of environmentally sound regulations to manage industry emissions, including methane. IOGA supports voluntary efforts by industry to reduce methane emissions. Our members are making constant improvements to the technology being used in the field to reduce, measure and report on emissions.

In January 2021, the International Energy Agency released a regulatory roadmap and toolkit focused on “Driving Down Methane Leaks from the Oil and Gas Industry.” The roadmap details that, “understanding the nature and magnitude of your emissions will be critical to designing sound regulations.” This is a primary tenet of what IOGA seeks to convey. One key aspect of the independent component of the oil and natural gas production industry is its breadth – spanning from large, high production wells to low production wells. These wells do not all have the same emissions profiles, and those different profiles should be considered in regulations.

Low production wells are those that produce 15 bopd (or 90 mcf/d) or less. The national average low production oil well is about 2.5 bopd and the low production natural gas well is about 24 mcf/d. Of the roughly one million active oil and gas wells in the U.S., about 750,000 are low production wells, typically operated by small businesses. The regulatory structure applied to low production wells is significant because their viability is so dependent on their cost of operation.

The 2016 EPA New Source Performance Standards (NSPS) fugitive emissions regulations created a specific problem for low production wells. When EPA developed its fugitive emissions requirements, it generated its Best System of Emissions Reductions (BSER) technology based on large hydraulically fractured well sites and its initial proposal applied only to these sites. However, in finalizing the fugitive emissions regulations, EPA expanded their scope to include low production wells, but it never revised the BSER requirements to reflect this broader application. The high production well Leak Detection and Repair (LDAR) program is economically infeasible for low production wells and provides minimal environmental benefits. The implications for low production wells are further compounded by the decision to base the EPA regulatory program on managing methane. Under the Clean Air Act (CAA), the choice of regulating methane can trigger a nationwide existing facility regulation that would apply EPA BSER technology to the 750,000 low production wells currently in operation.

Industry seeks to find a regulatory pathway designed for the sources it regulates. The 2016 NSPS fugitive emissions program that was designed for large facilities should not be applied to low production well sites. The 2020 NSPS reconsideration moved to correct that error. EPA followed the path it used in its October 2016 Control Techniques Guidelines for low production wells when it excluded them from its model fugitive emissions program. When EPA developed its NSPS regulations, it had no emissions profile for low production wells.

The U.S. Department of Energy (DOE) completed a study of low-production well emissions in 2022. The DOE report - [Quantification of Methane Emissions from Marginal \(low Production Rate\) Wells](#) – presents information that can be a guide to cost effective management of methane emissions. A summary of the DOE marginal well emissions report is attached as part of these comments. **Results from the DOE third-party methane emission study of low production wells and facilities indicate that wells producing less than 6 BOEPD would emit less than 3 tons per year (TPY) of emissions. Those producing 6-15 BOEPD do as well.** The emission calculation is based on Subpart W. Most existing low-production producers fall below the Subpart W reporting threshold and the cost and complexity of completing Subpart W reporting for these operators is not just burdensome, it is cost prohibitive for many small businesses. If EPA needs to design a low-production well program, it should utilize the emissions profile information developed by the DOE and then focus on the most cost effective options to address the key sources.

EPA Ignores Relevant Information from a DOE Study: EPA creates four matrices of facilities for its different requirements; 1.) single well head only well site, 2.) wellhead only sites with 2 or more wellheads, 3.) well sites and centralized production facilities with major production and processing equipment, and 4.) single wellhead well sites that do not contain any controlled storage vessels, control devices, pneumatic controller affected facilities, or pneumatic pump affected facilities, and include only one other piece of major production and processing equipment. The affected facility is the collection of fugitive emissions components located at a well site or centralized production facility with no exemptions. Fugitive emissions component means any component that has the potential to emit fugitive emissions of methane or VOC at a well site, centralized production facility, or compressor station, including valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems not subject to §60.5411b (closed vent systems), thief hatches or other openings on a storage vessel not subject to §60.5395b (storage vessels), compressors, instruments, meters, and in yard piping. EPA is not maintaining the inclusion of natural gas-driven pneumatic controllers or natural gas-driven pneumatic pumps as fugitive emissions components. These devices are both separate affected facilities with separate standards.

EPA creates three model facilities with detailed component count elements to define these matrix categories, but it uses emissions assumptions and emissions simulations using the Fugitive Emissions Abatement Simulation Tool ("FEAST") to create various control technology options. Essentially, EPA produces FEAST based on emissions levels related to throughput – one percent or 0.5 percent of throughput. For its single well only well site, its multiple well only site,

and its small well site (small well site) facilities, the production level would be below the threshold of EPA's earlier definition of a low production well – 15 barrels/day or 90 mcf. For its large facility (large well site), the production level would be three times the level of a low production well. It is because of these assumptions that the model is really more pertinent to the emission guidelines since no producer would be planning to drill new wells with these levels of production.

A key question then is the validity of the assumptions that EPA has used for its inputs. EPA relies on two primary resources – the DOE Study and a Rutherford Study – to test the validity of its FEAST results.

Taking the Rutherford Study first, there is no reason why EPA should use this data source. The genesis of the Rutherford Study relates to the ongoing disputes of differences in studies and inventories, such as the Inventory of U.S. Greenhouse Gas Emissions and Sinks ("GHGI"), which is bottom-up calculations and atmospheric studies. The Rutherford Study seeks to close the gaps by addressing the emissions factors used in the GHGI. It turns to the array of other studies and effectively cherry picks emissions factors from those studies to replace ones in the GHGI. Inherent in this effort is reliance on the same studies that have been used for prior analyses. IOGA have addressed the shortcomings of these studies in past comments – limited sampling times, little or no information on the facility operation, and no certainty on quality control of the data. And these reports only incidentally take data on the low production wells that are the focus of EPA's analysis. Finally, the Rutherford Study brings no new data to the analysis; it merely regurgitates old, inadequate material.

The DOE Study is a different story. It does provide new information with emissions data taken and with facility information at the time of the sampling. The issues with the DOE Study relate to EPA's interpretation. The DOE Study provides substantial new information on the emissions profile of low production wells, but EPA has chosen to limit the use of this material.

For example, with its inordinate focus on component counts as the sole basis to regulate fugitive emissions, EPA immediately discounts how the DOE Study can be used to create a much simpler regulatory path.

At this point, it is pertinent to bring into the discussion the use of Audio-Visual Olfactory ("AVO") monitoring for fugitive emissions at oil and natural gas production sites. IOGA have supported the use of AVO monitoring as an alternative to the costly Optical Gas Imaging ("OGI") and Method 21 LDAR that have been the primary basis for previous fugitive emissions programs. IOGA would support an EPA decision to embrace AVO in its regulatory framework. It is particularly significant for low production wells.

Consequently, in assessing the material in the DOE Study, evaluating the emissions information in a post-AVO application context is imperative. That is, while there may be higher emitting components at a facility, in looking at how to assess regulatory options, those that would be eliminated by an AVO program should be excluded. (Similarly, if the higher emitting component is regulated under a part of Subpart OOOOc that is separate from the fugitive emissions program, it should be excluded.)

The DOE Study demonstrated that low production well sites significant emissions resulted from predictable sources – tank vents or thief hatches, pneumatic controllers at separator vessels, open valves, or damaged piping. All of these can be identified with AVO. This reality is particularly clear for well sites producing 6 barrels/day of oil equivalent or less. Compared to the complicated matrix of well site options in the EPA proposal, this approach would be easily identifiable. Moreover, it would mean that 83 percent of the regulatory burden on low production wells would be managed in a straightforward program.

However, while EPA continues to believe that component count approaches should define its various regulatory matrices, its regulatory analysis is based on use of FEAST. IOGA lack the resources to duplicate the EPA FEAST analyses or conduct an independent analysis of the model. IOGA, however, can address the FEAST results and the implications of EPA's assessment of those results.

As described above, EPA used two resources to justify the validity of its FEAST results – the DOE Study and the Rutherford Study. If EPA had relied on the DOE Study's actual data for low production wells for the single well site, multiple well site, and small well site analyses, it would need to shift its FEAST inputs. The DOE study shows that EPA FEAST analysis results in two to six times the DOE study values.

IOGA have concerns regarding the approach that EPA appears to have taken in developing its multiple well site regulatory strategy. As EPA details in its preamble and support documents, it recognizes that the use of AVO can identify and correct the primary fugitive emissions sources, particularly for low production wells. Consequently, low production wells would be well managed using AVO. For this reason, IOGA believes that EPA should have developed its regulatory strategy by first applying an AVO control approach and determining its cost effectiveness. Next, EPA should assess the impact of adding an OGI component. EPA should then evaluate the incremental costs per ton of these additions to determine whether such requirements were cost effective. In other words, the baseline for control would be a periodic AVO requirement and any OGI would be judged on its incremental costs and benefits. This does not appear to be the approach EPA used.

Next, EPA should have developed its analysis around the DOE Study. Examining the multiple well site calculations and using an average DOE Study methane emissions value of 0.82 tons/year and assuming a VOC emissions value of 0.23 tons/year, very different conclusions are evident.

Monitoring Frequency	Annual Cost (\$/yr/site)	Methane Emission Reduction (tpy/site)	VOC Emission Reduction (tpy/site)	Cost-Effectiveness		Incremental Cost-Effectiveness*	
				Methane (\$/ton)	VOC (\$/ton)	Methane (\$/ton)	VOC (\$/ton)
Multi-Wellhead Well Sites: Includes additional travel costs Single Pollutant Approach							
Quarterly AVO	\$830	0.34	0.10	\$2,441	\$8,300		
Semiannual OGI	\$2,327	0.55	0.15	\$4,231	\$15,513	\$6,805	\$29,940
Semiannual OGI + Quarterly AVO	\$2,651	0.72	0.20	\$3,681	\$13,255	\$4,792	\$18,210
Multi-Wellhead Well Sites: Includes additional travel costs Multipollutant Approach							
Quarterly AVO	\$830	0.34	0.10	\$1,220	\$4,150		
Semiannual OGI	\$2,327	0.55	0.15	\$2,115	\$7,757	\$3,403	\$19,970
Semiannual OGI + Quarterly AVO	\$2,651	0.72	0.20	\$1,841	\$13,255	\$2,396	\$9,105
*The incremental cost effectiveness is calculated against the baseline of quarterly AVO.							

Based on using more accurate assessments of emissions from multiple well sites, EPA's proposed approach fails to pass the cost-effectiveness threshold test of \$2,165/ton of methane and the \$5,540/ton of VOC. Consequently, IOGA recommends that EPA use a quarterly AVO program only for its multi-wellhead well sites category like it proposes for the single well sites.

EPA demonstrated through its FEAST analysis that emissions from low production oil and natural gas facilities are small. These comments, that have relied on the DOE Study, further demonstrate that low production well sites can be well managed through AVO programs targeting key emissions sources. EPA has limited the scope of equipment that falls under the definition of its fugitive emissions program – separating controlled storage tanks and pneumatic controllers from the fugitive emissions facility. While EPA proposes to require all facilities to undergo some type of fugitive emissions detection, clearly, the vast majority of low production operations are below the 3 tons/year threshold that EPA proposed in 2021 as a threshold of concern and will be far smaller after the application of an AVO fugitive emissions program.

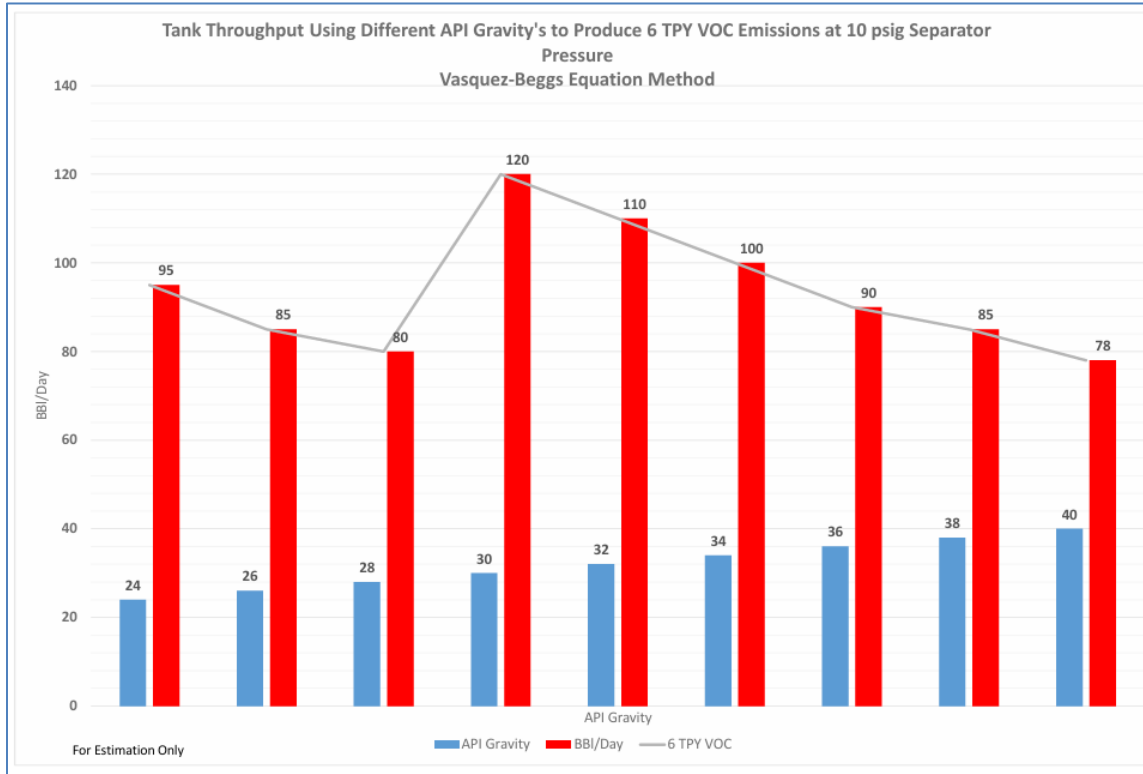
EPA Should Create an Intermediate Well Site Category: EPA is correct to separate requirements on small well sites from those at large well sites. However, the definition of a small well site appears to overly constrain the scope of sites that should fall into it. For example, EPA estimates that 95,000 sites will fall within its small well site definition. As described previously, 83 percent of low production wells produce 6 boe/day or less. In total, there are over 600,000 wells in this category (over 330,000 are less than one boe/day and 200,000 are between 1 and 4 boe/day).

While many will be single well or multiple well sites, it is highly likely that a sizable number of these wells will fall into EPA's large well definition. Because the large well matrix category captures everything above a threshold of not being a single well site, a multiple well site and a small well site, EPA needs to ensure that its threshold is appropriate. EPA notes in the preamble that the larger end of the DOE Study found wells that were emitting three to four tons per year. In its FEAST model analysis EPA uses an emissions threshold of 8.51 tons per year. This emissions rate translates into a well producing about 48 barrels of oil per day and is within EPA's concept of a large facility. However, a facility emitting three to four tons/year will essentially be at the top end of the low production well definition and its emissions will likely be consistent with EPA's small well site matrix category.

When EPA undertakes its cost-effectiveness analysis for its OGI based proposal, it again assesses the use of AVO as an addition to an OGI program. While this may be appropriate for truly large well sites, a more appropriate analysis for those sites on the borderline between small well sites and large wells would be the initial application of the small well site AVO program followed by the addition of an OGI requirement. This is particularly important because the shift between the requirements is from an all AVO quarterly program to a bimonthly AVO and quarterly OGI program – a fourfold cost increase. A more logical approach would be to move from an AVO small well program to an AVO/OGI mixed program for an intermediate well site to its AVO/OGI program for large sites.

Regardless of whether there is a gradual shift in requirements or a step change, it is imperative that EPA provide a reasonable definition of the facilities. Based on EPA's assessment of 95,000 facilities falling into the small well site category when hundreds of thousands are truly small well sites, EPA needs to establish better definitions to match a small site AVO fugitive emissions program with small well sites.

IOGA recommends that EPA use a well site definition approach that uses production throughput to create simplicity and avoid inappropriate results. The Vasquez-Beggs Equation Method is a commonly used tool that provides accurate estimates of emissions.



As much as EPA is attracted to component counts, it has no greater certainty to define well site cutoffs than production throughput and can lead to results that make no sense. For example, a well site producing 6 boe/day with two small uncontrolled tanks would be clearly a low producing well under the DOE Study and easily managed with an AVO program. However, under EPA's component only well site definitions, it would be a large well site subject to quarterly OGI. Consequently, IOGA recommends the approach outlined in the following table.

Type of Well Site	Criteria	Leak Detection Requirement
Small Well Site/Booster Compressor	A booster compressor or a well site with production of 6 boepd based on definition at 26 USC 613A(c)(2)(A)	Quarterly AVO
Intermediate Well Site	Production from 6 to 15 boepd based on definition at 26 USC 613A(c)(2)(A)	Quarterly AVO and initially semiannual OGI. If OGI showed no fugitive emissions that could not have been found through AVO, OGI would become annual. If annual OGI showed no fugitive emissions that could not have been found through AVO, future OGI would be at discretion of the state.
Large Well Site	Production greater than 15 boepd based on definition at 26 USC 613A(c)(2)(A)	Bimonthly AVO and initially quarterly OGI. If quarterly OGI shows no emissions that could not have been found through AVO, OGI would become semiannual.
Site categorization would change based on well site production.		

Compliance Cost and Project Economics Comments

The Biden Administration EPA often underestimated the cost of compliance and overestimated the benefits provided by proposed regulations.

We solicited quotes for 95% combustion devices to meet compliance with this regulation. Certified combustion devices are more expensive than devices that do not carry the certification, which is contrary to EPA's expectation that certified devices may be economically favorable. A certified combustion device that will meet gas flow rate requirements and gas quality will cost owners/operators \$12,000 – \$22,000 to purchase and an additional \$8,000 to install, for a total

installed cost of \$20,000 – \$30,000 per well. A conventional oil well may cost \$300,000 to \$600,000 to drill and complete. Installation of a combustion system could add 5% to 10% to the total cost of the project. The additional compliance cost will eliminate projects from being implemented.

We are finding that compliance costs will be considerably greater than the estimated \$405 cited by the EPA in the preamble of OOOOa. As noted above, installation of a certified combustor will cost \$20,000 – \$30,000. This cost does not include the cost to purchase and install a separator, install piping, complete the required surveys, and complete the required reporting for each well that is drilled. We estimate that the compliance costs could exceed 10% of the capital cost to drill a well. These costs are significant, and could drive many small operators out of business. We disagree with EPA's assessment that the industry can bear the cost and survive.

Over the past several years, many small oil and gas companies in Illinois have been working to develop cost-effective compliance programs to meet the requirements. A sample of some of the compliance costs have been included in Table 2. This is not a complete list of costs, but an example of some of the additional activities that are required and the cost associated with each activity. As this list of costs demonstrates, the cost of compliance negatively impacts small business.

Activity	Cost	Frequency
VOC inspection of tank facility	\$500 - \$2,000	2x per year per facility/well
Documentation and record keeping	\$20,000 - \$100,000	Annually
Green Completion (only for non-delineation wells)	\$10,000 - \$15,000	Every new exploration well
Install sample fittings (parts and labor) for gas samples	\$500 - \$1,000	Every new facility
Laboratory analysis	\$500 - \$1,000	Every new facility
Engineering evaluation of lab data analysis	\$250 - \$500	Every new facility
PE Certification of combustion system	\$2,500 - \$3,000	Every new facility
Installation of combustion system	\$20,000 - \$40,000	Every new facility
Monthly inspection of combustion system	\$250 - \$500	Monthly
Monthly inspection after removal of combustion system	\$2,500 - 4,000	Monthly
Design of combustion system	\$10,000 - \$15,000	One time cost
Develop record keeping system	\$40,000 - \$50,000	One time cost
Develop site specific monitoring plans	\$30,000 - \$50,000	One time cost
Purchase FLIR camera	\$95,000 - \$100,000	One time cost
FLIR camera training	\$3,000 - \$5,000	One time cost
Purchase sample collection equipment	\$2,000 - \$5,000	One time cost

Table 2. Compliance Activities and Costs Required by NSPS OOOOa

Many operators in the upstream oil and gas segment are working to optimize supply chain relationships, improve operating efficiencies, and refocus capex on the most resilient short-cycle projects. At a time when owners/operators are searching for ways to reduce operating costs to survive, EPA proposed methane regulation will likely measurably add to the cost of doing business. We believe that owners/operators will be required to employ additional staff for field surveys/maintenance activities and documentation burdens. We further expect that this regulation will result in a net loss in jobs from our industry because expenditures will be required for compliance activities, not new revenue generation.

In an effort to reduce the cost of compliance, we recommend reducing the documentation requirements. The documentation burden continues to grow as new wells and tank facilities are added to the program through operating the business. We question the need for some of the data that EPA has required to be collected and reported.

We also recommend changing the requirements for emissions testing from using EPA Method 21 or a FLIR camera to permitting a soap bubble test. Each FLIR camera cost more than \$90,000 and requires training to properly operate the equipment. Utilizing EPA Method 21 requires each operator to pay an outside contractor to visit each location with monitoring equipment and produce a report of leaking components. In addition, Method 21 also requires each facility to have a drawing of each fugitive gas emission component, and have each component tagged and labeled on the drawing. Both of these options are very expensive for small operators with limited budgets. Permitting the soap bubble test will provide existing staff a low cost way to identify leaks for repair.

Project Economics - EPA states that much of the methane and VOCs that are captured as a result of this regulation will be sold into the natural gas market. EPA is expecting owners and operators to use the gas sales to offset compliance costs.

In Illinois, the production is crude oil with nominal amounts of associated gas. There are no gas gathering systems or markets for the nominal associated gas.

Most of the gas that is not being sold today cost too much for owners and operators to collect, process, transport, and sell into the natural gas market. If projects to collect, process, and sell gas were economically attractive, companies would have already made the investment.

This is another example where a Federal Agency issues a national level regulation without considering the impact across the country. EPA's "one size fits all" regulation format failed to consider local conditions. Projects in Illinois, and other areas around the United States will not realize an economic benefit for developing compliance programs.

Documentation Burden - We believe EPA has underestimated the annual burden for recordkeeping and reporting requirements. Information provided below shows that we are estimating our compliance cost to be significantly more than the estimates provided by EPA.

EPA states, “The estimated average annual burden (averaged over the first 3 years after the effective date of the standards) for the recordkeeping and reporting requirements in subpart OOOOa for the 2,554 owners and operators that are subject to the rule is 98,438 labor hours, with an annual average cost of \$3,361,074. The annual public reporting and recordkeeping burden for this collection of information is estimated to average 20 hours per response. Respondents must monitor all specified criteria at each affected facility and maintain these records for 5 years.”

Using the information provided above, EPA is estimating that the average owner or operator will spend approximately 38 hours per year ($98,438 \text{ labor hours} / 2,554 \text{ owners and operators}$), in the first 3 years, on compliance reporting activities. This time estimate is expected to cost the average owner \$1,316 per year ($\$3,361,074 \text{ per year} / 2,554 \text{ owners and operators}$).

We estimate a one-time cost to develop a management and reporting system to be \$40,000 - \$50,000 and an ongoing cost of compliance of \$20,000 - \$100,000 per year (one-part time employee early in the program and potentially two full time people within a few years). These estimates are only to meet the reporting requirements detailed in the regulation and discussed below. These estimates do not include the cost to achieve compliance with our equipment at the affected facilities.

The new regulation will have a substantial impact on our small businesses by measurably increasing our operating costs. This increase in operating costs will come from Leak Detection and Repair (LDAR) survey costs, reporting costs, and additional capital investment to meet emissions reductions. We do not believe that the costs incurred to meet compliance requirements will be offset through recovered product.

The required information will be a substantial burden on our small organizations to collect, manage, store, and report to the Agency on an annual basis. Small oil producing companies in Illinois continually search for ways to reduce operating cost and improve efficiency. As small operators, we must focus on low cost operations to be competitive with larger companies. We do not have the benefit of large scale operations to spread our fixed cost like large operators. Regulations such as the oil and gas methane rule impose significant requirements and provide little to no economic benefit threatening the viability of small operators in Illinois and across the nation.

The documentation will necessitate many more hours than EPA's estimated 38 hours per year. Companies are evaluating the need to hire another one to two people solely to meet the reporting requirements of this new regulation. We believe that a full time position(s) may be required to meet all of the annual reporting and data management requirements to maintain compliance. We estimate that the fully loaded cost (salary and benefits) to fill this position will be an additional \$50,000 – \$60,000 per year per person to current operations. These requirements are not trivial.

Some operators in Illinois may drill 40 oil wells and perform work that would meet EPA's definition of a "modification" for more than 60 existing wells in a five-year period. An average of 50 wells being drilled or modified each year, not including associated tanks or other Fugitive Emissions Components. We expect this level of activity to resume as oil price increase for some of the active owners/operators in Illinois. We believe that smaller owners/operators will reduce their drilling and maintenance programs until the oil price increases again.

The reporting work will continue to grow each year as we continue to drill and modify wells because the current year work is added to all work from prior years. This growing work load will require the hiring of additional employees in the future.

The EPA oil and gas methane rule also requires owners and operators to develop and maintain a company-wide and site specific monitoring plan. The estimates to develop a robust system will exceed 500 man hours to solicit input, develop the written program, review with the management team, and implement the program throughout our organization. At a fully loaded cost (salary and benefit) of \$60 per hour, cost to develop this system is estimated at \$30,000 - \$50,000. We view the time invested in developing this type of system as part of the burden for recordkeeping and reporting.

As stated above, EPA requires digital photos and reports to be stored for up to five years. Development of a data management system, purchasing of additional data storage systems, and user training will require greater than 600 - 800 man hours. At a fully loaded cost (salary and benefit) of \$60 per hour, the cost to develop an IT solution is estimated at \$40,000 - \$50,000.

Impact of Emission Guidelines on Illinois

The proposed emission guidelines (EG) most certainly would impose a burden and insurmountable costs for the small businesses that make up the independent oil and gas industry in Illinois and across the nation and for the state of Illinois. There are over 31,000 wells in Illinois.

Other comparable states estimated costs to develop and implement this proposed rulemaking to be over \$40 million annually. The estimate includes 2,708 additional full time equivalent persons to be hired. The state of Illinois would incur similar costs.

IOGA is deeply concerned about the small businesses that make up the independent oil and gas industry in Illinois. It is not acceptable for these entities to be subject to this proposed federal regulation for existing sources and they should be exempted from applicability.

Many of the small businesses that make up the Illinois oil and gas industry do not have the knowledge required to perform a fugitive emissions survey or to perform air emissions calculations for a well that has existed for multiple generations. These entities should not be burdened with having to figure out how to do so or burdened with hiring, and paying for, an environmental consultant to perform the survey and calculations on their behalf.

Emission Guidelines (Subpart OOOOc): IOGA supports the exclusion of “wellhead only well sites” from the EGs for existing sources and concurs that the benefits would not be worth the costs. The EPA needs to include a definition for wellhead only well sites and low production wells.

IOGA does not support the proposal that “wellhead only sites” must calculate fugitive emissions. The EPA stated it does not believe these emissions would exceed 3 tons per year (tpy) threshold to require routine monitoring; therefore, it should not impose substantial requirements. Additionally, the small businesses that make up the independent oil and gas industry should not be burdened with purchasing and learning how to operate an optical gas imaging (OGI) device costing approximately \$90,000 to comply with the fugitive emissions requirements at wellhead only sites. The EPA did not evaluate the cost for these small entities to comply with the proposed EGs; therefore, they should be excluded from applicability.

Fugitive Emissions: IOGA opposes the proposed baseline requirements for fugitive emissions at well sites with fugitive emissions between zero and three tons per year. This action would impose significant burdens and costs without providing any air quality benefit.

In the final EGs, low production wells should be exempt from the rule along with small businesses. The designated facility category for fugitive emissions at well sites between zero and three tons per year should be eliminated in the final rule because low production wells should be exempt.

IOGA objected to the repeal of the amendments in the 2020 Technical Rule that exempted low production well sites from monitoring fugitive emissions under the NSPS (86 Fed. Reg. 63118).

Conclusions and Recommendations

To be clear, the small independent oil and natural gas producers in Illinois and across the nation recognize the need to manage their air emissions. The issue for these small businesses has never been whether regulations were necessary; it has always been whether the regulations were sound and cost effective.

When the EPA proposed its fugitive emissions program in 2015, it did not include low production wells – wells that produced less than 15 bopd of oil or 90 mcfpd of natural gas. When EPA finalized the regulations, it expanded the scope to include low production wells under pressure from environmentalists. However, the EPA never revised the LDAR technology requirements to reflect this expansion. This is significant because the cost effectiveness of an LDAR program is very different for large well sites compared to low production wells. And it is an even larger issue when the regulated emission is methane where the brunt of the impact falls on the 750,000 low production wells that average about 2.5 barrels/day and 25 mcfd.

EPA should make the following changes:

- Extend the Annual Report requirement under EPA's Oil & Gas Methane Rule by 540 days;
- EPA should retain a low production well distinction in the regulations. Regulations designed for large wells do not function appropriately for low production wells;
- EPA should restructure the regulation to provide that as wells decline to the low production well threshold, these wells would move into the low production well requirements;
- EPA should use the results of the DOE *Quantification of Methane Emissions from Marginal Oil and Gas Wells* project to exempt marginal wells from the EPA's oil and gas methane rule or develop low production well regulations, if any are cost effective;
- EPA should create an Intermediate Well Site Category. Fugitive emissions monitoring of "Low Production Wells" misses the mark. EPA's continued focus on "component" counts creates a number of problems for regulators and the regulated. State regulators and owners/operators do not make decisions based on component counts. Nonetheless, EPA relies on component counts to determine the type and frequency of fugitive emissions monitoring. EPA defines four categories of sources/sites: a fifth category is needed - an Intermediate Well Site. An Intermediate Well Site would allow certain wells sites, historically considered to be a "low production well", to utilize industry practices to identify leaks at substantially less cost than EPA's proposed framework;

- EPA should develop low-production well regulations, if any are cost effective, by first applying an AVO control approach and determining its cost effectiveness. Next, EPA should assess the impact of adding an OGI component. EPA should then evaluate the incremental costs per ton of these additions to determine whether such requirements are cost effective. The baseline for control would be a periodic AVO requirement and any OGI would be judged on its incremental costs and benefits.

EPA could follow the path that it took regarding a fugitive emissions program in the October 2016 CTG for existing oil and natural gas production facilities in Ozone nonattainment areas. In that action, EPA deferred the fugitive emissions program until an undefined future date. Given that the results of the DOE project are essential to developing sound regulations, if any are justified, this approach would be consistent with the CTG decision. The OGI requirements are inappropriate for low production wells. Instead, EPA needs to develop an approach that limits the regulatory burden on low production wells, limits the recordkeeping requirements that are so burdensome in most parts of the Subpart OOOO regulations. EPA could be instructed by other EPA regulations such as the Clean Water Act Spill Prevention, Control and Countermeasure (SPCC) plan requirements that require annual facility inspections without extensive reporting requirements to EPA. A similar approach might be appropriate here. And, like the SPCC plan requirements, an annual visual inspection could provide for whatever maintenance was necessary to limit possible emissions. But the key to any action must be to limit the regulatory burden unless and until appropriate low-production well regulations are developed.

We urge the EPA to modify the supplemental proposed rule to regulate oil and gas methane emissions to include a production rate threshold – exempting wells making less than 6 BOEPD.

Contact Information

For further information or any questions, please contact Edward Cross, Chief Executive Officer, Illinois Oil & Gas Association.

Sincerely,

A handwritten signature in black ink that reads "Edward P. Cross". The signature is written in a cursive, slightly stylized font.

Edward P. Cross, Chief Executive Officer
Illinois Oil & Gas Association