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**Methane Emissions Issue Points**  
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**Overview**

The Kansas Independent Oil & Gas Association (KIOGA) commends the Environmental Protection Agency (EPA) for the corrections it has made to the air emissions regulations affecting oil and natural gas production operations. These changes retain the basic framework of air emissions regulations of oil and natural gas production but they modify flawed provisions, particularly in the 2016 New Source Performance Standards fugitive emissions program driven by the political pressures to rush those regulations to completion.

To be clear, independent oil and natural gas producers recognize the need to manage their air emissions. In fact, prior to the first EPA New Source Performance Standards in 2012, oil and natural gas producers participated in the EPA's Gas STAR program that identified and developed cost effective emissions technologies. Many of these – reduced emissions completions, low bleed pneumatic controllers, storage tank vapor recovery – were the basis for the 2012 EPA regulations that covered the majority of production emissions. Now, producers continue to be engaged in voluntary efforts that go beyond their regulatory commitments such as The Environmental Partnership and funding research into cost effective controls. The issue for producers has never been whether regulations were necessary; it has always been whether the regulations were sound and cost effective.

Contrary to the hyperbolic characterizations of these regulatory changes from environmentalists, EPA regulations on oil and natural gas producers will be retained. Because production air emissions contain both methane and volatile organic compounds, both are managed by the same technologies. While these regulatory revisions change the targeted emission, the specific regulations remain in place and will manage both methane

and volatile organic compounds. The 1.2% of the U.S. Greenhouse Gas Inventory that comes from oil and natural gas production will still be regulated by federal and state programs.

The technical changes made by the EPA regulations are important corrections that are necessary to address flawed programs resulting from the politically driven rush to complete the 2016 regulations. Most of these changes relate to the fugitive emissions program. This program relies on expensive and rapidly outdated technology. Among the issues the revisions address are the use of alternative technologies and low production wells.

The Clean Air Act provides for Alternative Methods of Emissions Limitations to specific regulatory requirements. However, the Act was largely written with large permanent factories as the model and does not function for small, scattered, numerous production wells. The EPA has provided some flexibility in its revised regulations, but the challenge of utilizing more cost effective technologies will continue to be an area of concern.

When the EPA proposed its fugitive emissions program in 2015, it did not include low production wells – wells that produced less than 15 barrels per day of oil or 90 mcf of natural gas. When it finalized the regulations, it expanded the scope to include low production wells under pressure from environmentalists. However, the EPA never revised the technology requirements to reflect this expansion. When it proposed its reconsideration in 2018, it attempted to create a distinction for low production wells, but it was unworkable. **The finalized revision will allow a wellsite to be excluded from the burdensome fugitive emissions program when the wellsite falls below 15 barrels/day or 90 mcf. While this change will have little effect on the large hydraulically fractured shale wells that have 15 to 20 wells on the site, it will lift an unreasonable burden from the small business wellsites where there are only one or two wells per site.**

## Policy Issues

One regulation revises the targeted air emission from methane back to volatile organic compounds. For oil and natural gas production facilities, this change does not alter the compliance requirements for these New Source Performance Standards. The 2012 regulations that were originally volatile organic compound-based will remain in place. The 2016 regulations will be modified to refer to volatile organic compounds instead of methane. Reduced emissions completion, pneumatic controller, pneumatic pump, storage vessel and fugitive emissions management requirements will continue to be applied to oil and natural gas production operations. The same technology that manages methane also manages volatile organic compounds. There was never a need nor was there a

justification to change the regulated emission for oil and natural gas production operations from volatile organic compounds to methane.

## **Technical Issues**

A second regulation reconsiders and modifies the existing 2016 requirements regardless of the regulated emission. The most significant changes relate to the fugitive emissions Leak Detection and Repair (LDAR) requirements.

### *Alternative Methods of Emissions Limitations (AMEL)*

One of these involves the use of alternative technologies. The 2016 LDAR requirements rely upon a complicated, expensive, burdensome optical gas imaging technology – the forward looking infrared (FLIR) camera. The EPA promulgated the 2016 requirements under political pressure at a time when newer, simpler, more cost effective technologies were emerging. Now, these new technologies cannot be used without the EPA's permission under the AMEL provisions of the Clean Air Act. However, these AMEL provisions were written based on a model of large, permanent factories. Oil and natural gas production facilities are small, scattered across large areas and temporal. The AMEL permitting process is currently unsuited to the oil and natural gas production industry. KIOGA members want to find a pathway to use emerging, cost effective technologies. The EPA is trying to allow more flexibility in these regulatory revisions to allow use of the AMEL process, but the underlying Clean Air Act provisions may inhibit success.

### *Low Production Wells*

When the EPA proposed its LDAR requirements in 2015, it excluded low production wells – less than 15 barrels/day or 90 mcf/d. When those regulations were finalized, the EPA reversed its position and expanded the LDAR requirements to all wells under pressure from environmentalists. However, the LDAR program was designed for large wells and the EPA never revisited the structure of the requirements to reflect the broader scope. This is significant because the cost effectiveness of the 2016 LDAR program is very different for large, hydraulically fractured wellsites compared to small business low production wells. And, it would be an even larger issue if the regulated emission remains methane and triggers a nationwide existing source requirement where the brunt of the impact would fall on the 750,000 low production wells that average about 2.5 barrels/day and 25 mcf/d.

In its proposed reconsideration of the 2016 regulations, the EPA sought to draw a distinction between large wells and low production wells, but the approach was unworkable. In these revisions, the EPA provides for low production wellsites to have an off-ramp from the LDAR requirements when the wellsite falls below the 15 barrels/day or

90 mcf/d threshold. This revision will have little effect on the large, hydraulically fractured wellsites with 15 to 20 wells because one well falling below 15 barrels/day will not bring the entire wellsite below the threshold. However, for small business facilities with one or two wells per wellsite, it will be an appropriate and important change.

If some future regulation of small wellsites is considered, any regulatory assessment can be informed by an ongoing Department of Energy study to establish an accurate emissions profile of low production facilities.

## **Highlights of the Final Policy and Technical Rules for the Oil and Natural Gas Industry**

On August 13, 2020, the EPA announced two distinct final regulations for the oil and natural gas industry that streamline requirements, reduce regulatory burden and save the industry millions of dollars in compliance costs each year, while maintaining health and environmental protection from sources that the Agency considers appropriate to regulate.

- EPA issued the final rules at the same time to provide clarity to the industry and to streamline compliance. Combined, the two final rules are projected to result in net benefits of \$750 to \$850 million over the period from 2021 to 2030, the annualized equivalent of about \$100 million a year.
- The regulations are final policy amendments to the 2012 and 2016 New Source Performance Standards (NSPS) for the oil and natural gas industry and final technical amendments to the 2016 NSPS for that industry.
- The Obama Administration promulgated regulation of methane from the transmission and storage segment of the oil and gas sector without taking the appropriate steps to justify such an action. These amendments reflect the Trump Administration's position that EPA must make a finding that a pollutant, like methane, contributes significantly to air pollution anticipated to endanger public health before regulating it.
- These amendments not only follow the text of the Clean Air Act, but also reduce regulatory burden to the industry and streamline other requirements. Protection of human health and the environment will continue through controls for smog-forming volatile organic compounds for the production and processing segments of the industry, reducing methane at the same time.

### **Final policy amendments**

o EPA is issuing the policy amendments in response to President Trump's Executive Order on Promoting Energy Independence and Economic Growth. The order directs agencies to review existing regulations that potentially "burden the development or use of domestically produced energy resources," including oil and natural gas, and to rescind or suspend regulatory requirements if appropriate.

o Key aspects of the policy amendments:

- Remove the transmission and storage segment from the regulated "source category." EPA has determined that it was not appropriate to include this segment in the source category in the 2012 and 2016 amendments to the NSPS.
- Rescind all NSPS requirements that applied to the transmission and storage segment.

- Rescind methane standards for the production and processing segments of the industry. Standards for smog-forming volatile organic compounds (VOCs) continue to apply for the production and processing segments. Because the controls to reduce VOCs and the controls to reduce methane are the same, methane emissions will continue to be reduced from these segments.
- Finalize EPA’s position that the Clean Air Act requires, or authorizes, EPA to make a “significant contribution finding” for any particular pollutant as a predicate for setting performance standards for that pollutant.

o What the policy amendments mean for existing sources:

- Because EPA has rescinded methane standards for the production and processing segments of the industry, EPA is no longer required or authorized to issue emissions guidelines to address methane emissions from existing sources.

### **Final technical amendments**

o EPA is issuing the technical amendments to address a range of technical and implementation issues in response to administrative petitions for reconsideration and other issues brought to EPA’s attention since the 2016 NSPS was issued. These include fugitive emissions requirements, recordkeeping and reporting requirements, provisions to apply for the use of an alternative means of emission limitation (AMEL), pneumatic pump standards, storage vessel standard applicability determination, and engineer certifications. The final amendments will significantly reduce regulatory burden and save the industry hundreds of millions of dollars in compliance costs each year.

o Key aspects of the technical amendments:

- For Fugitive Emissions Monitoring, the technical amendments:
  - Reduce the frequency of required fugitive emissions monitoring for gathering and boosting compressor stations from quarterly to semi-annually.
  - Exempt low-production wells from fugitive emissions monitoring requirements, as long as the well maintains production at or below 15 barrels of oil equivalent (boe) per day.
  - Retain the schedule for fugitive emissions monitoring for non-low production wells at semi-annual. EPA had proposed to change this schedule but retained it after finding that semi-annual monitoring for VOCs at non-low production well sites remained cost-effective.

- Allow owners/operators to determine the best means to ensure that all components are monitored, rather than having to include a site map and an observation path in their monitoring plans.
  - Streamline recordkeeping and reporting requirements.
  - Revise the schedule for making fugitive emissions repairs.
  - Clarify the actions that constitute a modification for a well site that is a separate tank battery surface site.
- For Alternative Means of Emissions Limitations (AMEL), the technical amendments:
    - Incorporate state fugitive emissions standards for well sites and compressor stations in California, Colorado, Ohio, Pennsylvania and Texas, and for well sites in Utah, and simplify recordkeeping for some owners/operators who choose to comply with those standards. The final rule incorporates an alternative for gathering and boosting compressor stations in Texas; in the proposal Texas was included only for well sites.
    - Streamline the process to request new alternative emissions standards as state, local, and tribal fugitive emissions programs continue to develop.
    - Recognize that new technologies that are expected to enter the market could help locate the source of fugitive emissions sooner and at lower costs than the current technologies required in the NSPS.
    - Amend the application requirements for requesting to use an AMEL for monitoring and reducing fugitive emissions from well sites and compressor stations to allow any person to apply.
    - Notes that EPA has discretion in certain circumstances to allow for broad approval of alternatives and will work with applicants throughout the approval process as appropriate.
  - For Pneumatic Pumps, the technical amendments:
    - Expand an existing exemption from control requirements to cover pumps at greenfield sites.
    - Expand the types of monitoring that owners/operators may use to demonstrate that closed vent systems associated with pneumatic pumps are operating with no detectable emissions
  - For Engineer Certifications for Closed Vent Systems, the technical amendments:

- Allow either a professional engineer or in-house engineer with appropriate knowledge of the closed-vent system design to certify that the system is designed and operated as required
- For Storage Vessels (Tanks), the technical amendments:
  - Clarify how to calculate potential VOC emissions for individual storage tanks to determine whether standards in the rule apply.
  - Establish separate criteria for calculating potential VOC emissions from individual storage vessels that are part of a controlled tank battery.

Where to find additional information: Pre-publication versions of the two final rules and fact sheets are available at: <https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/actions-and-notice-about-oil-and-natural-gas#regactions>.