Kentucky OIL & GAS ASSOCIATION

Docket ID No. EPA-HQ-OAR-2010-0505
Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Ave, NW
Washington DC 20460

Attention Docket ID No.: EPA-HQ-OAR-2010-0505

Dear Sir or Madam:

I am submitting comments on behalf of the Kentucky Oil and Gas Association (KOGA). KOGA serves as the voice for the oil and gas industry in Kentucky, representing 600 members, 220 companies and 82 of Kentucky's oil and gas producers. Kentucky's oil and gas industry contributes over $1 billion in economic impact to the state of Kentucky and involves more than 9,000 employees and proprietors in production and ancillary services. The state of Kentucky has over 31,000 producing wells, 18,000 of which are oil wells.

KOGA supports the EPA's decision to reconsider the original storage vessel rules contained within the Oil and Natural Gas Sector NSPS (40 CFR part 60 subpart OOOO). This presents another opportunity for the agency to strike a balance between appropriate environmental stewardship with the need to ensure the agency's rules don't place an unnecessary and undue burden on the industry.

The agency's decision to delineate between Group 1 and Group 2 storage vessels is welcome. Group 2 storage vessels will be the first focus of these comments.

Group 2 storage vessels are defined by the EPA as "the cohort of storage vessels constructed, modified or reconstructed after April 12, 2013." The rule also proposes that "affected storage vessels in Group 1 that undergo an event after April 12, 2013 that leads to an increase in emissions, even without a physical change or change in method of operation, implement the same control requirements as Group 2."

The rule proposes that Group 2 storage vessels have up to 30 days after startup to determine the emissions rate and, if emissions are estimated to be 6 tpy or more, controls, must be in operation no later than 60 days from startup (or by April 15, 2014, whichever is later). Likewise, Group 1 Storage Vessels that experience an event on or after April 12, 2013 that results in emissions increasing, must control emissions within 60 days after the event (or April 15, 2014, whichever is later).

This approach poses a serious problem for small producers. In the earliest months of well production, a storage vessel will have an initial throughput that, if annualized, would result in

estimated VOC emissions rate in excess of 6 tpy. However, over time, production will decline. A far more accurate estimation of annual VOC emissions can be determined once production levels off. That, however, won't occur within the 30-day period the proposed rule grants for making an initial estimation of VOC emissions.

To the agency's credit, the EPA recognizes that "after production declines, associated emissions (will) also decline." This recognition, however, only impacts a producer's determination of whether controls *can be removed* after a storage vessel's emissions are determined to fall under the "alternative mass-based limit of less than 4 tpy (of) uncontrolled emissions." The proposed uncontrolled emission limit "would be available to those who can demonstrate, based on records for the 12 months immediately preceding the demonstration and while the control is on, that the uncontrolled emissions during that 12 month period would have been under 4 tpy."

KOGA believes this process is backwards. It requires the expensive installation of controls on storage vessels which, over the course of twelve months, may fall under the emission limits.

Further, VOC emissions can change dramatically with seasonal temperature changes. An estimate of annual VOC for a Group 2 storage vessel installed in the summer would vary significantly from a Group 2 storage vessel installed during the winter. The "30 day after startup" window won't account for these seasonal variations.

KOGA's membership consists largely of small, independent operators. The overwhelming majority of the Association's operators have less than 500 wells. Our regulatory review, therefore, grants the EPA an opportunity to examine the impact of their rules on this vital segment of the industry.

The cost of compliance with this provision for the small operator is significant. To evaluate the real-world implications of these rules, a KOGA member-company requested some cost estimates for compliance.[1] Our member-company's estimates indicate the "incremental cost of compliance per standard oil field tank battery" to be $60,500. This will be an extremely difficult financial burden placed upon small operators, which will ultimately divert scarce resources from lease development and job creation.

Furthermore, it is almost certain that the companies which will provide the services and technology to comply with these rules will have their time monopolized by the larger companies. Our expectation is that equipment procurement and installation will take as long as six months for small operators. And, as we discuss in the following paragraphs, it is possible (if not likely) that these costs will be borne by the small operator because of faulty assumptions and calculations made during the "30 day window" granted to operators to estimate an emissions rate.

KOGA proposes the EPA adopt a "rolling monthly average of VOC emissions" over twelve months (which would encompass a complete climatic cycle) for an operator to determine whether a Group 2 or modified Group 1 storage vessel require controls. If, after that 12 month period, an operator determines a storage vessel will require controls, the EPA should allow 90

[1] Cost estimates are included as Attachment 1 to these comments. The operator and their consultant requested that they not be identified in this correspondence. The operator, however, was open to discussing these cost estimates with the agency for verification purposes. If desired, please contact KOGA to facilitate that discussion.

days for the operator to inform the EPA and an additional 90 days to have the control equipment installed. This proposed change allows for two things: 1) Grants operators the chance to accurately determine if controls are required prior to making a major investment for controlling VOC emissions and 2) if emission controls are required, 90 days to inform the EPA and additional 90 days to have the controls installed, will give small operators the time they'll need to procure services and equipment.

***KOGA Comment**: The EPA should allow operators twelve months to develop a "rolling monthly average" of VOC emissions prior to requiring the installation of controls.*

***KOGA Comment**: If a storage vessel is determined to require controls, the EPA should allow 90 days for the operator to notify the EPA and another 90 days to have the control equipment installed.*

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The requirement that Group 1 wells (those constructed, modified or reconstructed between August 23, 2011 and April 12, 2013) provide initial notification to the EPA by October 15, 2013 raises a significant issue for small producers: How does a producer determine whether a storage vessel exceeds 6 TPY?

Complicating this matter is the fact that the EPA has not given guidance on recommended methods for determining VOC emissions. As contained within the "Comments and Responses" to the initial rule, we cite the following:

> **Comment:** Five commenters (4135, 4228, 4241, 4258, 4266) who advocate using a VOC emissions applicability metric also recommend methods for determining VOC emissions. One commenter (4135) recommends that the EPA specify the methods to be used to determine emissions because there are many methods, and some are far less accurate than others. Another commenter (4241) suggests that basin-wide emission factors developed by some State or local agencies could be used to determine applicability or, alternatively, the data and simulations being developed under the Mandatory Reporting Rule for GHG could be used as compliance data for the NSPS which would simplify the data management for operators.
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> One commenter (4266) states that appropriate methods of estimating flashing emissions include process simulation software and E&P TANK, while another commenter (4228) states that there are numerous tools for determining VOC PTE for a liquids hydrocarbons storage vessel, including the Vasquez-Beggs Equation (VBE) calculation methodology and other correlation equations, equation of state (EOS) calculation programs such as E&P TANK, gas oil ratio (GOR) and throughput determinations, and process simulators such as HYSIM, HYSYS, WINSIM, and PROSIM. The commenter recommends that the final rule allow operators to determine VOC PTE based on available data and tools provided the approach is documented.
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> One commenter (4258) states that "potential" is not defined in this subpart and the traditional definition of "potential" does not realistically apply to storage tanks and, therefore, this should be changed to "actual" emissions as calculated by E&P TANK 2.0 or another method accepted by the Administrator (e.g., HYSIS) based on the first 30

days of production and appropriate decline factor (default decline factor of 0.6 if other supporting information is not provided).

Response: We disagree that the EPA should specify which methodologies must be used to calculate VOC emissions. Different methodologies may be more appropriate than others for certain situations, and it would be very difficult to determine each possible situation and determine the appropriate methodology for that situation. Additionally, such a prescriptive requirement would not allow as yet undeveloped methodologies to be used, or would require amending the rule whenever a new methodology was released. For these reasons, the final rule specifies that any generally accepted methodology may be used to estimate emissions.

The EPA could provide greater clarity on this issue in a manner that will not preclude undeveloped methodologies to be used in the future.

***KOGA Comment**: The EPA should provide greater clarity on acceptable methodologies to calculate VOC emissions. This clarity should identify all current acceptable methodologies while allowing for the likelihood that acceptable methodologies will be developed in the future.*

***KOGA Comment**: The EPA should develop compliance assistance programs (workshops, web-based materials, training, etc) for affected operators, with a special focus on small, independent producers.*

In preparation for the initial rule, a substantial effort was undertaken by the EPA to model storage vessel VOC emissions. EC/R Inc.'s "Oil and Natural Gas Sector: Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution" (Contract No. EP-D-07-061 Work Order No. 4-06) contained the following table:

Table 7-11. Options for Throughput Cutoffs for Crude Oil Storage Vessels

Regulatory Option	Throughput Cutoff (bbl/day)	Equivalent Emissions Cutoff (tons/year) [a]	Emission Reduction (tons/year) [b]	Annual Costs for VRU ($/yr) [c]	Cost Effectiveness ($/ton)	Number of impacted units [d]
1	1	0.3	0.28	$18,983	$68,432	15607
2	5	1.5	1.4	$18,983	$13,686	825
3	20	5.8	5.55	$18,983	$3,422	209
4	50	14.6	13.87	$18,983	$1,369	209

Minor discrepancies may be due to rounding

a. Emissions calculated using emission factor of 1.6 lb VOC/bbl condensate and the throughput associated with each option.
b. Calculated using 95 percent reduction
c. Refer to Table 7-7 for VRU Annual Costs.
d. Number of impacted units determined by evaluating which of the model tank batteries and storage vessel populations associated with each model tank battery (refer to Table 7-6) would be subject to each regulatory option. A storage vessel at a model tank battery was considered to be impacted by the regulatory option if its throughput and emissions were greater than the cutoffs for the option.

This table suggest that a fundamental assumption of the EPA in promulgating the rule is that a throughput of 20 bbl/day equates to a VOC emission equivalent of 5.8 tons/year – less than the 6 TPY threshold established by the rule. KOGA understands why the EPA moved away from the "throughput threshold" of 20 bbl/day to the "6 tpy threshold." Throughput, however, is the simplest and clearest methodology for an operator to determine if controls are required.

It would seem, based upon the EPA's technical modeling, the EPA could accept an operator's determination that a storage vessel won't require emission controls if the throughput is less than 20 bbl/day.

***KOGA Comment**: Based upon the agency's technical modeling, the EPA should accept that Group 1 storage vessels with less than 20 bbl/day throughput will fall under the "6 tpy threshold" and, therefore, are not required to be reported.*

***KOGA Comment**: Based upon the agency's technical modeling, the final rule should allow an operator to conclude that any storage vessel with less than 20 bbl/day throughput has VOC emissions less than 6 tpy and does not require emission controls. As an alternative, given the estimates of 20 bbl = 5.8 tpy (which is very close to the 6 tpy threshold), the agency could identify a throughput equal to 4 tpy VOC emissions and establish it as an acceptable throughput for operators to conclude a storage vessel will not require controls.*

These proposals are an effective way for EPA to acknowledge the challenges facing small operators. It is based upon the EPA's modeling, remains consistent with the current rule and will provide significant relief to small operators. We are not asking the EPA to revert back to the 20 bbl/day threshold. The "6 tpy threshold" remains in force. We are asking for simplicity and clarity

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In conclusion, KOGA and its members urge the EPA to continue to refine its storage vessel rules in a manner which reflects the significant costs which will be borne by Kentucky's producers and the broader industry.

We appreciate the agency's consideration of our comments.

Respectfully,

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KOGA's Mission is aligning and coalescing industry stakeholders to influence public policy and shape attitudes which materially impact Kentucky's Oil & Gas industry. It achieves its mission through legislative advocacy, business networking and strategic communications.