WESTERN ENERGY ALLIANCE

November 15, 2016

U.S. Environmental Protection Agency
Mail Code 28221T, 1200 Pennsylvania Ave. NW.
Washington, DC 20460

RE: Oil and Natural Gas Sector: Request for Information (RFI), Emerging Technologies Docket ID No. EPA-HQ-OAR-2016-0346

Dear Sir or Madam:

Western Energy Alliance appreciates that EPA is interested in better understanding new and emerging methane capture, control and mitigation technologies for the oil and natural gas industry. Allowing broad flexibility and ample room to innovate and apply new technology is a much more effective, cost-efficient way to reduce emissions than prescriptive regulations. We urge EPA to reform its technology approval process while considering new and emerging methane mitigation technology. The current process for approving new technologies is time-consuming, inflexible, and generally stifles innovation. Even the most promising technologies will fail to flourish under a prescriptive, time-consuming, and expensive approval process.

Western Energy Alliance represents over 300 companies engaged in all aspects of environmentally responsible exploration and production of oil and natural gas in the West. Alliance members are independents, the majority of which are small businesses with an average of fifteen employees.

While we support voluntary efforts to collect information, we are disappointed by the timing of EPA's RFI. This voluntary RFI should have been conducted well in advance of recently finalized New Source Performance Standards Subpart OOOOa, Control Techniques Guidelines (CTGs) for existing sources, and an Information Collection Request (ICR) so as to inform these regulatory efforts. Identifying new technology after establishing burdensome and prescriptive control requirements relying on this very technology is not an effective way to foster innovation and encourage new technology adoption. If EPA is serious about embracing new technology, the results of the RFI should be used in a reconsideration process on OOOOa and CTGs to.

While we disagree with the assumption that EPA possesses clear authority to regulate methane under section 111(d) of the Clean Air Act without a specific methane

1775 Sherman St., Ste 2700 Denver, CO 80203
P 303.623.0987 F 303.893.0709 W WesternEnergyAlliance.org

endangerment finding, we understand that EPA is moving forward regardless. With that context in mind, we are proposing that the RFI be a step in a robust analytical effort to determine both the benefits and costs of promulgating emission control requirements to the diverse range of existing facilities in the oil and natural gas industry. We believe EPA can best accomplish this goal by following the peer-review process laid out in white papers during the New Source Performance Standards (NSPS) Subpart OOOO regulatory process. A similar white paper on control technology that could be reviewed by stakeholders would be an effective way to allow industry to provide EPA with detailed information on existing source controls.

Western Energy Alliance members have evaluated many new technologies that have methane reduction and measurement applications. While we do not endorse any specific technologies, we have identified some important factors that must be accounted for as these new technologies are vetted.

First, EPA should be aware that technologies that are found to be safe, reliable, and cost-effective are generally embraced by industry and put into use. If technologies have not been adopted, there is generally a reason for that. Some vendors make strong claims about the efficacy or capabilities of their technologies, but these should be subject to scrutiny including robust field testing. EPA should not be in a position of picking winners and losers in the marketplace by identifying technology specific to a particular company or group of companies, but rather should identify categories of technologies and capabilities. The regulatory process should not become a venue for crony capitalism and used by vendors and advocacy groups like the Center for Methane Emissions Solutions to identify their particular technologies.

While some technologies may be effective under certain conditions, we caution that consider the diverse range of operating conditions in the oil and natural gas industry which affect which technologies are used. Type of production (heavy vs. light oil, condensate, wet gas, dry gas), volume of production (including both hydrocarbons, water, and other gases), environmental conditions, equipment configurations, infrastructure availability, and regulatory requirements are just some of the factors affecting when and where a technology is technically and economically feasible. For example, remote skid-mounted NGL recovery plants may have different run-times and capacities depending on climate, or the availability of gas gathering infrastructure, electricity, and improved roads.

In operator experience, some technologies like remote capture NGL skids have other negative environmental consequences to consider, such as increased wellpad size and additional hazardous material truck traffic. Sometimes, gas composition can mean that up to 80% of wellsite gas still ends up getting flared because light ends like methane and ethane are not captured by NGL processing units. In other instances, the gas volumes required to make these remote capture facilities economic are simply not sustainable. Some NGL separation units require 2-3 MMCF/day for six months to be financially viable.

But while aggregate flaring rates may make these units seem attractive, it is less common that individual locations are able to sustain that level of gas production in order to justify their expense. Often times, individual locations may have gas production levels closer to 0.5-1 MMCF/day while production declines and expanding gas gathering infrastructure further eat away at available gas volumes.

Another important consideration is whether a wellpad is electrified. Locations without electricity require onsite electrical generation, often supplied by diesel or propane generators that produce additional air emissions. These wellsite-sized gas processing units are typically managed through gas-driven pneumatics. That means increased pneumatic controller and pneumatic pump equipment counts and corresponding emissions.

A better option than investing in remote capture technologies is simply investing in pipeline and gas gathering infrastructure. Expedited gas gathering line and pipeline infrastructure will greatly improve gas capture rates, thereby reducing emissions and increasing beneficial use of natural gas. Often delays in permitting by the federal government delay the installation of gathering infrastructure; a better way to increase methane capture is simply for land management agencies to simply approve the infrastructure permitting, rather than mandating new technologies that are less effective and economically feasible.

Rather than focusing on which exact technologies are used, companies have found implementing work practice standards around fugitive emissions monitoring to be an effective way of improving leak reduction rates. Industry has found that work practices are an effective means to improve leak reduction rates. For example, some companies have found that conducting fugitive emission surveys in one complete pass improves detection rates. Companies have also found that certain components like thief hatches are best addressed when they are resurveyed more than once immediately after conducting repairs.

Effective strategies for conducting a fugitive emissions monitoring program could have a greater impact than simply increasing the frequency of inspections for fugitive emissions. For example, a Western Energy Alliance member conducted an analysis of its available leak detection and repair (LDAR) data to better understand the effects of inspection frequency on the operator's current LDAR program in Wyoming. Its analysis compared the field wide average component leak rate to the time interval experienced between the inspections.

The operator experienced a significant drop in emissions (over 50%) from performing LDAR inspections once per year. When that frequency was increased to semiannually or quarterly, the effectiveness of each sequential frequency inspection was significantly diminished. Specifically, the operator identified a 52% reduction in emissions from annual LDAR inspections, a 57% emission reduction from semiannual inspections and a 61% emission reduction from quarterly inspections, where the percent of emission reductions

is the percent reduction in number of leaks from initial survey to subsequent surveys for a given inspection frequency. The operator's analysis indicates a near exponential decay of effectiveness from increased LDAR frequencies in terms of leaks and corresponding emission rates from fugitive emission sources. This is evidence that program frequency alone will not necessarily be the most effective strategy for strengthening an LDAR program. Instead, focusing on a programmatic approach appears to be a potentially more fruitful strategy.

In conclusion, we encourage EPA to develop a streamlined approval process for new technology in conjunction with its technology evaluation process. We also caution EPA to be mindful of the numerous technical, operational, environmental, and economic constraints that can impact methane mitigation technologies. Choice of technology needs to remain flexible so that the best technology can be used based on the circumstances of each well site. To best achieve a thorough and objective analysis of potential control strategies, we support EPA developing a white paper analysis with peer review mirrored on the NSPS OOOO white paper process.

We are available to work with EPA to evaluate potential methane mitigation technologies, provide EPA with more useful information on operator experience, and improve the technology approval process. Please feel free to contact me to discuss these issues in greater detail.

Sincerely,

Kathleen M. Sgamma
Vice President of Government & Public Affairs