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Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460
Docket ID Numbers – EPA-HQ-OAR-2010-0505 and EPA-HQ-OAR-2015-0216

RE: Comments on Oil and Natural Gas Sector: Emission Standards for New and Modified Sources and EPA’s Draft Control Technical Guidelines for the Oil and Gas Industry

Dear Administrator McCarthy:

The Colorado Oil and Gas Association (COGA), with the input of its members, prepared and is pleased to submit these comments on the U.S. Environmental Protection Agency’s (EPA) proposed rules entitled “Oil and Natural Gas Sector: Emission Standards for New and Modified Sources,” published on September 18, 2015. 80 *Fed. Reg.* 56,593 (hereinafter referred to as “Quad Oa”). We are simultaneously providing comment on EPA’s draft control technical guidelines (CTGs) for the oil and natural gas industry. See 80 *Fed. Reg.* 56,577 (Sept. 18, 2015). The Colorado Petroleum Association (CPA) joins COGA in these comments.

COGA notes that, because the issues in both proposals are so closely aligned, it makes sense in certain places to provide comments regarding those similar issues. Thus, COGA is submitting this comment letter to both the Quad Oa and CTG dockets, and, in doing so, incorporate by reference all applicable comments for each proposal separately into each docket and intends that all comments, where appropriate, be applicable to both proposals.

I. Executive Summary

For over 30 years, COGA has fostered and promoted the beneficial, efficient, responsible, and environmentally sound development, production, and use of Colorado’s oil and natural gas resources. With over 300 members, COGA provides a positive, proactive voice for the oil and gas (O&G) industry in Colorado and aggressively promotes the expansion of Rocky Mountain natural gas markets, supply, and transportation infrastructure. Founded in 1951, the Colorado Petroleum Association (CPA) is a statewide non-profit Colorado trade association comprised of member companies involved in every segment of Colorado’s oil and gas industry, including exploration and production, refining, transportation, supplier chain, pipeline and contractors. As noted above, CPA joins COGA in every respect in submitting these comments. As described below, the Quad Oa and CTG proposals will significantly impact COGA members, and we appreciate EPA’s consideration of its comments on these proposals.

The Quad Oa rule proposes to amend the new source performance standards (NSPS) for the oil and natural gas source category by setting standards for both methane and volatile organic compounds (VOC) for certain equipment, processes, and activities across the named source category. As described in more detail below, however, the proposed requirements are duplicative and unnecessary in states like Colorado that have established, and are enforcing, aggressive VOC control regimes aimed directly at controlling both VOC and methane emissions from the O&G sector. Although COGA members believe that many aspects of Colorado's final hydrocarbon emissions (including VOCs and methane) control regime applicable to the O&G sector (hereinafter referred to as the Regulation No. 7 Program)¹ are overly burdensome and unnecessary, COGA strongly urges EPA to recognize Colorado's Regulation No. 7 Program (as a whole) by expressly allowing those facilities already in compliance with the Colorado program to be deemed in compliance for purposes of Quad Oa (and thereby exempt from Quad Oa). In the alternative, and at a minimum, COGA requests that EPA: 1) recognize that Colorado's Leak Detection and Repair (LDAR) requirements, including all aspects of the Regulation No. 7 Program that implicate LDAR requirements (*e.g.*, including Storage Tank Emission Management (STEM) system requirements) for the upstream oil and natural gas sector, are adequate to demonstrate equal or greater benefits than would otherwise occur under the proposed federal program; and 2) deem compliance with Colorado's LDAR program sufficient for compliance with leak detection requirements of any final Quad Oa rule (and so exempt from the same). Finally, and understanding that EPA, in part, utilized Regulation No. 7 to inform development of its proposed Quad Oa, COGA offers important lessons learned from Colorado operators' perspective—following implementation of the Regulation No. 7 Program—that are prudent for EPA to consider in development of any final Quad Oa rules.

II. Background and History of Oil and Gas Air Quality Regulation in Colorado

A. History of Colorado Oil and Gas Air Emission Regulation

Colorado has been and continues to be a world leader in regulating air emissions from the O&G industry. While COGA has not always agreed with the regulatory actions taken by the state, we have worked very hard with the state every step of the way to ensure that the regulatory environment facing our members provides robust environmental benefits while at the same time allowing for the environmentally responsible development of the state's oil and natural gas resources. From an air emissions perspective, our members' facilities are the most tightly controlled operations anywhere in the country and they continue to improve with each passing day.

Colorado's focus on controlling emissions from the state's oil and natural gas sector reaches back to at least 2004, when the state approved the Early Action Compact (EAC) for ozone. The 2004 EAC made changes to Colorado's State Implementation Plan (SIP), and more specifically to Regulation No. 7 VOC and Motor Vehicle Emissions Inspection programs. Colorado designed these actions to demonstrate attainment of the 8-hour ozone national ambient air quality standards by December 31, 2007 and maintenance of the standard through 2012. With respect to O&G controls, the plan required the installation of air pollution control technology to achieve at least a 47.5% percent reduction in VOC emissions from exploration and production operations, natural gas compressor stations, and natural gas drip stations located in the EAC plan area. These controls were focused largely on VOC flash emissions from condensate tanks, with more stringent standards required during the summer ozone season. The

¹ The requirements of the Regulation No. 7 Program applicable to the O&G sector will be discussed in more detail below. For reference, the Regulation No. 7 Program requirements are located at 5 Colorado Code of Regulations 1001-9, §§ XII, XVII, and XVIII (including all cross-referenced sections therein).

plan also required VOC and NO_x emission reductions from larger new Reciprocating Internal Combustion engines (RICE), and VOC reductions from certain new dehydration units.

In 2006, the Air Quality Control Commission (AQCC) approved additional changes to Regulation No. 7 to require a 75% system-wide reduction of condensate tank flash VOC emissions for the 2007 ozone season, and a 78% reduction for the 2012 ozone season (combustion that achieves a 95% reduction of VOC emissions). The revisions also increased control requirements for glycol dehydrators. In 2008, the AQCC approved further revisions to the Regulation No. 7 SIP provisions by increasing the system-wide control requirements for tank flash VOC emissions, eventually to 90% for tanks ≥ 2 tons per year (tpy) for the 2011 ozone season, as well as the installation and operation of auto igniters on all control devices, effective May 1, 2010. The 2008 SIP control measures also placed more stringent, statewide control requirements on RICE and required daily inspection of tanks in the non-attainment area (NAA). Also in 2008, the AQCC in coordination with the Colorado Public Utility Commission (PUC) passed the Clean Air Clean Jobs Act, which addressed Regional Haze and also carried significant ozone benefits or co-benefits.

In October 2012, the AQCC partially adopted EPA's Quad O NSPS. The AQCC also directed the Air Pollution Control Division (APCD) to pursue options to *fully* adopt NSPS Quad O and to identify options that would go above and beyond NSPS Quad O requirements. To this end, in February 2014 the AQCC passed a comprehensive new set of regulations aimed at additional VOC and hydrocarbon/methane reductions from the Colorado O&G sector. In part, revisions to Regulation Nos. 3 and 6 fully adopted NSPS Quad O. The new provisions under Regulation No. 7, however, in large measure went above and beyond NSPS Quad O requirements, applying new and additional control requirements to all O&G operations statewide and addressing *all* hydrocarbons, not just VOCs. See Section II below for additional detail. In short, the Regulation No. 7 Program requires operators of new and existing facilities to implement a STEM system, LDAR programs, upgrades to pneumatic controllers, increased controls for glycol dehydrators, increased combustion efficiency to 98%, new requirements for compressor seals and open-ended valves or lines, emissions controls for new, modified, existing, and re-located natural-gas fired RICE, and new well liquid unloading requirements, among other requirements (collectively referred to as "the Regulation No. 7 Program"). The rule became effective on April 14, 2014 and by January 1, 2016 the Regulation No. 7 Program will be fully operational.

B. Ozone in Colorado, Regulation No. 7, and Significant VOC Reductions

The Regulation No. 7 Program was designed to address the recent and expected growth of O&G development in light of the Denver Metropolitan Area/North Front Range ozone NAA (DMA/NFR NAA). The Regulation No. 7 Program, because it applies to all sources statewide, also promised environmental benefits outside the DMA/NFR NAA. Although some of the growth projections and emissions inventory estimates supporting the rule were likely not accurate in COGA's view, there is no doubt that the new Regulation No. 7 Program has provided and will provide substantial emissions reductions from the Colorado O&G sector—emissions reductions that are well ahead of and more significant than what EPA proposes under Quad Oa.

In support of Regulation No. 7, APCD estimated that the proposed control strategies would reduce approximately 125,000 tpy of VOC and other hydrocarbon emissions. These Colorado-specific reductions are just below half of what EPA has forecast *nationally* as the result of Quad Oa and,

obviously, are already being achieved.² Based on these rough emissions benefit comparisons alone, we believe the Colorado program is already generating significant benefits that should be recognized in this proposed federal rule.

As recently as October 2015, emissions inventory work has provided another example of how the Colorado’s unique regulatory environment has dramatically reduced emissions; this work further supports COGA’s position that EPA should not overlay duplicative, less effective federal requirements on top of Colorado’s Regulation No. 7 Program. Specifically, as part of its ozone planning efforts in the Fall 2015, the Regional Air Quality Council (RAQC) updated its Colorado emissions inventories, including the O&G source category. The updated inventory demonstrates a 33% reduction in VOCs from all source categories and an over 50% VOC reduction just from oil and gas by 2017. *See* Briefing Paper, 2008 Moderate Area SIP, 2011 and 2017 Base Case Emissions Inventory, October 26, 2015 (available at file:///C:/Users/ewae/Downloads/2011-2017_BaseCaseEmissionsInventories110615.pdf). This updated O&G VOC inventory utilized site-specific emission factors, which reflect technological advancements (e.g., additional stages of separation, tankless sites) and better emission control under Colorado’s regulations, including the new Regulation No. 7 Program. Of course, the same VOC reductions are simultaneously generating significant methane co-benefits. Moreover, these O&G reductions will occur despite significant projected growth (nearly 75% growth in production forecast from 2014 to 2017). *Id.* at 5.

The fact that the regulatory measures noted above have focused on VOC reductions (with methane co-benefits) from the O&G sector to address ozone issues is a very important point in the overall context of these comments. As EPA notes, the recently proposed Quad Oa rules “[do not] provide . . . credible health benefits estimates . . . due to the differences in the locations of oil and natural gas emission points relative to existing information and the highly localized nature of air quality responses associated with HAP and VOC reductions.” *See* RIA at 4-1 (emphasis added). The Colorado experience is illustrative of this point. The DMA/NFR NAA issue is uniquely a Colorado issue—an issue which, as noted above, the state has been working with COGA, other trade associations, and industries for over ten years to address. The mix of stationary emission sources (both inside and outside the O&G sector), population growth, mobile sources, and boundary conditions all contribute in a unique way to the ozone issues confronting the state. COGA strongly believes that the state, not EPA, is best suited to tackle this issue. The state’s serious efforts towards this end should not be discounted or negated by a federal rule that, if imposed on top or in place of Colorado’s program, might actually make attainment in the DMA/NFR NAA more difficult. The only way to avoid this outcome is for EPA to expressly recognize that compliance with the Regulation No. 7 Program (or, at a minimum, Colorado’s LDAR program, as discussed in Section III.D. below) is sufficient to demonstrate compliance with Quad Oa at affected facilities.

² EPA expects Quad Oa to generate between 290,000 and 300,000 tons of methane and VOC reductions in 2020. *See* 80 *Fed. Reg.* at 56,596. Even though EPA’s cost-benefit analysis gives credit to certain of the Colorado reductions for some parts of the program in reaching this aggregate figure (*see e.g.*, RIA at 61 subtracting wells assumed to be covered by state LDAR regulations), Colorado’s Regulation No. 7 Program still offers significant emissions reductions that are already on the books and should not be eliminated or minimized through this federal rule.

III. Summary of Regulation No. 7 Provisions

In 2014, the Colorado AQCC approved major changes to Regulation No. 7, expanding the requirement to use good air pollution control practices to minimize hydrocarbon emissions from hydrocarbon liquid collection, storage, processing, and handling activities, as well as control of ozone via ozone precursors. The revised Regulation No. 7 became effective on April 14, 2014 and will be fully implemented for every affected source by January 1, 2016. Regulation No. 7 applies statewide, rather than just in the DMA/NFR NAA, and it covers new and existing sources. With respect to O&G exploration and production activities, the rule covers all production facilities, natural gas compression (between wellhead and natural gas plants), natural gas processing plants, and equipment such as glycol dehydrators, pneumatics, and storage tanks.

For O&G operators, the 2014 revisions to Regulation No. 7 have ushered in one of—if not the most—stringent programs for controlling VOC and methane emissions from O&G exploration and production segments in the country. For example, the revisions require gas from newly constructed, hydraulically fractured, or recompleted wells be routed to a gas gathering line or controlled by 95% (and if using a combustion device, the device must be designed to achieve 98% control). Similarly, storage tanks with uncontrolled actual VOC emissions ≥ 6 tpy must control hydrocarbon emissions by 95% (and, if using a combustion device, the device must be designed to achieve 98% control). These storage tank requirements apply to storage tanks that are “manifolded together via liquid line” (*i.e.*, a tank battery) making the 6 tpy emission threshold more stringent than under Quad O (which applies to single vessels). The 2014 revisions to Regulation No. 7 also expanded the requirement to use auto-igniters and require audio, visual and olfactory (AVO) and additional visual inspections for controlled tanks at the frequency of liquids loadout (not more than every 7 days, and at least every 31 days). Storage tanks with VOC emissions ≥ 6 tpy must also develop and employ STEM plans, which includes Approved Instrument Monitoring Method (AIMM) inspections at various intervals. The new Regulation No. 7 Program also requires operators to implement best management practices during well maintenance and liquids unloading events to minimize venting.

The Regulation No. 7 Program also includes additional LDAR requirements for new and existing natural gas compressor stations and well production facilities. Specifically, the LDAR program requires inspections of facilities to identify, repair, and re-monitor leaks as applicable. With respect to well production facilities, operators must conduct an initial AIMM inspection between 15 and 30 days after the facility commences operation for new facilities. Subsequently, operators must also conduct periodic AIMM inspections for all facilities (new and existing). Operators must conduct monthly AVO inspections for every facility in the state irrespective of the AIMM monitoring frequency. Importantly, within the AIMM definition, the Colorado program allows for state-approved AIMM technologies through a streamlined application and approval process. COGA fully supports such flexibility in approved optical gas imaging (OGI)/AIMM monitoring as it allows operators flexibility and encourages innovation.

The LDAR provisions set different thresholds for leaks requiring repair based on the method used to detect the leak. Specifically, the leak threshold for leaks detected with an infrared (IR) camera or AVO is any detectable emission, while a separate schedule exists for leaks detected with EPA Reference Method 21. Regulation No. 7 requires a first repair attempt to be made no later than five (5) working days after discovery, with provisions for leaks that may be more difficult or require parts to be ordered from a manufacturer. Within 15 working days, the operator must re-monitor to verify a repair was effective. Finally, the program contains robust recordkeeping and reporting requirements, and the APCD

has recently released its first report documenting the results of the first year of the program (available at https://www.colorado.gov/pacific/sites/default/files/2014_LDAR_Annual_Report_Summary.pdf).

IV. **The Final Quad Oa Should Expressly Recognize Compliance with Regulation No. 7**

COGA respectfully requests that EPA avoid unnecessary and duplicative regulation by making clear that Colorado operators already subject to Regulation No. 7 need not also comply with Quad Oa. Specifically, COGA supports and encourages EPA to determine that compliance with the whole of the Regulation No. 7 Program serves as compliance with Quad Oa.³ The rationale for this request is simple: the Regulation No. 7 Program, as a whole, generates greater emissions benefits than the proposed federal rule—benefits that are uniquely tailored to the Colorado airshed and which specifically address the DMA/NFR NAA. The following section of COGA’s comments provide both legal and policy rationale for this request.

A. Cooperative Federalism Demands That Colorado Operators not be Made to Comply With Both State and Federal VOC Reduction Programs

The 1970 Clean Air Act (CAA) establishes a “division of responsibilities” between the state and federal governments commonly known as “cooperative federalism,” under which the federal and state governments work together to achieve federal regulatory goals. *Train v. Natural Resources Defense Council, Inc.*, 421 U.S. 60, 79 (1975); *see also* 42 U.S.C. § 7411(d). Policy development and enforcement under the CAA relies on this concept: the federal government sets standards for permissible emissions of substances affecting ambient air quality, while individual states retain responsibility for implementing programs to enforce these standards. This system empowers states to act under federal law, while also allowing for development and implementation of state innovation and expertise to reach—and often exceed—federal goals and standards. Critically, the CAA states that “air pollution control at its source is the primary responsibility of States and local government.” 42 U.S.C. § 7401(a)(3) (emphasis added).

Congress made clear that states are not required to use the particular system identified by EPA to reach an ultimate goal or standard; rather, states have the flexibility to use other systems, tailored to their state, so long as they achieve the same or greater level of pollution reduction. Ultimately, the CAA’s cooperative federalism regime should foster cooperation, not discourage it, especially in cases where, as with Colorado, states have been aggressive in addressing local air pollution problems—here, the DMA/NFR NAA. Colorado’s O&G sector (as discussed above) has played a significant role in addressing the ozone issues in Colorado, and, although industry did not necessarily agree with all aspects of the final adopted Regulation No. 7 Program, COGA members recognize that it is a particularly aggressive approach that surpasses EPA’s proposed Quad Oa. Ignoring Colorado’s regulations and forcing operators in the state to comply with duplicative and arguably less stringent federal rules would undermine this fundamental construct of the CAA. In COGA’s view, the history of O&G regulation in Colorado, while not always perfect, is an example of how cooperative federalism should work in practice. We strongly urge EPA to honor this framework.

³ COGA’s less preferred alternative to this approach is to have Colorado’s LDAR program be deemed compliant with Quad Oa’s LDAR requirements.

B. State Emissions Standards Need Only be as Stringent as Federal Standards

The preamble to the Quad Oa proposal arguably misstates the relevant and applicable standard. 80 *Fed. Reg.* at 56,595 (“EPA acknowledges that a state may have more stringent state requirements . . .”). The standard for determining whether a state requirement(s) can stand in the shoes of a federal requirement(s), however, is not whether it is “more stringent” than the federal standard but whether it is *as stringent*. See 40 C.F.R. § 60.10(a) (“The provisions of this part shall not be construed in any manner to preclude any state or political subdivision thereof from . . . [a]dopting and enforcing any emission standard or limitation applicable to an affected facility, provided that such emission standard or limitation is not less stringent than the standard applicable to such facility”); *North Dakota v. Swanson*, No. 11-3232 (SRN/SER), 2012 WL 4479246 (D. Minn. Sept. 30, 2012) (“States must establish performance standards that are at least as stringent as the EPA guidelines”) (discussing CAA Section 111(d) and referencing 40 C.F.R. § 60.24(c)).

The concept of the federal requirements acting as a floor, rather than a ceiling, is a cornerstone of the CAA’s cooperative federalism structure discussed above. EPA has supported this principle across numerous other CAA programs for the past 30 years. For example, when discussing state roles in the New Source Review program, EPA indicated that it did not implement “base programs with a one-size-fits-all mentality and certainly did not have the goal of ‘preempting’ State creativity or innovation . . . [I]f a State decides it does not want to implement any of the new applicability provisions, that State will need to show that its existing program is at least as stringent as our revised base program.” 67 *Fed. Reg.* 80,186, 80,241 (Dec. 31, 2002). Similarly, before EPA can approve alternative requirements in place of a National Emissions Standard for Hazardous Air Pollutants (NESHAP), the state must demonstrate that “the level of control in the state rule must be at least as stringent as the level of control in the Federal rule.” 76 *Fed. Reg.* 30,545, 30,547 (May 26, 2011) (discussing the Maine Department of Environmental Protection’s request for approval to implement and enforce the Maine Dry Cleaner Rule as a partial substitution for the amended Perchloroethylene Dry Cleaning Facilities NESHAP). In fact, EPA has expressed its intention to allow states to set more—or, as appropriate, even *less*—stringent emission standards. Specifically, while discussing performances standards and state plans for the control of certain pollutants under CAA Section 111(d), EPA indicated that “it is inaccurate to argue that, because EPA’s emission guidelines will reflect best available technology considering cost, States will be unable to set more stringent standards . . . States that believe additional control is necessary or desirable will be free under section 116 . . . to require more expensive controls . . . On the other hand, States will be free to set more lenient standards, subject to EPA review . . . in the case of welfare-related pollutants and in cases of economic hardship.” 40 *Fed. Reg.* 53,340, 53,343 (Nov. 17, 1975). This “less stringent” concept has since been codified at 40 C.F.R. § 60.24(f), to be applied in specific circumstances to certain “designated facilities:”⁴

States may provide for the application of less stringent emissions standards or longer compliance schedules than those otherwise required . . . provided that the State demonstrates with respect to each such facility (or class of facilities): 1) Unreasonable cost of control resulting from plant age, location, or basic process design; 2) Physical impossibility of installing necessary control equipment; or 3) Other factors specific to

⁴ A “designated facility” is “any existing facility (see §60.2(aa)) which emits a designated pollutant and which would be subject to a standard of performance for that pollutant if the existing facility were an affected facility (see §60.2(e)).” 40 C.F.R. § 60.21(b).

the facility (or class of facilities) that make application of a less stringent standard or final compliance time significantly more reasonable.

Based on these examples, the fact that, in some rare cases, Colorado's program may not precisely mirror the standards of the federal program is neither surprising nor fatal. More importantly, EPA has latitude to, and should allow states to be flexible—just as Colorado has been—in addressing air pollution in their respective states. This latitude is particularly appropriate in this case given that EPA is proposing a work practice and *not* a performance standard or emissions limit. COGA believes the Colorado Regulation No. 7 Program easily meets the applicable “as stringent” standard; and is more stringent in key respects than what EPA has proposed. For this reason, it would be entirely appropriate to carve-out from federal requirements operators already complying with Colorado's Regulation No. 7 Program or, as discussed in Section III.D., alternatively permit compliance with Colorado's LDAR program to demonstrate compliance with Quad Oa's LDAR requirements (and so be exempt from the same).

C. EPA Should be Consistent in Recognizing Enforceable State Programs, Similar to Storage Tanks Under Quad O

EPA should follow a similar structure with respect to Quad Oa that it did for Quad O: that is, recognizing that operators are not required to comply with both a state and federal program where the state program is enforceable and provides the same or greater emissions benefits as the federal program. With respect to determining Quad O applicability for storage tanks, Colorado made clear that the applicability “determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirements established under a Federal, State, local or tribal authority.” See Memorandum from Mark McMillan, Unit Supervisor, Oil and Gas Team, Colorado Air Pollution Control Division, October 15, 2013; see also PS Memo 14-03/GP 08, August 8, 2014 at 21 (“[B]y establishing an enforceable emission limit for your storage tank below the 6 tpy applicability threshold, NSPS OOOO will not apply to the storage vessel”).

Although it is a work practice standard (not emission limits) largely at issue in Quad Oa, we believe the same principles regarding recognition of enforceable state requirements should apply. The central function of EPA's legally and practically enforceable rule is to ensure controls and other requirements at a facility, which are enforceable under a state rule or permit, among others, achieve the same or greater emissions benefit as would otherwise occur under the federal program. Here, there is no dispute that the Colorado LDAR program provides emissions benefits notwithstanding the fact it is not an emission limit *per se*. For example, under Colorado's Regulation No. 7, operators who are required to and do comply with the LDAR program at well sites are allowed to estimate fugitive emissions at those sites using emission factors from Table 2-8 of the 1995 EPA Protocol for Equipment Lead Emission Estimates (Document EPA-453/R-95-017). See Reg. No. 7 § XVII.F.2. This is an express recognition that implementation of Colorado's LDAR program reduces fugitive emissions (*i.e.*, following LDAR implementation, Table 2-4 from the same EPA protocol, which vastly overestimates fugitives and is not representative of actual conditions, is no longer appropriate for estimating or permitting fugitives). Analogous to tank controls, the Colorado LDAR program is a recognized, legally and practically enforceable work practice standard that reduces emissions as recognized by § XVII.F.E.

EPA has itself recognized the interplay between emission limits and work practices, recognizing work practices to be a legally binding restriction on emissions from a source, so long as CAA requirements are met via components of the work practice. See, *e.g.*, “State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs;

Findings of Substantial Inadequacy; and SIP Calls To Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction; Final Rule,” 80 *Fed. Reg.* 33,840 (June 12, 2015). Specifically, EPA recognizes that “SIP emission limitations do not necessarily have to be expressed in terms of a numerical level of emissions . . . [F]or some source categories, under some circumstances, it may be appropriate for the SIP emission limitation to include a specific technological control requirement or specific *work practice requirement* that applies during specified modes of source operation, such as startup and shutdown.” *Id.* at 33975 (emphasis added). When choosing such an approach, however, “work practice standards must meet the otherwise applicable CAA requirements (*e.g.*, be a RACT-level control for the source as part of an attainment plan requirement) and the necessary parameters to make it legally and practically enforceable (*e.g.*, have adequate recordkeeping, reporting and/or monitoring requirements to assure compliance).” *Id.* at 33916. Therefore, a legally and practically enforceable work practice can act as an alternative emission limitation, provided that there is a clear understanding of when the work practice standard applies (or does not); a detailed description of the requirements of that standard; and adequate monitoring, recordkeeping, and reporting requirements. In fact, as EPA acknowledges, § 111 authorizes the Agency to promulgate and enforce work practice standards where “it is not feasible . . . to prescribe or enforce a standard of performance” which then enjoys the same force and effect as a standard of performance for purposes of § 111. 42 U.S.C. §§ 7411(h)(1), (5). The Colorado Regulation No. 7 Program, and LDAR requirements in particular, meet or exceed each of these requirements: emission standards are not feasible for this type of emissions in this sector; the rules are clear and detailed; they contain reasonably achievable control technology (RACT)-level controls as evidenced by similar requirements in the draft CTGs; compliance with the same can be monitored and assessed; and, given operational size, nuance, and complexity, a singular emissions limitation applicable to all O&G facilities is not feasible.

Furthermore, the Quad Oa proposal itself recognizes that that duplicative recordkeeping and reporting may exist between the NSPS, Subpart W, and other state and local rules, and that EPA “is trying to minimize overlapping requirements on operators.” *Id.* at 56,616. Therefore, as with storage tanks, for each of the reasons discussed above, EPA should make clear in Quad Oa that operators complying with such a state program are not also required to comply with the federal program. We further encourage EPA to recognize that Colorado’s program meets each of these criteria either through a specific discussion in the preamble to any final rule or in the final Quad Oa rule text.

D. Compliance with Colorado’s Regulation No. 7 Requirements is Sufficient for Federal Purposes, Such that Compliance with Quad Oa Requirements is Not Also Required

The preamble specifically requests comment on “how to determine whether existing state requirements (*i.e.*, monitoring, recordkeeping, and reporting) would demonstrate compliance with this federal rule.” 80 *Fed. Reg.* at 56,595. COGA strongly feels that Colorado operators are in a unique position and that, for the reasons stated above, the Colorado regulations should be treated accordingly. The promulgation of Regulation No. 7 in 2014 ushered in an aggressive LDAR program as well as other VOC/methane emission control programs. Emissions benefits are already being realized and recent data demonstrates they will continue to be significant into the future. Moreover, Colorado operators have spent significant time and resources complying with these rules. Thus, although there may be parts of the Colorado Regulation No. 7 Program that do not perfectly align with what is being proposed (or may be in the final rule), we believe that, on the whole, the Colorado program is precisely the kind of program that EPA should deem sufficient to satisfy compliance with the proposed federal rule—and therefore be deemed to be exempt from compliance with Quad Oa—as the Regulation No 7 Program is the most stringent state regulatory program of its kind. Accordingly, COGA respectfully requests that

EPA formally recognize in the final rule (either in the preamble or in the text of the final rule) that Colorado operators complying with Regulation No. 7 are deemed to be in compliance with the federal rule and that no additional federal requirements under Quad Oa would be necessary.

In the alternative, EPA should at the least make clear that compliance with the Regulation No. 7 LDAR provisions is sufficient to demonstrate compliance with Quad Oa LDAR requirements, such that compliance with Quad Oa LDAR requirements is not also required (*i.e.*, is exempt from Quad Oa requirements). Such an alternative should include allowances to rely on Colorado’s LDAR program in lieu of Quad Oa’s leak detection requirements, given that Regulation No. 7 provides for equivalent work practice standards to reduce leak emissions. Colorado’s LDAR program will achieve the same or greater emissions benefits in a cost-effective manner, thus meeting or exceeding federal “best system of emissions reduction” requirements.

Specifically, Colorado’s LDAR program covers both new and existing upstream O&G facilities and compressor stations. It requires monitoring at numerous frequencies determined to be cost-effective for Colorado. With respect to monitoring frequency, COGA believes it is critical that the EPA program allow each state to make its own cost-effectiveness determinations. A one-sized-fits-all approach towards mandating LDAR frequency is not the best approach. For example, whether an LDAR program is cost-effective depends on numerous factors including facility type, facility size, facility location, ease of travel, availability of gathering infrastructure, company size, and burden associated with developing and implementing databases, number, and availability of vendors, and production decline in any given location, among others. Moreover, the Quad Oa proposal does not tier frequency or otherwise tailor the program based on emissions or some other metric—rather, it would apply equally to all new and modified facilities as defined in the rule. COGA believes: (1) that the Colorado program is more stringent, overall, in its tiered monitoring frequency approach; and (2) that the one-size-fits-all EPA proposal will be inefficient and ineffective.

Colorado’s program also requires OGI (labeled AIMM) monitoring along with Method 21. The Colorado program requires timely repairs of identified leaks, and specifically calls out that a leak does not constitute a violation of the rules. COGA strongly urges EPA to provide a similar provision in Quad Oa as it is critical to the effectiveness of any LDAR program to incentivize and not punish finding and fixing leaks. Finally, the Colorado LDAR program requires recordkeeping and reporting. For these reasons, Colorado’s existing LDAR program already demonstrates compliance with the federal rule as proposed and we urge EPA to make this clear in the final rule. It is of utmost importance to the success of both EPA’s program and Colorado’s program that EPA avoid requiring that operators develop a hybrid program based on the most stringent requirement between NSPS and state program requirements, which adds an additional and unnecessary level of complexity to implementation and compliance.⁵

⁵ Is also is very important that for sources for which EPA does not have sufficient data or has otherwise already determined controls are not cost-effective, the Agency not finalize any control requirements until such time as it has the requisite data or the data show controls that are cost-effective. COGA believes working with industry participants to develop necessary data where it is lacking *prior* to regulation is the appropriate approach. This would include emissions associated with liquids unloading (*see* 80 Fed. Reg. at 56,614), intermittent pneumatic controllers, which EPA acknowledges are “inherently low-emitting sources” (*see* 80 Fed. Reg. at 56,623, n. 62), and compressors at well sites, for which EPA acknowledges there are no cost-effective controls (*see* 80 Fed. Reg. at 56,620, n. 57).

V. Summary of Lessons Learned from the Regulation No. 7 Program

While COGA requests EPA recognize compliance with the Regulation No. 7 Program as sufficient for compliance with Quad Oa (and therefore exempt from the same), COGA offers the following feedback to EPA in development of any final Quad Oa rule at the national level, given its unique experience. Colorado operators' unique experience and perspective on LDAR compliance has demonstrated that what works for some facilities does not work for all facilities. Nonetheless, the lessons learned by Colorado operators are instructive and, as summarized below, demonstrate a critical point that must be recognized in any effective LDAR program: flexibility with respect to monitoring programs and technology is paramount to LDAR compliance in Colorado and beyond. Please see Attachment 1 which describes these lessons learned as applied to specific fugitive leaks and emissions issues.

With respect to monitoring frequency, certain LDAR regimes favor a step-up/step-down frequency based upon the number of leaks found. While some Colorado operators initially favored this approach, it has become apparent that these incentives do not actually improve efficiency and, in fact, make the program significantly more burdensome, if not unmanageable. First, Colorado operators have indicated that coordination of inspections and subsequent recordkeeping duties already requires a significant amount of time and resources, without the added complication of having to manage an inspection schedule that constantly changes. Instead, Colorado operators support correlating LDAR inspection frequency with actual emissions because the inspection frequency will be more frequent at larger facilities that have a higher emissions potential (and thus a corresponding higher potential for fugitive emission leaks). This methodology allows inspection frequency to naturally decrease as emissions decrease without implementing a step-up/step-down frequency. In fact, an emissions-based frequency is preferable to a frequency based on the percentage of leaking components because—given the large and changing number of facility components—most operators do not conduct actual component counts at each well production facility and/or natural gas compressor station. Having to track the number of components and any additions and deletions that occur over time will add significant costs to manage the LDAR program.

Colorado's experience with repair and inspection deadlines has also been instructive insofar as Colorado operators have learned that a more flexible, forgiving repair and re-inspection deadline is appropriate, especially given that approximately 5% of identified leaks require a delay of repair. While this number is low in terms of overall leaks, it is significant enough that flexibility is required. Although the Quad Oa proposal permits delay in repair where "technically infeasible or unsafe," the proposal provides no discussion or definition of what is meant by technically infeasible. Moreover, such limited terms fail to adequately capture all appropriate circumstances in which a delay of repair beyond fifteen days may be required, including—as experienced by operators in Colorado—considerations such as weather constraints, the availability of specific parts and equipment, etc. EPA should therefore allow at least thirty days for the initial repair and thirty days to re-survey after the repair, as well as permit operators to demonstrate good cause for any other delayed repair beyond that timeframe.

Flexibility is also important with respect to inspection and repair technology. Colorado's experience has demonstrated that: 1) OGI is not appropriate for all weather or site-specific conditions; 2) AVO is rarely effective in a low-pressure coalbed methane (CBM)/dry gas field; 3) alternatives to AVO are of little environmental benefit because leaks at CBM well sites are small, low volume, and the stream does not contain VOCs; 4) repeated LDAR surveys produce little environmental or economic benefit; and 5) use of a soapy water solution (as described Method 21, Section 8.3.3) is very effective at

identifying the location of a range of leak sizes and repair of the same. Moreover, prescribing a specific monitoring method/technology, such as OGI or the use of portable instruments, as the only monitoring method does not provide flexibility to adopt emerging technologies on a timely basis and may have the unintended consequence of stunting future innovation in fugitive emission detection methodology. In fact, many operators performing repairs will not have access to portable analyzers, let alone carry such analyzers with them at the time a leak is noticed and repair is made. Further, from a practicality standpoint, unless the individual who discovers the leak also repairs the leak at the time of discovery, any verification method that automatically requires the use of a camera or portable analyzer adds additional steps to the process and does not necessarily improve emissions.⁶ By allowing the use of the alternative screening procedure in Method 21, the number of leaks that would have to be verified using a camera or portable analyzer are minimized (or reduced only to those where a soapy water solution is ineffective), thereby reducing effort, number, cost, and time required for site re-visits to verify repairs. COGA believes that, by accelerating or streamlining approval of new technologies and methodologies, operators are more likely to invest in and implement more efficient and cost-effective technologies. Therefore, EPA should consider accelerating the alternative method approval process in order to encourage a better rate of compliance and achieve a greater reduction of fugitive emissions.

Lastly, because operators design, construct, and operate facilities differently, there is no one-size-fits-all investigative technique or monitoring plan that can account for facility changes (*e.g.*, equipment that is down) or daily activities. Given unique facility designs, safety concerns and considerations, and unanticipated modifications in facility design and construction, a requirement to provide and maintain a walking/monitoring plan should be removed from the federal requirement. It provides no environmental benefit and is an overreach. This is especially true given that not all deviations from a monitoring plan are material, nor do such deviations mean that the monitoring plan was not followed or otherwise ineffective. Instead of focusing on specifically defined visual paths, Colorado operators have identified training as the key to a successful program. Specifically, the monitoring plan should focus on training, so that when difficulties or unforeseen events arise, the plan can still be implemented successfully.

VI. COGA's Position on Draft Control Technical Guidelines for the Oil and Gas Industry

As a nationally recognized trade association that aggressively promotes the expansion of Rocky Mountain natural gas markets, supply, and transportation infrastructure, the substance and use of the CTGs published by EPA (*see 80 Fed. Reg. 56,577 (Sept. 18, 2015)*) are of importance to and will greatly impact COGA's members once finalized. To that end, COGA supports and fully incorporates herein the comments of the Western Energy Alliance on the CTGs. COGA also notes the following additional considerations with respect to the CTGs.

⁶ With respect to verification of leaks or leak repairs, Colorado operators oppose EPA's proposal to capture and retain photographs of fugitive monitoring activities during surveys. While not a lesson learned, COGA notes that such photographs will inherently capture details which would not otherwise be available, creating security risks (*e.g.*, terrorist activities, retaliation, and anti-competitive activities) to facilities should people obtain the photographs through Freedom of Information Act requests (these requests undoubtedly submitted by individuals with no interest in fugitive monitoring). COGA strongly urges EPA not to require such photographs under Subpart OOOOa for fugitive emissions monitoring, particularly as these photographs do not provide any additional environmental benefit.

COGA questions why Colorado (and other similarly situated states) must consider the CTGs as RACT given that effective control techniques and standards are included in Colorado's existing SIP and state-only controls. Moreover, although COGA understands that the CTGs are intended to serve as guidelines for RACT standards for sources emitting VOCs, Section 182 of the Clean Air Act requires states with ozone NAAs to revise their SIPs to incorporate RACT standards. Thus, instead of CTGs being treated as guidelines, states, including Colorado, could be required to fold the RACT "guidelines" from the CTGs into state regulatory requirements or air quality control programs. In Colorado's case, this would create unnecessary and duplicative requirements because, as noted above, SIP provisions and state-only controls currently provide effective VOC control with respect to emissions from the oil and natural gas industry. Therefore, as noted above, COGA respectfully requests that EPA make clear that the CTGs are recommendations meant for review and site-specific application or adaption, as appropriate, and that the CTGs are not, and should not be, considered RACT absent a state-specific or site-specific analysis as to applicability and need.

VII. Conclusion

COGA appreciates the opportunity to provide comments on EPA's Quad Oa proposal. Our members are in a unique position to weigh in on these issues having implemented many of the aspects of what EPA is proposing—particularly with regard to Colorado's upstream LDAR program. Colorado's VOC and methane reduction rules for this sector are second to none and already are providing significant emissions reductions. We strongly encourage EPA to recognize the significant efforts made by CDPHE and the state's operators by making clear in the final rule that compliance with Regulation No 7 at affected facilities is deemed sufficient to demonstrate compliance with Quad Oa—and therefore exempt from the same. In the alternative, we encourage EPA to recognize (at a minimum) that Colorado's LDAR program under Regulation No. 7 provides more emission reductions than would be achieved under the federal program and is otherwise compliant with the federal CAA (*i.e.*, requires recordkeeping and reporting), and, as a result, exempt from the leak detection requirements under any final Quad Oa.

Sincerely,



Andrew Casper
Director of Legal & Regulatory Affairs
Colorado Oil & Gas Association

Attachment