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**Chapter 26 Backseat Driver No More! The Expanding Role of State and Local Government in Reducing Methane Emissions from *Oil* and Gas Sources**

**§ 26.01 Introduction**[[1]](#footnote-2)1

Federal and state regulation of greenhouse gases (GHGs) in the United States has evolved substantially since the U.S. Supreme Court ruled in *Massachusetts v. EPA* that the U.S. Environmental Protection Agency (EPA) has authority under the federal Clean Air Act (CAA) to regulate GHGs.[[2]](#footnote-3)2 A significant focus of federal regulatory efforts in the last decade has been reducing GHG emissions, primarily methane, from ***oil*** and gas sources. EPA initially indirectly regulated GHGs, in the form of methane, from ***oil*** and gas sources as a "co-benefit" of the regulation of emissions of volatile organic compounds (VOCs) under New Source Performance Standard (NSPS) OOOO adopted in 2012. However, toward the end of President Obama's administration, EPA and the Bureau of Land Management (BLM) began to directly regulate methane emissions from ***oil*** and gas sources-through NSPS OOOOa and the BLM Venting and Flaring Rule. Those measures were immediately challenged and one enjoined, and when President Trump's administration took office, federal agencies deemphasized GHG regulation and specifically reconsidered direct regulation of GHGs from ***oil*** and gas sources (as opposed to regulation of GHG as a co-benefit of regulating VOCs).

Amid the challenges in these shifting federal GHG regulatory efforts, states have responded in different ways to express their general sentiment that states should have control over much of the regulation of ***oil*** and gas within their states. Several states with substantial ***oil*** and gas activity have elected to challenge the federal regulations adopted by the Obama administration as an overreach and in doing so have joined with industry to challenge additional GHG or VOC regulation of the ***oil*** and gas industry. Other states and localities with significant ***oil*** and gas activity have responded by challenging the Trump administration's revisions to ***oil*** and gas regulation and by expanding their role in regulating GHG emissions (either directly or as a co-benefit) from these sources. Most, though not all, jurisdictions have statutory frameworks that allow them broad authority[[3]](#footnote-4)3 to regulate pollutants, including GHGs-even where such regulation exceeds federal regulations. Whether states pursue such regulation with respect to the ***oil*** and gas industry has depended in large part not only on their statutory authority but on (1) the party in political power in the state, and (2) the emphasis on climate change and/or ***oil*** and gas regulation among the citizenry. In some states, these efforts have been ongoing for years, while in many states and local jurisdictions, these efforts started in earnest during the Trump administration. But there is no sign that states are letting up with the new Biden administration (which has already issued executive orders re-prioritizing climate change regulation and targeting ***oil*** and gas operations).[[4]](#footnote-5)4 Rather, many states are reinforcing their role as the primary regulator of ***oil*** and gas operations via increased regulation of air quality emissions from ***oil*** and gas sources-not only through the traditional roles of the state agencies with authority to regulate air quality, but also through the agencies with authority to regulate waste of ***oil*** and gas, including waste associated with such production.

The goal of this chapter is to highlight the history of federal regulation of ***oil*** and gas sources, and co-existing and subsequent state (and local) efforts to regulate GHGs and methane emissions from ***oil*** and gas sources-either directly or as a co-benefit of VOC regulation. This chapter is organized as follows: § 26.02 briefly surveys the evolution of federal regulation of VOC and GHG emissions from ***oil*** and gas sources as a backdrop to state and local actions; § 26.03 details some of the recent regulatory efforts undertaken by certain states (and localities) with substantial ***oil*** and gas development;[[5]](#footnote-6)5 and § 26.04 concludes with some predictions on how state GHG regulation will evolve to address new climate change goals and an evolving industry. Importantly, this chapter should not be used as a substitute for review and evaluation of the specific regulations cited herein or others related to ***oil*** and gas development in each of the states below. This chapter provides only a summary of certain of the types of equipment and regulations impacting the ***oil*** and gas industry.

**§ 26.02 Federal Regulation of Methane from *Oil* and Gas Sources**

**[1] Obama Administration Takes Action on Emissions from *Oil* and Gas Sources**

**[a] NSPS OOOO**

In 2012, EPA promulgated regulations directed at reducing emissions of VOCs from new and modified sources in the upstream and midstream ***oil*** and natural gas sector.[[6]](#footnote-7)6 NSPS OOOO established several first-of-its kind federal standards for new or modified facilities within the ***oil*** and natural gas production source category.[[7]](#footnote-8)7 The newly established standards included regulations, among others, directed at new or modified (1) storage vessels located at ***oil*** and natural gas production facilities, (2) natural gas-driven pneumatic controllers located between the wellhead and the natural gas processing plant, (3) hydraulically fractured natural gas wells, and (4) certain reciprocating and centrifugal compressors.[[8]](#footnote-9)8

Shortly thereafter, the Obama administration released the Climate Action Plan: Strategy to Reduce Methane Emissions (Methane Strategy), concluding that methane plays a significant role in affecting climate change, with a global warming potential estimated in 2014 to be more than 20 times greater than carbon dioxide.[[9]](#footnote-10)9

The Methane Strategy identified two potential federal rulemakings: (1) additional regulation of sources of methane and other emissions from the ***oil*** and gas sector, and (2) updated standards to reduce venting and flaring from ***oil*** and gas production on public lands.[[10]](#footnote-11)10 Following the Methane Strategy, the Obama administration announced a new goal "to cut methane emissions from the ***oil*** and gas sector by 40 to 45 percent from 2012 levels by 2025 and steps to put the United States on a path to achieve this ambitious goal."[[11]](#footnote-12)11

**[b] Original NSPS OOOOa**

EPA finalized NSPS OOOOa in June 2016 and expanded upon NSPS OOOO in a few fundamental ways at new and modified facilities, including, among others, expanding the standards applicable to well completions, known as green completions, to both natural gas and ***oil*** wells; enacting comprehensive leak detection and repair (LDAR) requirements for fugitive emission components at well sites and compressor stations; expanding regulation within the transmission sector; and imposing design requirements for storage vessels at ***oil*** and gas production facilities subject to the rule's 95% control requirement.[[12]](#footnote-13)12

NSPS OOOOa also expanded coverage of most of the existing standards carried over from NSPS OOOO and most of the newly promulgated standards to include limitations on GHG emissions, in the form of methane.[[13]](#footnote-14)13 EPA included the methane standards on the stated basis that "methane is one of the six well-mixed gases in the definition of GHGs and the ***oil*** and natural gas source category is one of the country's largest industrial emitters of methane."[[14]](#footnote-15)14 But EPA also acknowledged throughout NSPS OOOOa that the VOC standards in the rule resulted in both methane and VOC reductions and acknowledged expressly that the best system of emission reduction (BSER) for methane was the "same as the BSER for reducing VOC emissions."[[15]](#footnote-16)15 EPA justified the decision to include specific methane standards on the grounds that methane

should be directly addressed through GHG standards in the form of limits on methane emissions under CAA section 111(b) based on direct evaluation of the extent and impact of GHG emissions from [the] source category and the emission reductions that can be achieved through the best system for their reduction.[[16]](#footnote-17)16

Following its publication, NSPS OOOOa was immediately challenged by North Dakota, Texas, West Virginia, and a number of industry parties. The various petitions for review raised a series of common challenges to EPA's adoption of NSPS OOOOa, including whether EPA was required to make a separate, pollutant-specific, endangerment and significant contribution finding in order to establish standards of performance for methane emissions from already regulated sources in the ***oil*** and natural gas source category.[[17]](#footnote-18)17

**[c] Venting and Flaring Rule**

Shortly following EPA's publication of NSPS OOOOa, BLM published a final rule with the stated purpose to reduce waste of natural gas during ***oil*** and natural gas production activities on onshore federal and tribal leases.[[18]](#footnote-19)18 Though limited to ***oil*** and gas production on federal and tribal lands, the Venting and Flaring Rule sought to address those sources that EPA arguably could not yet address under the CAA-existing ***oil*** and gas sources. The Venting and Flaring Rule contained, among other requirements, regulations that (1) prohibited venting gas that could not be routed to sale in almost all circumstances; (2) imposed stringent control requirements on storage vessels at ***oil*** and gas production facilities; (3) required lessees to implement an LDAR program; (4) required operators to replace certain equipment with newer, lower emission models; and (5) imposed capture and flaring requirements on lessees during well completions and related operations.[[19]](#footnote-20)19

The Venting and Flaring Rule and NSPS OOOOa were intended to complement each other, and BLM and EPA worked closely during the development of the two rules to attempt to avoid conflicting requirements.[[20]](#footnote-21)20 And, as noted above, the Venting and Flaring Rule was intended to apply many of the standards applicable only to new and modified sources under NSPS OOOO/OOOOa to existing sources.[[21]](#footnote-22)21 Accordingly, much of the Venting and Flaring Rule directly mirrored the air pollution control measures in NSPS OOOOa. A more detailed discussion of the history of the BLM Venting and Flaring Rule can be found below.

**[2] The Trump Administration and an Uncertain Future for Federal Methane Regulation**

NSPS OOOOa and the Venting and Flaring Rule were both finalized in the last six months or so of the Obama administration. The future of the rules was quickly called into question following the election of President Trump in November 2016.

On March 28, 2017, President Trump published Executive Order No. 13,783, "Promoting Energy Independence and Economic Growth."[[22]](#footnote-23)22 The order directed EPA to immediately review NSPS OOOOa and, "if appropriate, . . . suspend, revise, or rescind the guidance, or publish for notice and comment proposed rules suspending, revising, or rescinding those rules," as soon as practicable.[[23]](#footnote-24)23 The order directed BLM to do the same with the Venting and Flaring Rule.[[24]](#footnote-25)24

**[a] NSPS OOOOa (Version 2) Under the Trump Administration**

EPA announced its intent to review the provisions in NSPS OOOOa shortly after the President's publication of Executive Order No. 13,783.[[25]](#footnote-26)25 Of most import, on September 14, 2020, EPA finalized what is referred to as the Policy Rule.[[26]](#footnote-27)26 The Policy Rule removes sources in the transmission and storage segment-added for the first time in NSPS OOOOa-from the ***oil*** and natural gas source category, and "rescinds the methane-specific requirements of the NSPS applicable to sources in the production and processing segments."[[27]](#footnote-28)27 EPA based its decision to remove the methane requirements from NSPS OOOOa on the grounds that the requirements "are redundant with the existing NSPS for VOC and, thus, establish no additional health protections."[[28]](#footnote-29)28 In the Policy Rule, EPA found that "the 2016 rational basis determination [by the Obama EPA] was incorrect because the methane NSPS was redundant on the grounds that it does not achieve any additional methane reductions beyond what sources achieve by implementing the VOC NSPS."[[29]](#footnote-30)29 EPA finalized a broader set of technical revisions to the rule on September 15, 2020.[[30]](#footnote-31)30 The "Technical Rule," as it became known, addresses a large range of technical issues with the rule, including revisions to certain LDAR monitoring frequencies, the closed vent system monitoring and certification requirements for pneumatic pumps, and the calculation methodology for determining storage tank applicability under the rule.[[31]](#footnote-32)31

Soon after EPA finalized the Policy Rule, environmental groups and state agencies petitioned for the review of the rule in the U.S. Court of Appeals for the D.C. Circuit.[[32]](#footnote-33)32 The petitioners argued that EPA's rescission of the methane regulations, as well as removal of the transmission and storage segment from the source category, was arbitrary and capricious. While that litigation was pending, on January 20, 2021, President Biden signed Executive Order No. 13,990 on "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis."[[33]](#footnote-34)33 The executive order directs "all executive departments and agencies . . . to immediately review and, as appropriate and consistent with applicable law, take action to address the promulgation of " any federal regulations or actions taken since 2016 that conflict with the executive order's objectives regarding climate change.[[34]](#footnote-35)34 In the list of agency actions accompanying the executive order, President Biden specifically identified the Policy Rule as falling within the scope of review.[[35]](#footnote-36)35 As a result of the executive order, EPA moved to hold the cases litigating the Policy Rule in abeyance pending EPA's review of the rule.[[36]](#footnote-37)36 On February 12, 2021, the court granted the motion to hold the cases in abeyance "pending implementation of the executive order and conclusion of potential reconsideration."[[37]](#footnote-38)37 Therefore, the Policy Rule remains in effect pending EPA's review and potential reconsideration. However, the Senate timely passed a resolution (consistent with the Congressional Review Act) to revoke the Policy Rule, which also passed the House of Representatives and was signed by the President.[[38]](#footnote-39)38

**[b] Venting and Flaring Rule**

The BLM Venting and Flaring Rule has had, to say the least, a complicated procedural history. BLM finalized the Venting and Flaring Rule in November 2016, and the rule became effective (in part) in January 2017. As noted above, the rule required rigorous requirements related to venting and flaring of natural gas on federal lands, including significant limitations on the extent to which and when operators can vent or even flare (instead of capture) natural gas on federal lands. The rule was immediately challenged by the states of Wyoming, Montana, North Dakota, and Texas, and by the Western Energy Alliance and American Petroleum Institute.[[39]](#footnote-40)39 One day prior to the rule's effective date,[[40]](#footnote-41)40 the U.S. District Court for the District of Wyoming denied the states' and industry groups' motions for a preliminary injunction and ordered expedited briefing on the merits of the case.[[41]](#footnote-42)41

BLM, following Trump's directive in Executive Order No. 13,783, then attempted to finalize a rule suspending the effectiveness of many of the Venting and Flaring Rule's deadlines, which were set to phase in over a period of time.[[42]](#footnote-43)42 Both actions were challenged in the U.S. District Court for the Northern District of California. That court vacated the Postponement Notice and enjoined the Suspension Rule-thereby precluding the Trump administration from unilaterally delaying the effective date of aspects of the Venting and Flaring Rule.[[43]](#footnote-44)43 Thus, many of the original deadlines and requirements under the Venting and Flaring Rule would continue or go into effect.

On February 22, 2018, the same day the Northern District of California enjoined the Suspension Rule, BLM published proposed revisions to the Venting and Flaring Rule for public comment.[[44]](#footnote-45)44 Upon publication, the state and industry petitioners who had initially challenged the Venting and Flaring Rule in the District of Wyoming filed motions to lift the stay on that litigation and either proceed to a decision on the merits or stay the Venting and Flaring Rule pending the administrative revision of the rule. On April 4, 2018, the District of Wyoming stayed implementation of the phase-in provisions of the Venting and Flaring Rule.[[45]](#footnote-46)45

While the appeal of the District of Wyoming's stay was pending, BLM published the final revision to the Venting and Flaring Rule (Revision Rule).[[46]](#footnote-47)46 The Revision Rule repealed all of the requirements contained in the original Venting and Flaring Rule that mirrored NSPS OOOOa, including the requirements pertaining to well completions, pneumatic controllers, pneumatic diaphragm pumps, storage vessels, and LDAR.[[47]](#footnote-48)47 Numerous states and environmental groups then challenged the Rescission Rule in the Northern District of California, and on July 15, 2020, the court entered an order vacating the Rescission Rule.[[48]](#footnote-49)48 The Northern District of California stayed its order vacating the Rescission Rule for 90 days to allow the parties time to return to the District of Wyoming and reinstate the pending challenge on the merits of the 2016 Venting and Flaring Rule.[[49]](#footnote-50)49 Accordingly, following the Northern District of California's order, the District of Wyoming lifted its stay on the previous litigation challenging the 2016 Venting and Flaring Rule.[[50]](#footnote-51)50 Ultimately, the District of Wyoming vacated all but two royalty provisions of the Venting and Flaring Rule. The court held that BLM exceeded its authority because the Mineral Leasing Act "does not allow and was not intended to authorize [BLM to enact] rules justified primarily upon the ancillary benefit of a reduction in air pollution, particularly when considered in light of historical context and the comprehensive regulatory structure under the [CAA]."[[51]](#footnote-52)51

**[3] Biden Administration Poised to Build on Obama Policy on Methane**

In his first month in office, Biden signaled that he was likely to closely track and build on the Obama administration's ambitious agenda to regulate methane emissions from ***oil*** and gas sources. In his first week in office, he issued an executive order entitled "Tackling the Climate Crisis at Home and Abroad" that imposed an indefinite "pause" on all new ***oil*** and gas leasing on federal lands.[[52]](#footnote-53)52 This followed an earlier secretarial order by the Department of the Interior (issued during Biden's first week in office) that temporarily suspended all ***oil*** and gas development on federal lands (including processing of applications for permits to drill on *existing* leases) pending a review by the Secretary of the Interior.[[53]](#footnote-54)53 While both actions were immediately challenged by industry,[[54]](#footnote-55)54 it is indisputable that the Biden administration has GHG emissions from the ***oil*** and gas industry in its crosshairs. And on May 14, 2021, EPA announced its intent to release additional rules regulating new and existing sources in the ***oil*** and gas sector, likely in September 2021.[[55]](#footnote-56)55

**§ 26.03 State Regulation of Methane from *Oil* and Gas Sources**

Key driving forces behind state regulation of methane from ***oil*** and gas sources have been the uncertainty over the status of federal initiatives, the vacillating policies of different presidential administrations, the political drive by citizens and politicians to take immediate action related to climate change, and the focus on impacts from ***oil*** and gas development. The changing nature of these federal regulations, compounded by certain of the other considerations above, prompted action by several states to avoid the consequences of such reconsiderations and to be identified as leaders in efforts related to climate change and ***oil*** and gas regulation. Thus, states have been adopting regulations similar to or more stringent than those put in place at the federal level by the Obama administration (e.g., NSPS OOOOa and the BLM Venting and Flaring Rule), and in many cases have been applying similar requirements to existing (and not just new and modified) sources.

In addition, state legislatures in various states have been working diligently to develop GHG reduction goals and individual climate policy initiatives. While these goals are not necessarily specific to the ***oil*** and gas industry, in many ***oil*** and gas producing states, the ***oil*** and gas production facilities remain the highest profile and most numerous sources of GHG emissions. Thus, ***oil*** and gas sources are often the first sources subject to a state's efforts at reducing GHG emissions. And there are very few aspects of ***oil*** and gas production that are preempted from regulation by the individual states. Thus, states have utilized their authorities to protect the environment and air quality and minimize waste of ***oil*** and natural gas resources to impose controls, emissions reductions, monitoring, recordkeeping, and reporting of numerous sources and activities within the ***oil*** and gas sector. States are not alone in their position-many states are being influenced by and significantly guided by environmental organizations (whether national or grassroots) and their policy objectives.

While each state has its own initiatives, the sources that are being regulated and the monitoring requirements are substantially similar. As described in more detail for each state below, the primary emission sources at upstream ***oil*** and gas facilities that are subject to regulation include storage tanks, pneumatic controllers, storage tank truck loadout, well liquids unloading, and high pressure flaring, to name a few. And in many states, emission reductions from ***oil*** and gas sources serve a dual purpose-both reduction of ozone precursors (VOCs) and GHGs, including methane emissions.

The following summarizes recent initiatives targeting methane emissions in key ***oil*** and gas producing states. Numerous other ***oil*** and gas producing states have existing regulations of VOCs that will reduce methane emissions. However, this chapter focuses on the key states that have been the most active in adopting methane regulations or more comprehensive VOC regulations (with methane co-benefits).

**[1] California**

California has long been at the forefront of GHG regulation. In particular, California adopted a GHG cap-and-trade program that became effective in 2012 and applies to certain GHG emissions, including the ***oil*** and gas industry. But California only recently adopted regulations specifically targeting methane emissions from ***oil*** and gas operations. Specifically, effective March 2017, the California Air Resources Board (CARB) adopted a set of measures targeting methane emissions from ***oil*** and gas sources phased in from January 2018 to January 2020.[[56]](#footnote-57)56 Even more recently, California's legislature adopted Assembly Bill 1057 (AB 1057) to reorganize the California Department of Conservation's Geologic Energy Management Division (CalGEM) to better align with a focus on public health and the environment, and with a particular mandate to reduce GHG emissions from ***oil*** and gas development.[[57]](#footnote-58)57 The following summarizes California's recent directives aimed at reducing methane emissions from the ***oil*** and gas sector.

**[a] *Oil* and Gas Methane Regulation**

CARB's ***Oil*** and Gas Methane Regulation applies to most sectors in the ***oil*** and gas production supply chain, including onshore and offshore crude ***oil*** or natural gas production; crude ***oil***, condensate, and produced water separation and storage; natural gas underground storage; natural gas gathering and boosting stations; natural gas processing plants; and natural gas transmission compressor stations.[[58]](#footnote-59)58

The initial phase of CARB's ***Oil*** and Gas Methane Regulation started on January 1, 2018, with flash gas emission testing requirements, enhanced LDAR requirements, and new vapor recovery and control system requirements. Many of these requirements tightened under the phase-in as of January 1, 2020. The following summarizes key (but not all) requirements in the CARB rules.

**[i] Separator and Tank Systems**

By or beginning (for new sources) January 1, 2018, owners or operators of existing and new separator and tank systems not already controlled for emissions with the use of a vapor collection system were/are required to conduct flash analysis testing of the crude ***oil***, condensate, or produced water processed, stored, or held in the system.[[59]](#footnote-60)59 The testing must be reported to CARB as annual methane emissions. Affected facilities with methane emissions greater than 10 tons per year (tpy) were required to adopt vapor recovery and control systems.[[60]](#footnote-61)60

**[ii] Well Stimulation Circulation Tanks**

As of January 1, 2018, owners or operators of circulation tanks that conduct well stimulation treatments must implement a best practices management plan that is designed to limit methane emissions, and submit plans (upon request) to CARB.[[61]](#footnote-62)61 At a minimum, the plans must address (1) inspection practices to minimize emissions from circulation tanks, (2) practices to minimize venting of emissions from circulation tanks, (3) practices to minimize the duration of liquid circulation, and (4) alternative practices to control vented and fugitive emissions.[[62]](#footnote-63)62 Further, each operator or a group of operators must conduct a "technology assessment" evaluating the "technical feasibility" of vapor recovery and control systems along with the costs and safety aspects related to the installation of the equipment.[[63]](#footnote-64)63 "By January 1, 2020, an owner or operator that conducts well stimulation treatments shall control emissions from circulation tanks with at least 95 percent vapor collection and control efficiency, unless the [CARB] Executive Officer makes a determination that controlling emissions is not possible for reasons identified in the technology assessment" or the CARB Executive Director is delayed in making the determination.[[64]](#footnote-65)64

**[iii] Pneumatic Controllers and Pumps**

Beginning January 1, 2019, natural gas powered pneumatic pumps and continuous bleed pneumatic controllers shall not vent natural gas to the atmosphere and must meet certain LDAR requirements.[[65]](#footnote-66)65 For continuous bleed pneumatic controllers installed prior to January 1, 2016, operators can instead meet certain requirements related to venting amounts and measurement of such amounts.[[66]](#footnote-67)66

**[iv] Leak Detection and Repair**

Since January 1, 2018, with tightened requirements as of January 1, 2020, the LDAR requirements require daily audio/visual inspections and provide that "[a]t least once each calendar quarter, all components shall be tested for leaks of [methane] . . . in accordance with US EPA Reference Method 21 (October 1, 2017) . . . ."[[67]](#footnote-68)67 "Leaks with measured total hydrocarbon concentrations greater than or equal to 1,000 [parts per million volume (ppmv)] but not greater than 9,999 ppmv shall be successfully repaired or removed from service within 14 calendar days of initial leak detection."[[68]](#footnote-69)68 "Leaks with measured total hydrocarbon concentrations greater than or equal to 10,000 ppmv but not greater than 49,999 ppmv shall be successfully repaired or removed from service within five (5) calendar days of initial leak detection."[[69]](#footnote-70)69 "Leaks with measured total hydrocarbon concentrations greater than or equal to 50,000 ppmv shall be successfully repaired or removed from service within two (2) calendar days of initial leak detection."[[70]](#footnote-71)70 Operators meeting certain conditions, e.g., who can provide proof that a part has been ordered, can seek a delay to the repair or removal from service time requirements by request to the CARB Executive Officer.[[71]](#footnote-72)71

In addition, on or after January 1, 2020, no facility can exceed the following number of allowable leaks during a CARB Executive Officer inspection: 5 components with leaks between 1,000 ppmv and 9,999 ppmv at a facility with 200 or fewer components (or 2% if more than 200 components); 2 components with leaks between 10,000 ppmv and 49,999 ppmv at a facility with 200 or fewer components (or 1% if more than 200 components); and 0 components with leaks greater than or equal to 50,000 ppmv.[[72]](#footnote-73)72

**[v] Liquid Unloading of Natural Gas Wells**

Beginning January 1, 2018, owners and operators of wells located at facilities in the ***oil*** and gas sector are subject to specific requirements if the gas wells vent for the purpose of liquids unloading.[[73]](#footnote-74)73 Owners and operators of these subject wells must either (1) collect the vented natural gas with a vapor collection system, (2) measure the volume of natural gas vented by direct measurement, or (3) calculate the volume of natural gas vented.[[74]](#footnote-75)74 The volume of natural gas vented must also be recorded, and the owner or operator must specify the calculation method used to determine volume.[[75]](#footnote-76)75 These and other records not covered here are subject to review by CARB and must be maintained.[[76]](#footnote-77)76

**[b] Environmental Protection by *Oil* and Gas Regulatory Agency**

AB 1057 became law on October 12, 2019. AB 1057 purports to make environmental regulation, including regulation of GHGs, a paramount consideration in California ***oil*** and gas regulation by CalGEM. As the preamble to the bill notes,

[t]his bill would specify that the purposes of provisions relating to ***oil*** and gas conservation include protecting public health and safety and environmental quality, including reduction and mitigation of [GHG] emissions associated with the development of hydrocarbon and geothermal resources in a manner that meets the energy needs of the state.[[77]](#footnote-78)77

Pursuant to AB 1507, Governor Gavin Newsom adopted measures to (1) enact a moratorium on new ***oil*** extraction wells that use high-pressure cyclic steaming process in ***Kern*** County, (2) require CalGEM to adopt regulations related to local impacts from ***oil*** and gas operations, and (3) independently evaluate pending applications for hydraulic fracturing and well stimulation.[[78]](#footnote-79)78 There have been no announcements ending the moratorium since its announcement. CalGEM is currently undertaking a process to develop a public health rulemaking; however, the details of the proposed rulemaking have not been released.[[79]](#footnote-80)79 On April 23, 2021, Governor Newsom directed CalGEM to initiate regulatory action to end the issuance of permits for hydraulic fracturing by January 2024.[[80]](#footnote-81)80 While the focus of the measures appears to be driven by impacts other than air quality, GHG emissions may be evaluated as part of any new suite of regulations.

**[2] Colorado**

Colorado continues to be one of the leading states in tackling methane emissions from the ***oil*** and natural gas industry. In 2014, Colorado became the first state to adopt methane regulations and requirements more protective than what EPA proposed with NSPS OOOO.[[81]](#footnote-82)81 Regulation No. 7 included implementing emission controls for storage tanks, storage tank emissions management (STEM), LDAR requirements statewide, and pneumatic controllers, among other sources.[[82]](#footnote-83)82 Colorado has since continued to strengthen and expand its methane regulations. More recently, Colorado has adopted continuous emissions monitoring during pre-production and early production (in addition to existing production LDAR requirements) and is moving toward implementation of a non-emitting pneumatic controller regulation for new, modified, and certain existing facilities. And the Colorado General Assembly has increasingly over the years imposed more obligations on the state ***oil*** and gas regulatory agency-the Colorado ***Oil*** and Gas Conservation Commission (COGCC)-to consider and account for public health and the environment, including air quality matters. Though not detailed herein, the COGCC also recently adopted, among others, provisions to limit or in many instances eliminate (1) flaring from high pressure sources, and (2) produced water ponds and pits.[[83]](#footnote-84)83

**[a] Storage Tanks**

For storage tanks (defined in Colorado as the entire battery) with uncontrolled actual VOC emissions >= 2 tpy, operators must route emissions to control equipment with at least 95% hydrocarbon control efficiency.[[84]](#footnote-85)84 If a combustion device is being used, the design destruction efficiency must be at least 98%.[[85]](#footnote-86)85 Such storage tanks must also develop a STEM plan that analyzes the engineering design of the storage tank and control equipment.[[86]](#footnote-87)86 Operators of storage tanks at well production facilities, natural gas compressor stations upstream of the natural gas processing plant, or natural gas processing plants constructed on or after May 1, 2020, or modified on or after May 1, 2020, must use a storage tank measurement system (i.e., auto-gauging) to determine the quantity of liquids in the storage tank.[[87]](#footnote-88)87 Storage tanks constructed or modified on or after January 1, 2021, must use a storage tank measurement system to determine the *quality and quantity* of liquids in the storage tank.[[88]](#footnote-89)88 Operators of well production facilities must conduct the LDAR and/or audio, visual, and olfactory (AVO) inspections based on estimated uncontrolled actual VOC emissions from the highest emitting storage tank at the well production facility.[[89]](#footnote-90)89

**[b] Compressor Stations**

Natural gas compressor stations upstream of the natural gas processing plant must conduct optical gas imaging (OGI) or EPA Method 21 (M21) inspections pursuant to the following schedule based on VOC emissions on a rolling 12-month total: (1) > 0 but >= 12 tpy: semi-annually, (2) > 12 and <= 50 tpy: quarterly, and (3) > 50 tpy: monthly.[[90]](#footnote-91)90 Compressor stations in the ozone non-attainment area must conduct quarterly OGI or M21 inspections.

Uncontrolled hydrocarbon emissions from wet seal fluid degassing systems on wet seal centrifugal compressors must be reduced by at least 95% unless the centrifugal compressor is subject to NSPS OOOO requirements.[[91]](#footnote-92)91 The rod packing on any reciprocating compressor located at a natural gas compressor station must be replaced every 26,000 hours of operation or every 36 months, unless the reciprocating compressor is subject to NSPS OOOOa requirements.[[92]](#footnote-93)92

**[c] Hydrocarbon Liquids Loadout Control**

Operators of well production facilities, natural gas compressor stations, and natural gas processing plants with a truck loadout of hydrocarbon liquids (which does not include produced water) throughput of greater than or equal to 5,000 barrels/year on a rolling 12-month basis must control truck loadout emissions by using (1) submerged fill and (2) a vapor collection and return system and/or air pollution control equipment.[[93]](#footnote-94)93 Other loadout control requirements include but are not limited to a no-venting standard, loadout observation, and operator training.[[94]](#footnote-95)94

**[d] Pneumatic Controllers**

Colorado is also taking the lead in adopting non-emitting pneumatic controller requirements. In February 2021, industry, environmental non-governmental organizations, government organizations, and the Colorado Air Pollution Control Division (Division) collaborated in drafting a joint pneumatic controller proposal, which was ultimately adopted by the Colorado Air Quality Control Commission. The rule requires that, beginning May 1, 2021, new well production facilities and natural gas compressor stations must only use non-emitting pneumatic controllers, with some specified exceptions.[[95]](#footnote-96)95 This requirement applies to (1) well production facilities where a new well is drilled or where a well is refractured or recompleted on or after May 1, 2021, and (2) existing natural gas compressor stations that increase compression horsepower on or after May 1, 2021.[[96]](#footnote-97)96 The pneumatic controller rule features a company-wide plan for existing and non-modified facilities, which allows owners and operators to determine which facilities to retrofit with non-emitting controllers.[[97]](#footnote-98)97 Owners and operators would be required to phase in retrofits by May 1, 2023, with a deadline for the first phase of May 1, 2022.[[98]](#footnote-99)98 Exemptions to the non-emitting pneumatic controller requirements apply for (1) temporary or portable equipment on-site for a certain duration, (2) safety or process purposes, or (3) certain wellheads used as emergency shutdown devices or artificial lifts that are located greater than one-quarter mile from associated production facilities (for new facilities) or not located on the same surface disturbance as the associated production facilities (for existing facilities).[[99]](#footnote-100)99

**[e] Pre-Production and Early Production Continuous Emissions Monitoring**

In September 2020, the Colorado Air Quality Control Commission adopted air quality monitoring requirements "at and/or around preproduction operations (i.e., drilling, fracturing, drill-out, flowback) and early production operations (i.e., six months)."[[100]](#footnote-101)100 For drilling operations that begin on or after May 1, 2021, owners or operators must monitor air quality for (1) "at least ten (10) days prior to beginning pre-production operations," (2) "during all pre-production operations," and (3) "for at least six months after the well is capable of consistently producing either separable gas or saleable liquid hydrocarbons (i.e., early production)."[[101]](#footnote-102)101

Monitoring is to be conducted pursuant to an air quality monitoring plan. The plan must be submitted to the Division for approval at least 60 days prior to beginning air quality monitoring. Operators must receive Division approval of the air quality monitoring plan prior to beginning air quality monitoring. The air quality monitoring requirements afford owners and operators the flexibility to choose which group of air pollutants representative of pre-production and early production hydrocarbon emissions to monitor, and by what monitoring technology.[[102]](#footnote-103)102 Owners and operators must choose from one or more of the following groups of air pollutants to "detect, evaluate, and reduce as necessary" as a part of the plan: (1) hazardous air pollutant emissions, (2) ozone precursor emissions, and/or (3) methane emissions.[[103]](#footnote-104)103 The air quality monitoring plan must describe how the monitoring equipment, pollutants monitored, and siting plan are expected to detect elevated emissions and achieve at least one of the chosen monitoring objectives.[[104]](#footnote-105)104 The plan must include the response level for each pollutant or indicator monitored and/or sampled, as well as the response procedures or actions to be taken if such elevated levels are observed.[[105]](#footnote-106)105

**[3] New Mexico**

In January 2019, New Mexico Governor Michelle Lujan Grisham signed Executive Order No. 2019-003, which acknowledges that reducing methane emissions in the state will have significant climate benefits and prevent the waste of energy resources.[[106]](#footnote-107)106 The executive order directs the New Mexico Environment Department (NMED) and the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) to "jointly develop a statewide, enforceable regulatory framework to secure reductions in ***oil*** and gas sector methane emissions and to prevent waste from new and existing sources and enact such rules as soon as practicable."[[107]](#footnote-108)107 The two state regulatory agencies adopted (in the case of EMNRD) or proposed complementary regulations; NMED's regulations seek to establish emission standards for VOCs and nitrogen oxides (NOx), while the EMNRD regulations are intended to prevent waste.

**[a] Venting and Flaring Rules**

In March 2021, the New Mexico ***Oil*** Conservation Division (OCD) (a division within the EMNRD) finalized its rules "[t]o regulate the venting and flaring of natural gas from wells and production equipment and facilities [and natural gas gathering systems] to prevent waste and protect correlative rights, public health, and the environment."[[108]](#footnote-109)108 The heart of the rule is the statewide natural gas capture requirements that require operators to reduce the annual volume of vented and flared natural gas (including in most cases, venting or flaring from low pressure sources) from wells and gathering systems by no less than 98% by December 31, 2026.[[109]](#footnote-110)109 To ensure compliance with the gas capture requirements, operators must submit a natural gas management plan with each application for permit to drill (APD) for a new or recompleted well, describing the actions the operator will take to meet its gas capture targets.[[110]](#footnote-111)110 If an operator does not meet its annual gas capture requirements, the operator must submit to OCD "a compliance plan demonstrating its ability to comply with its annual gas capture requirement for the current year."[[111]](#footnote-112)111 If OCD determines the compliance plan will not meet the gas capture requirements, "the operator's approved APDs for wells that have not been spud shall be suspended pending a division hearing to be held no later than 30 days after the determination."[[112]](#footnote-113)112

To help achieve such natural gas capture requirements, venting and flaring of natural gas is prohibited during production operations and from gathering systems, except for limited circumstances such as emergencies or maintenance.[[113]](#footnote-114)113 The rule also imposes performance standards for separation, storage tank, and flare equipment to minimize waste.[[114]](#footnote-115)114

AVO inspections must be conducted weekly (or less frequently for low-producing facilities or facilities with inactive wells).[[115]](#footnote-116)115 Venting or flaring events must be reported monthly, and each time venting or flaring exceeds 50 mcf and is caused by an emergency or malfunction or is of long duration.[[116]](#footnote-117)116 In many cases, operators must install equipment to measure the volume of gas vented or flared from equipment associated with wells or gathering systems.[[117]](#footnote-118)117

One of industry's primary concerns with the proposed rules was that the 98% natural gas capture rate required capturing gas from low-pressure sources. Industry argued throughout the rulemaking proceedings that OCD and the ***Oil*** Conservation Commission only have the authority to regulate surface waste, while the authority to regulate air pollution rests with NMED's Environmental Improvement Board. Many of the low-pressure sources the rules sought to regulate and include in the gas capture requirements (e.g., storage tanks, routine repair and maintenance, routine downhole maintenance) are necessary as part of prudent operations and cannot be technically or economically captured and marketed.

**[b] Ozone Precursor Rules**

In July 2020, NMED proposed the draft "***Oil*** and Natural Gas Regulation for Ozone Precursors" rule targeting VOC and NOx emissions from ***oil*** and natural gas production and processing sources.[[118]](#footnote-119)118 Following significant stakeholder input and revisions to clarify the state's statutory authority, NMED released a revised proposed rule on May 6, 2021 (Proposed Ozone Precursor Rule).[[119]](#footnote-120)119 Of note, the Proposed Ozone Precursor Rule eliminates previously proposed exemptions for stripper wells and facilities that were previously considered low potential to emit (PTE). The rulemaking hearing is currently scheduled for fall 2021 and, if approved by the Environmental Improvement Board, NMED anticipates the rule will go into effect in early 2022.

As now proposed, the Proposed Ozone Precursor Rule would apply to a broad range of the ***oil*** and gas sector and proposes to impose requirements related to, among others, storage tanks, pneumatic controllers, pneumatic pumps, produced water management ponds, hydrocarbon liquids transfer operations, engines, well liquids unloading, heaters, and pigging operations.

**[i] Storage Vessels**

Under the Proposed Ozone Precursor Rule, all new and existing storage vessels located at wellhead sites, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission and compressor stations would be required to have a combined capture and control rate of at least 95% for storage vessels with a PTE of >= 2 tpy and < 10 tpy, or at least 98% for storage vessels with a PTE of >= 10 tpy.[[120]](#footnote-121)120 If the uncontrolled actual annual VOC emissions of a storage vessel were to decrease to < 2 tpy, the combined capture and control rate requirements would cease to apply.[[121]](#footnote-122)121

**[ii] Compressor Stations**

Operators of centrifugal compressors would be required to control VOC emissions from the wet seal fluid degassing system by 95% for existing compressors or 98% for new compressors by capturing and routing emissions through a closed vent system to a control system, recovery system, fuel cell, or a process stream.[[122]](#footnote-123)122 For existing and new reciprocating compressors, the requirements proposed are almost identical to the EPA Control Technique Guidelines; the rod packing must be replaced every 26,000 hours of operation or 36 months, whichever is later.[[123]](#footnote-124)123 Alternatively, emissions from the rod packing of a reciprocal compressor could be collected through a closed vent system in the manner stated by the centrifugal compressor requirement.[[124]](#footnote-125)124 However, the emission control requirements for centrifugal and reciprocating compressors would not apply at wellheads.[[125]](#footnote-126)125

**[iii] Pneumatic Controllers**

New Mexico is moving toward ensuring pneumatic controllers are non-emitting where feasible. All new pneumatic controllers and existing pneumatic controllers with access to commercial electrical power located at wellhead site, tank batteries, gathering and boosting sites, natural gas processing plants, or transmission compressor stations would be required to be non-emitting.[[126]](#footnote-127)126 Unlike the July 2020 version, the May 2021 version of the proposed rule would require all new pneumatic controllers to have a zero emission rate, regardless of whether the new controllers have access to commercial electrical power.[[127]](#footnote-128)127

The Proposed Ozone Precursor Rule also adopts a phased-in retrofitting approach similar to Colorado's, but would require owners and operators to have a certain percentage of non-emitting pneumatic controllers across their operations.[[128]](#footnote-129)128 Owners and operators would be required to phase in retrofits by January 1, 2030, with interim deadlines of January 1, 2024, and January 1, 2027.[[129]](#footnote-130)129 As proposed, the total required percentage of non-emitting controllers would vary based on total historical percentage of non-emitting controllers and whether the pneumatic controllers are located at a wellhead, tank battery, and gathering and boosting facility or at a natural gas compressor station and gas processing plant.[[130]](#footnote-131)130 However, if the owner or operator meets at least 75% total non-emitting controllers by January 1, 2025, the owner or operator would no longer need to meet the 2024, 2027, or 2030 deadlines.[[131]](#footnote-132)131 Therefore, the proposed rule would prioritize achieving a 75% retrofit percentage by 2025 over a 90+% retrofit percentage by 2030.

The Proposed Ozone Precursor Rule would also allow owners and operators to seek a waiver from retrofit requirements if, after January 1, 2027, NMED determines the owner or operator's remaining pneumatic controllers are not cost-effective to retrofit.[[132]](#footnote-133)132 NMED's determination would be based on the owner or operator's submittal of a cost analysis for retrofitting remaining pneumatic controllers.[[133]](#footnote-134)133

**[iv] Pneumatic Pumps**

Pneumatic pumps located at a natural gas processing plant and pneumatic pumps located at wellhead site, tank battery, gathering and boosting site, or transmission compressor station with access to electrical power would be required to have a VOC emission rate of zero.[[134]](#footnote-135)134 For pneumatic pumps without access to electrical power, VOC emissions would be reduced by 95% "if it is technically feasible to route emissions to a control device, fuel cell, or process."[[135]](#footnote-136)135 If technically infeasible, pneumatic pump emissions would be required to be routed to a control device if there is one on site.[[136]](#footnote-137)136

**[v] Glycol Dehydrators**

Glycol dehydrators with a PTE of >= 2 tpy of VOC located at wellhead sites, tank batteries, gathering and boosting sites, natural gas processing plants, and transmission compressor stations would be required to have a minimum combined capture and control efficiency of 95% of VOC emissions from the still vent and flash tank.[[137]](#footnote-138)137 If a combustion device is used, it would be required to have a minimum 98% design combustion efficiency.[[138]](#footnote-139)138

**[vi] Monitoring Requirements**

In addition to the equipment emissions control standards, the Ozone Precursor Rule proposes certain monitoring requirements for well production facilities depending on the facility's potential to emit VOCs. Well production facilities with storage vessels with an uncontrolled PTE of >= 2 tpy of VOC would be required to monitor total liquid throughput and upstream separate pressure monthly, conduct weekly AVO inspections, and conduct monthly inspections to ensure vessels are not leaking emissions and vessel components are functioning properly.[[139]](#footnote-140)139 At wellhead sites and tank battery facilities, operators would be required to conduct EPA Method 21 or OGI inspections quarterly, semi-annually, or annually depending on the facility's PTE.[[140]](#footnote-141)140 EPA Method 21 or OGI inspections are also required at gathering and boosting sites, gas processing plants, and compressor stations quarterly for facilities with a PTE < 25 tpy of VOC or monthly for facilities with a PTE >= 25 tpy of VOC.[[141]](#footnote-142)141

An Equipment Monitoring Tag (EMT) would also be required on all centrifugal and reciprocating compressors, control devices, natural gas wells liquids unloading events, heaters, pneumatic controllers and pumps, and storage tanks subject to monitoring requirements.[[142]](#footnote-143)142 EMT data (e.g., date and time of monitoring event, name of monitoring personnel, description of maintenance or repair activities and results) would have to be able to generate a Compliance Database Report.[[143]](#footnote-144)143 Further, all equipment subject to the control requirements of the Proposed Ozone Precursor Rule would have to keep records of all inspections, maintenance, and emissions from malfunctions, startup, shutdown, and scheduled maintenance, and emissions in excess of the control requirements.[[144]](#footnote-145)144

**[4] Pennsylvania**

In 2016, Pennsylvania launched a framework for reducing methane emissions from ***oil*** and gas sources.[[145]](#footnote-146)145 In terms of substantive regulations on the ***oil*** and gas industry, this framework consists of (1) revisions to the general plan approval and/or general operating permit for natural gas compression stations, processing plants, and transmission stations (GP-5), which was originally issued in 2013 and modified in 2015; (2) a new general plan approval and/or general operating permit for unconventional natural gas well site operations and remote pigging stations (GP-5A); (3) a new guidance document to supplement the air quality permit exemptions document, which was previously amended in 2013; and (4) a proposed rulemaking for control of VOC emissions from ***oil*** and natural gas sources, which would revise 25 Pa. Code chs. 121 and 129. Measures (1) to (3) were finalized as of June 9, 2018. The VOC rule was proposed in December 2019, but as of April 2021 had not yet been finalized.[[146]](#footnote-147)146

**[a] Revisions to GP-5**

The new GP-5 (finalized in June 2018) revised the existing GP-5 applicable to midstream, gas processing, and gas transmission facilities.[[147]](#footnote-148)147 Generally, the GP-5 incorporates by reference certain federal NSPS requirements or imposes "best available technology" (BAT) requirements at new or modified facilities. For instance, storage vessels at these facilities constructed between 2011 and 2018 must meet requirements at 40 C.F.R. §§ 60.5365(e) and 60.5395(d) and (e).[[148]](#footnote-149)148 But for each storage vessel constructed and authorized to operate on or after August 8, 2018, with a methane emission rate of 200 tpy or greater, a VOC emission rate of 2.7 tpy or greater, a single HAP emission rate of 0.5 tpy or greater, or a total HAP emission rate of 1.0 tpy or greater, an owner or operator must equip the storage vessel with a cover and route all vapor through a closed vent system to a control device that reduces methane, VOC, and HAP emissions by 95% or more by meeting the applicable control, cover, and closed vent system requirements.[[149]](#footnote-150)149

The GP-5 LDAR requirements include, for facilities brought online between 2013 and 2018, monthly AVO inspections, quarterly inspections using infrared cameras, and 15 days to repair leaks.[[150]](#footnote-151)150 For facilities constructed and authorized by the general permit after August 8, 2018, the requirements include monthly AVO inspections, quarterly inspections using Method 21 LDAR, and 5 days to attempt a first repair and 15 days to complete the repair (unless certain limited exceptions apply).[[151]](#footnote-152)151

**[b] Adoption of New GP-5A for Unconventional Natural Gas Well Site Operations and Remote Pigging Stations**

The GP-5A requirements applicable to unconventional natural gas well site operations and remote pigging stations generally mirror the GP-5 requirements, with a few additional requirements unique to production facilities, such as provisions for use of best management practices for wellbore liquids unloading operations.[[152]](#footnote-153)152 Best management practices for liquids unloading operations include plunger lift systems, soaping, and swabbing, unless venting is necessary for safety to mitigate emissions during liquids unloading activities.[[153]](#footnote-154)153 In all cases, an operator must "direct the gas generated during liquids unloading to a control device, a gas production line or existing separator or storage vessel which is controlled," unless it is not technically feasible or it is unsafe.[[154]](#footnote-155)154

**[c] New Guidance Document for Exemption 38 Related to Permitting *Oil* and Gas Emissions**

Along with the revised GP-5 and GP-5A, on June 9, 2018, the Pennsylvania Department of Environmental Protection (PADEP) issued new guidance to clarify an existing Air Quality Permit Exemption 38 applicable to the ***oil*** and gas sector under 15 Pa. Code § 127.14(a)(8).[[155]](#footnote-156)155 This document went into effect August 8, 2018.[[156]](#footnote-157)156

The new guidance adds new conditions for when ***oil*** and gas sources may be exempt from air permitting regulations.

Under Exemption 38(b) and (c), conventional and unconventional ***oil*** and gas facilities meeting certain conditions (which conditions vary based upon construction date) are exempt. Under both Exemption 38(b) and (c), conditions include having methane emissions below certain thresholds and maintaining certain emission reduction requirements.[[157]](#footnote-158)157

**[d] New Rulemaking to Control Volatile Organic Compound Emissions from *Oil* and Natural Gas Sources**

The final piece of the Pennsylvania framework to reduce methane emissions from ***oil*** and gas sources is a proposed rulemaking targeting VOC emissions from ***oil*** and gas sources.[[158]](#footnote-159)158 As PADEP noted in the preamble to the proposed rule: "While this proposed rulemaking requires VOC emission reductions, methane emissions are also reduced as a co-benefit . . . ."[[159]](#footnote-160)159 PADEP estimates the proposed rulemaking will result in VOC emissions reductions of 4,404 tpy with a co-benefit of methane reductions of 75,603 tpy.

The purpose of the rulemaking is to establish reasonably available control technology (RACT) requirements for VOC emissions from existing ***oil*** and natural gas sources.[[160]](#footnote-161)160 Building off EPA's Control Technique Guidelines adopted in 2016 establishing presumptive RACT for ***oil*** and gas sources, Pennsylvania's proposed rule would establish new requirements for storage vessels, natural gas-driven pneumatic controllers, natural gas-driven diaphragm pumps, reciprocating and centrifugal compressors, and fugitive emissions components.

For a storage vessel at a conventional well site or at an unconventional well site installed prior to August 10, 2013, the proposed rulemaking proposes a PTE threshold of 6.0 tpy VOC.[[161]](#footnote-162)161 Meanwhile, the PTE threshold is 2.7 tpy for well sites installed after August 10, 2013. Owners or operators of an affected storage vessel must reduce VOC emissions by 95% by either routing emissions to a control device or installing a floating roof that meets the requirements of 40 C.F.R. pt. 60, subpt. KKB (relating to standards of performance for volatile organic liquid storage vessels (including petroleum liquid storage vessels)).[[162]](#footnote-163)162

For fugitive emissions, the proposed rulemaking establishes compliance requirements based on the gas to ***oil*** ratio (GOR) of the well.[[163]](#footnote-164)163 The owner or operator of a well site with a GOR less than 300 standard cubic feet (scf) of gas per barrel of ***oil*** produced must comply with certain record-keeping requirements. The owner or operator of a well site with a GOR greater than or equal to 300 scf of gas per barrel of ***oil*** must implement monthly AVO and quarterly instrument based LDAR.

For pneumatic controllers, a natural gas-driven continuous bleed pneumatic controller located between the wellhead and the natural gas processing plant is required to have a bleed rate of 6 scf per hour or less. This is consistent with NSPS OOOO and OOOOa but would apply to all existing facilities as well. A natural gas-driven pneumatic controller at a natural gas processing plant is required to have a bleed rate of zero. As with NSPS OOOO and OOOOa, operators may claim an exception for any natural gas-driven pneumatic controller that requires a greater bleed rate based on functional requirements.

Last, for compressors located between the wellhead and the natural gas transmission and storage segment (i.e., not including a compressor located at a well site), centrifugal compressors that use wet seals are required to reduce VOC emissions by 95% by routing the emissions through a cover and closed vent system to a control device or process.[[164]](#footnote-165)164 Reciprocating compressors are required to either replace the compressor rod end packing every 26,000 hours or every 36 months or route the packing emissions through a cover and closed vent system.

**[5] Adams County, Colorado**

Parts of Adams County, Colorado, make up core ***oil*** and gas development areas in the prolific Denver Julesburg Basin. Adams County is also a growing suburb of Denver. As a result, new residential and ***oil*** and gas development frequently abut one another. Partly in response to these tensions, the Colorado General Assembly adopted Senate Bill 19-181 (SB 19-181) in spring 2019.[[165]](#footnote-166)165 That legislation substantially altered the role localities may play in the regulation of ***oil*** and gas development in Colorado.

Bolstered by SB 19-181, in 2019 Adams County immediately adopted a comprehensive suite of new local development regulations governing the ***oil*** and gas industry. A significant portion of the new regulations are aimed at controlling air quality and GHG emissions from the industry.[[166]](#footnote-167)166 Some highlights of the new Adams County air quality regulations include (1) required implementation of a range of emission minimization measures on "air quality action days"; (2) robust LDAR requirements, with the potential for more frequent monitoring frequencies depending on a case-by-case assessment, and attempts to repair within 72 hours; (3) mandatory deployment of "closed-loop" green completions and systems for minimizing emissions; (4) requirements that flares achieve 98% destruction efficiency; and (5) case-by-case analysis of whether more stringent measures like "tankless" and "zero emission" facilities such as separators and pneumatic devices are required.[[167]](#footnote-168)167 The ordinance also specifies that Adams County reserves the right to require the "use of electric drill rigs," "Tier 4 or better diesel engines, diesel and natural gas co-fired Tier 2 or Tier 3 engines, natural gas fired spark ignition engines, or electric line power for hydraulic fracturing pumps."[[168]](#footnote-169)168 Of note, these requirements on non-road engines are specified under provisions related to "noise" and not the standards related to "air quality," and based on our knowledge, the legality of such provisions has not yet been fully addressed. Despite the fact that these regulations were only adopted in fall 2019, Adams County is once again undertaking revisions to its regulations; these revisions include requirements related to evaluating cumulative impacts from ***oil*** and gas development, including to air quality, and requirements to undertake speciated sampling in response to certain odor complaints.[[169]](#footnote-170)169

**§ 26.04 Conclusion and the Future of Methane Regulation**

Many individuals and political leaders cite climate change as one of the most pressing environmental issues of our time. As a result, there is substantial momentum and desire at the state, federal (depending on the presidential administration), and (increasingly) local level to take immediate and substantial steps to regulate and reduce GHG emissions. As a key source of methane emissions, ***oil*** and gas sources are and will for the near future remain a significant target of regulations aimed at these efforts.

Local and state GHG reduction initiatives may have started as a means to fill a gap or perceived lack of commitment to aggressively tackle GHG emissions from ***oil*** and gas sources at the federal level. Still, state and local regulation of methane emissions from ***oil*** and gas sources will likely only increase in the coming years. This is for several reasons. First and foremost, ***oil*** and gas development is historically regulated by state agencies. Thus, it is a natural extension of existing state ***oil*** and gas regulation to expand the state's purview to include requirements related to air quality and GHG emissions. Second, states (and even those in the industry) have been frustrated by vacillating policies and an uncertain regulatory environment at the federal level. Third, states are more likely to feel compelled to engage in stakeholder processes to hear the range of perspectives within the state. And, in many states, the most vocal perspective desires more stringent regulation of ***oil*** and gas and immediate reductions of GHG emissions. It is unclear how states will act in the face of significant action that is expected from the Biden administration. On the one hand, some states may wait to see how those regulations play out before expending significant resources. Yet others have begun a path forward on GHG emission reductions or ***oil*** and gas regulation (e.g., Colorado and New Mexico) and those efforts are likely to proceed either in parallel or prior to action by the Biden administration. Regardless of the motivations driving local and state regulation of methane from ***oil*** and gas sources, natural resources practitioners will be wise to continue tracking local and state developments as these regulations continue to evolve.

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1. 1Cite as Jennifer Biever, Carlos Romo & Corey Lim, "Backseat Driver No More! The Expanding Role of State and Local Government in Reducing Methane Emissions from ***Oil*** and Gas Sources," 67 *Rocky Mt. Min. L. Inst.* 26-1 (2021).Jennifer Biever is a director at Williams Weese Pepple & Ferguson and practices at the forefront of environmental, permitting, and other regulatory issues affecting energy and natural resource companies. She assists companies with respect to all aspects of state and federal regulatory regimes, including due diligence during transactions, rule and guidance development, permitting, implementation of compliance programs, self-evaluation of compliance, and enforcement.Carlos Romo is a director at Williams Weese Pepple & Ferguson and is nationally recognized in environmental and natural resources law. He helps clients in a variety of industries navigate complex regulatory requirements, and has particular expertise in state and federal permitting, environmental due diligence in M&A transactions, and state and federal litigation and class action matters.Corey Lim is an associate at Williams Weese Pepple & Ferguson, where she practices in the environmental and natural resources areas. She represents clients in all aspects of state and federal regulatory matters, including permitting, implementation of compliance programs, and enforcement. [↑](#footnote-ref-2)
2. 2549 U.S. 497, 528 (2007). [↑](#footnote-ref-3)
3. 3This chapter does not address the extent of limitations imposed on state and local regulation based upon preemption by the CAA. However, as a general matter, with respect to stationary sources (as opposed to mobile sources), the CAA contains broad savings clauses authorizing states to regulate more stringently than the federal government. Regulation of certain sources utilized within the ***oil*** and gas sector that are considered mobile (including non-road) sources is likely subject to preemption (in some form) under the CAA. [↑](#footnote-ref-4)
4. 4*See* Exec. Order No. 14,008, "Tackling the Climate Crisis at Home and Abroad," 86 Fed. Reg. 7619 (Jan. 27, 2021). [↑](#footnote-ref-5)
5. 5This chapter does not address all state regulation of ***oil*** and gas sources, but rather focuses on states that have enacted the most rigorous emission requirements or GHG requirements. [↑](#footnote-ref-6)
6. 677 Fed. Reg. 49,490 (Aug. 16, 2012) (to be codified at 40 C.F.R. pts. 60, 63). [↑](#footnote-ref-7)
7. 7*Id.* at 49,496. [↑](#footnote-ref-8)
8. 8*Id.* at 49,497. [↑](#footnote-ref-9)
9. 9*See* White House, "Climate Action Plan: Strategy to Reduce Methane Emissions," at 1 (Mar. 2014). [↑](#footnote-ref-10)
10. 10*Id.* at 2-3. [↑](#footnote-ref-11)
11. 1181 Fed. Reg. 35,824, 35,830 (June 3, 2016). [↑](#footnote-ref-12)
12. 12*See id.* at 35,826. [↑](#footnote-ref-13)
13. 13*Id.* [↑](#footnote-ref-14)
14. 14*Id.* at 35,825. [↑](#footnote-ref-15)
15. 15*Id.* at 35,845. [↑](#footnote-ref-16)
16. 16*Id.* at 35,841. [↑](#footnote-ref-17)
17. 17*See, e.g.*, Petitioners' Motion to Govern Further Proceedings at 8, North Dakota v. EPA, No. 16-1242 (D.C. Cir. Oct. 21, 2016). [↑](#footnote-ref-18)
18. 18*See* Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008 (Nov. 18, 2016) (to be codified at 43 C.F.R. pts. 3100, 3160, 3170) (Venting and Flaring Rule). [↑](#footnote-ref-19)
19. 19*See id.* at 83,010-13. [↑](#footnote-ref-20)
20. 2081 Fed. Reg. at 35,825. [↑](#footnote-ref-21)
21. 21*See* 81 Fed. Reg. at 83,037 ("[T]he BLM requirements on venting from pneumatic controllers, pneumatic pumps, and storage vessels all explicitly apply to *existing sources that are not subject* to EPA's subpart OOOOa . . . ." (emphasis added)). [↑](#footnote-ref-22)
22. 2282 Fed. Reg. 16,093 (Mar. 28, 2017). [↑](#footnote-ref-23)
23. 23*Id.* § 7(a). [↑](#footnote-ref-24)
24. 24*Id.* § 7(b). [↑](#footnote-ref-25)
25. 25*See* 82 Fed. Reg. 16,331 (Apr. 4, 2017). [↑](#footnote-ref-26)
26. 26Emission Standards for New, Reconstructed, and Modified Sources Review, 85 Fed. Reg. 57,018 (Sept. 14, 2020) (to be codified at 40 C.F.R. pt. 60). [↑](#footnote-ref-27)
27. 27*Id.* at 57,018. [↑](#footnote-ref-28)
28. 28*Id.* at 57,019. [↑](#footnote-ref-29)
29. 29*Id.* at 57,031. [↑](#footnote-ref-30)
30. 30Emission Standards for New, Reconstructed, and Modified Sources Reconsideration, 85 Fed. Reg. 57,398 (Sept. 15, 2020) (to be codified at 40 C.F.R. pt. 60). [↑](#footnote-ref-31)
31. 31*Id.* at 57,399-400. [↑](#footnote-ref-32)
32. 32*See* California v. Regan, No. 20-1357 (D.C. Cir. filed Sept. 14, 2020). [↑](#footnote-ref-33)
33. 3386 Fed. Reg. 7037 (Jan. 20, 2021). [↑](#footnote-ref-34)
34. 34*Id.* at 7037. [↑](#footnote-ref-35)
35. 35White House, "Fact Sheet: List of Agency Actions for Review" (Jan. 20, 2021). [↑](#footnote-ref-36)
36. 36*See* Motion to Hold Case in Abeyance, California v. Regan, No. 20-1357 (D.C. Cir. Feb. 1, 2021). [↑](#footnote-ref-37)
37. 37California v. Regan, No. 20-1357 (D.C. Cir. Feb. 12, 2021) (order granting motion to hold cases in abeyance). [↑](#footnote-ref-38)
38. 38*See* Pub. L. No. 117-23, 135 Stat. 295 (2021) (S.J. Res. 14). [↑](#footnote-ref-39)
39. 39*See* Wyoming v. U.S. Dep't of the Interior, Nos. 2:16-cv-00280, 2:16-cv-00285 (D. Wyo. filed 2017). [↑](#footnote-ref-40)
40. 40Some provisions of the rule, such as the gap capture requirements, were not set to take effect until January 17, 2018. *See* 81 Fed. Reg. 83,008, 83,038 (Nov. 18, 2016). [↑](#footnote-ref-41)
41. 41Wyoming v. U.S. Dep't of the Interior, Nos. 2:16-cv-00280, 2:16-cv-00285, 2017 WL 161428, at \*12 (D. Wyo. Jan. 16, 2017). [↑](#footnote-ref-42)
42. 42*See* 82 Fed. Reg. 27,430 (June 15, 2017) (Postponement Notice); 82 Fed. Reg. 58,050 (Dec. 8, 2017) (to be codified at 43 C.F.R. pts. 3160, 3170) (Suspension Rule). [↑](#footnote-ref-43)
43. 43*See* California v. BLM, 277 F. Supp. 3d 1106 (N.D. Cal. 2017); California v. BLM, 286 F. Supp. 3d 1054 (N.D. Cal. 2018). [↑](#footnote-ref-44)
44. 4483 Fed. Reg. 7924 (proposed Feb. 22, 2018) (to be codified at 43 C.F.R. pgs. 3160, 3170). [↑](#footnote-ref-45)
45. 45Wyoming v. U.S. Dep't of the Interior, 366 F. Supp. 3d 1284, 1292 (D. Wyo. 2018), *vacated*, 768 F. App'x 790 (10th Cir. 2019). [↑](#footnote-ref-46)
46. 4683 Fed. Reg. 49,184 (Sept. 28, 2018) (to be codified at 43 C.F.R. pts. 3160, 3170). [↑](#footnote-ref-47)
47. 47*Id.* at 49,188 ("[T]he BLM notes that the 2016 rule had many requirements that overlapped with the EPA's regulations issued under the [CAA], namely EPA's New Source Performance Standards (NSPS) at 40 CFR part 60, subparts OOOO (NSPS OOOO) and OOOOa (NSPS OOOOa)."). [↑](#footnote-ref-48)
48. 48California v. Bernhardt, 472 F. Supp. 3d 573 (N.D. Cal. July 15, 2020), *appeal docketed*, No. 20-16793 (9th Cir. Sept. 16, 2020). [↑](#footnote-ref-49)
49. 49*Id.* at 632. [↑](#footnote-ref-50)
50. 50*See* Order Granting Motion to Lift Stay, Wyoming v. U.S. Dep't of the Interior, Nos. 2:16-cv-00280, 2:16-cv-00285 (D. Wyo. July 21, 2020). [↑](#footnote-ref-51)
51. 51Order on Petitions for Review of Final Agency Action at 56, Wyoming v. U.S. Dep't of the Interior, Nos. 2:16-cv-00280, 2:16-cv-00285 (D. Wyo. Oct. 8, 2020). [↑](#footnote-ref-52)
52. 52*See* Exec. Order No. 14,008, § 208, 86 Fed. Reg. 7619 (Jan. 27, 2021). [↑](#footnote-ref-53)
53. 53*See* Secretarial Order No. 3395, "Temporary Suspension of Delegated Authority" (Jan. 20, 2021). [↑](#footnote-ref-54)
54. 54*See* Cont'l Res., Inc. v. de la Vega, No. 1:21-cv-00034 (D.N.D. dismissed Mar. 10, 2021); W. Energy All. v. Biden, No. 0:21-cv-00013 (D. Wyo. filed Jan. 27, 2021). [↑](#footnote-ref-55)
55. 55*See* News Release, EPA, "EPA Announces Public Listening Sessions and Trainings on Upcoming ***Oil*** and Natural Gas Methane Rule" (May 15, 2021). [↑](#footnote-ref-56)
56. 56*See* CARB, "***Oil*** and Gas Methane Regulation," https://ww2.arb.ca.gov/resources/fact-sheets/***oil***-and-gas-methane-regulation. [↑](#footnote-ref-57)
57. 57A. 1057, 2019 Cal. Legis. Serv. ch. 771. [↑](#footnote-ref-58)
58. 5817 Cal. Code Regs. § 95666(a). [↑](#footnote-ref-59)
59. 59*Id.* § 95668(a)(5). [↑](#footnote-ref-60)
60. 60*Id.* § 95668(a)(6) (referencing *id.* § 95671), (7) (same). Several types of low-production facilities are exempt from the flash gas analysis and standards. *See id.* § 95668(a)(2). [↑](#footnote-ref-61)
61. 61*Id.* § 95668(b)(1). [↑](#footnote-ref-62)
62. 62*Id.* [↑](#footnote-ref-63)
63. 63*Id.* § 95668(b)(2). [↑](#footnote-ref-64)
64. 64*Id.* § 95668(b)(4). [↑](#footnote-ref-65)
65. 65*Id.* § 95668(e)(2). [↑](#footnote-ref-66)
66. 66*Id.* [↑](#footnote-ref-67)
67. 67*Id.* § 95669(g). [↑](#footnote-ref-68)
68. 68*Id.* § 95669(i)(1). [↑](#footnote-ref-69)
69. 69*Id.* § 95669(i)(2). [↑](#footnote-ref-70)
70. 70*Id.* § 95669(i)(3). [↑](#footnote-ref-71)
71. 71*Id.* § 95669(i)(5). [↑](#footnote-ref-72)
72. 72*Id.* § 95669(o)(2), tbl.3. [↑](#footnote-ref-73)
73. 73*Id.* § 95668(f). [↑](#footnote-ref-74)
74. 74*Id.* [↑](#footnote-ref-75)
75. 75*Id.* [↑](#footnote-ref-76)
76. 76*Id.* [↑](#footnote-ref-77)
77. 77AB 1057, at Preamble. [↑](#footnote-ref-78)
78. 78*See* News Release #2019-05, Cal. Dep't of Conservation, "California Announces New ***Oil*** and Gas Initiatives" (Nov. 19, 2019). [↑](#footnote-ref-79)
79. 79CalGEM, "Draft Regulations Update: Protecting Communities from Health Impacts of ***Oil*** Production" (Dec. 31, 2020). [↑](#footnote-ref-80)
80. 80Press Release, Office of Gov'r Gavin Newsom, "Governor Newsom Takes Action to Phase Out ***Oil*** Extraction in California" (Apr. 23, 2021). [↑](#footnote-ref-81)
81. 81Regulation No. 7, Part F § N (codified at 5 Colo. Code Regs. § 1001-9 Part F). [↑](#footnote-ref-82)
82. 82*Id.* [↑](#footnote-ref-83)
83. 83COGCC Rule 903. [↑](#footnote-ref-84)
84. 84Regulation No. 7, Part D § I.D.3.a.(ii). [↑](#footnote-ref-85)
85. 85*Id.* [↑](#footnote-ref-86)
86. 86*Id.* § II.C.2.b. [↑](#footnote-ref-87)
87. 87*Id.* § II.C.4.a. [↑](#footnote-ref-88)
88. 88*Id.* [↑](#footnote-ref-89)
89. 89*Id.* § II.E.4.e. [↑](#footnote-ref-90)
90. 90*See id.* at Table 2. [↑](#footnote-ref-91)
91. 91*Id.* § II.B.3.b. [↑](#footnote-ref-92)
92. 92*Id.* § II.B.3.c. [↑](#footnote-ref-93)
93. 93*Id.* § II.C.5.a. [↑](#footnote-ref-94)
94. 94*Id.* [↑](#footnote-ref-95)
95. 95*Id.* § III.C.4.a. [↑](#footnote-ref-96)
96. 96*Id.* [↑](#footnote-ref-97)
97. 97*Id.* § III.C.4.c. [↑](#footnote-ref-98)
98. 98*Id.* [↑](#footnote-ref-99)
99. 99*Id.* § III.C.4.e.(i). [↑](#footnote-ref-100)
100. 100Regulation No. 7, Part F § T. [↑](#footnote-ref-101)
101. 101Regulation No. 7, Part D § VI.C.1.a. [↑](#footnote-ref-102)
102. 102Regulation No. 7, Part F § T. [↑](#footnote-ref-103)
103. 103Regulation No. 7, Part D § VI.C.1.b.(v). [↑](#footnote-ref-104)
104. 104*Id.* § VI.C.1.b.(xi). [↑](#footnote-ref-105)
105. 105*Id.* [↑](#footnote-ref-106)
106. 106N.M. Exec. Order No. 2019-003, § II (Jan. 29, 2019). [↑](#footnote-ref-107)
107. 107*Id.* § III.6. [↑](#footnote-ref-108)
108. 108N.M. Code R. §§ 19.15.27.6, .28.6. [↑](#footnote-ref-109)
109. 109*Id.* §§ 19.15.27.9, .28.10; *see* Notice, OCD, "Waste Rule Upcoming Deadlines and Deliverables" (Apr. 29, 2021) (list of the new deadlines and applicable reporting requirements). [↑](#footnote-ref-110)
110. 110N.M. Code R. § 19.15.27.9(D). [↑](#footnote-ref-111)
111. 111*Id.* § 19.15.27.9(A). [↑](#footnote-ref-112)
112. 112*Id.* [↑](#footnote-ref-113)
113. 113*Id.* §§ 19.15.27.8, .28.8. [↑](#footnote-ref-114)
114. 114*See id.* § 19.15.27.8(E). [↑](#footnote-ref-115)
115. 115*Id.* [↑](#footnote-ref-116)
116. 116*Id.* § 19.15.27.8(G); *see also* Notice, OCD, "Release of Final C-129 and Natural Gas Management Plan Forms" (May 21, 2021). [↑](#footnote-ref-117)
117. 117N.M. Code R. §§ 19.15.27.8(F), .28.8(E). [↑](#footnote-ref-118)
118. 118The July 2020 proposed rule is available at https://www.env.nm.gov/new-mexico-methane-strategy/wp-content/uploads/sites/15/2020/07/Draft-Ozone-Precursor-Rule-for-***Oil***-and-Natural-Gas-Sector-Version-Date-7.20.20.pdf. [↑](#footnote-ref-119)
119. 119The May 2021 revised proposed rule is available at https://www.env.nm.gov/air-quality/wp-content/uploads/sites/2/2018/08/Proposed-Part-20.2.50-May-6-2021-Version.pdf. [↑](#footnote-ref-120)
120. 120N.M. Code R. § 20.2.50.123(B)(1)-(4) (proposed, May 2021 version). [↑](#footnote-ref-121)
121. 121*Id.* § 20.2.50.123(B)(5) (proposed, May 2021 version). [↑](#footnote-ref-122)
122. 122*Id.* § 20.2.50.114(B)(1), (3) (proposed, May 2021 version). [↑](#footnote-ref-123)
123. 123*Id.* § 20.2.50.114(B)(2), (4) (proposed, May 2021 version). [↑](#footnote-ref-124)
124. 124*Id.* [↑](#footnote-ref-125)
125. 125*Id.* § 20.2.50.114(A) (proposed, May 2021 version). [↑](#footnote-ref-126)
126. 126*Id.* § 20.2.50.122(B)(4) (proposed, May 2021 version). [↑](#footnote-ref-127)
127. 127*Id.* § 20.2.50.22(B)(3)(b) (proposed, July 2020 version). [↑](#footnote-ref-128)
128. 128*Id.* § 20.2.50.122(B)(4)(c) (proposed, May 2021 version). [↑](#footnote-ref-129)
129. 129*Id.* [↑](#footnote-ref-130)
130. 130*Id.* [↑](#footnote-ref-131)
131. 131*Id.* [↑](#footnote-ref-132)
132. 132*Id.* [↑](#footnote-ref-133)
133. 133*Id.* [↑](#footnote-ref-134)
134. 134*Id.* § 20.2.50.122(B)(5) (proposed, May 2021 version). [↑](#footnote-ref-135)
135. 135*Id.* [↑](#footnote-ref-136)
136. 136*Id.* [↑](#footnote-ref-137)
137. 137*Id.* § 20.2.50.118(B) (proposed, May 2021 version). [↑](#footnote-ref-138)
138. 138*Id.* [↑](#footnote-ref-139)
139. 139*Id.* § 20.2.50.123(C) (proposed, May 2021 version). [↑](#footnote-ref-140)
140. 140*Id.* § 20.2.50.116(C)(3) (proposed, May 2021 version). The frequencies of inspections are: (1) PTE < 2 tpy VOC: annually; (2) PTE >= 2 tpy and < 5 tpy VOC: semi-annually; (3) PTE >= 5 tpy VOC: quarterly. [↑](#footnote-ref-141)
141. 141*Id.* [↑](#footnote-ref-142)
142. 142*Id.* § 20.2.50.112(A) (proposed, May 2021 version). [↑](#footnote-ref-143)
143. 143*Id.* [↑](#footnote-ref-144)
144. 144*Id.* § 20.2.50.112(C) (proposed, May 2021 version). [↑](#footnote-ref-145)
145. 145Pa. Dep't of Envtl. Prot. (PADEP), "A Pennsylvania Framework of Actions for Methane Reductions from the ***Oil*** and Gas Sector" (Jan. 19, 2016). [↑](#footnote-ref-146)
146. 146*See* 50 Pa. Bull. 2633 (May 23, 2020) (proposed rule). [↑](#footnote-ref-147)
147. 147*See* PADEP, "General Permits," https://www.dep.pa.gov/Business/Air/BAQ/Permits/Pages/GeneralPermits.aspx. [↑](#footnote-ref-148)
148. 148GP-5, § E. Similarly, GP-5 incorporates NSPS OOOO and OOOOa for pneumatic controllers. [↑](#footnote-ref-149)
149. 149*Id.* [↑](#footnote-ref-150)
150. 150*Id.* § G.1.(a). [↑](#footnote-ref-151)
151. 151*Id.* § G.1.(b). [↑](#footnote-ref-152)
152. 152GP-5A, § L. [↑](#footnote-ref-153)
153. 153*Id.* § L(1). [↑](#footnote-ref-154)
154. 154*Id.* [↑](#footnote-ref-155)
155. 155*See* 25 Pa. Code § 127.14(a) ("Plan approval is not required for the construction, modification, reactivation or installation of . . . (8) Other sources and classes of sources determined to be of minor significance by the Department."). [↑](#footnote-ref-156)
156. 156*See* 48 Pa. Bull. 3490 (June 9, 2018). [↑](#footnote-ref-157)
157. 157*Id.* [↑](#footnote-ref-158)
158. 158*See* 50 Pa. Bull. 2633 (proposed May 22, 2020). [↑](#footnote-ref-159)
159. 159*Id.* at 2636. [↑](#footnote-ref-160)
160. 160RACT is generally required only in ozone nonattainment areas. However, the proposed rule would apply statewide because Pennsylvania is in the Ozone Transport Region. [↑](#footnote-ref-161)
161. 161*See* Proposed 25 Pa. Code § 129.123. [↑](#footnote-ref-162)
162. 162*Id.* [↑](#footnote-ref-163)
163. 163*Id.* § 129.127. [↑](#footnote-ref-164)
164. 164*Id.* § 129.126. [↑](#footnote-ref-165)
165. 1652019 Colo. Legis. Serv. ch. 120. [↑](#footnote-ref-166)
166. 166*See* Adams County Development Standards and Regulations § 4-11-02-03-03-03. [↑](#footnote-ref-167)
167. 167*Id.* § 4-11-02-03-03-03(15). [↑](#footnote-ref-168)
168. 168*Id.* § 4-11-02-03-03-03(14). [↑](#footnote-ref-169)
169. 169*See* Adams Cty., "***Oil*** & Gas Information," https://www.adcogov.org/***oil***-and-gas-information. [↑](#footnote-ref-170)