

Vinson & Elkins

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OIL AND GAS BEWARE,
REGULATIONS ARE IN THE AIR: EPA
TAKES THE NEXT STEP IN
EXPANDING AIR REGULATIONS BY
ISSUING FINAL CONTROL
TECHNIQUES GUIDELINES (CTG)
FOR VOLATILE ORGANIC
COMPOUND (VOC) EMISSIONS

ENVIRONMENTAL LAW UPDATE

EPA recently issued Final Control Techniques Guidelines for the oil and gas industry. As a result, oil and gas facilities in certain parts of the country may face additional requirements similar to the “Subpart OOOOa” or “Quad Oa,” regulations that the U.S. Environmental Protection Agency (“EPA”) placed on the industry in May 2016. If implemented by the states, these new guidelines would require well sites, compressor stations, and other facilities built before September 2015 that are not currently subject to Quad Oa to meet many of the same onerous requirements that Quad Oa currently imposes on new, modified, or reconstructed facilities.

Background

EPA has taken a number of recent steps to limit volatile organic compound (“VOC”) and methane emissions from the oil and gas industry. EPA regulates VOCs as precursors to ground-level ozone, and methane as a greenhouse gas that may contribute to global warming. Because both VOCs and methane are emitted in natural gas production and processing, steps taken to limit the emissions of one will also reduce emissions of the other.

On October 20, 2016, EPA issued final Control Techniques Guidelines (“CTG”) to push states toward adopting standards for VOC emissions from existing oil and natural gas equipment and processes in ozone nonattainment areas. While the CTG will not have an immediate effect, they may eventually cause states to include standards in their State Implementation Plans (“SIPs”) that are similar to EPA’s new standards for methane and VOC emissions, issued in May 2016 and codified as “Subpart OOOOa” or “Quad Oa,” for new and modified oil and gas sources. More information about Quad Oa is available [here](#). The CTG comes on the heels of EPA’s 2016 Information Collection Request (“ICR”) to support development of new rules to govern methane emissions at existing oil and gas sources, as noted below.

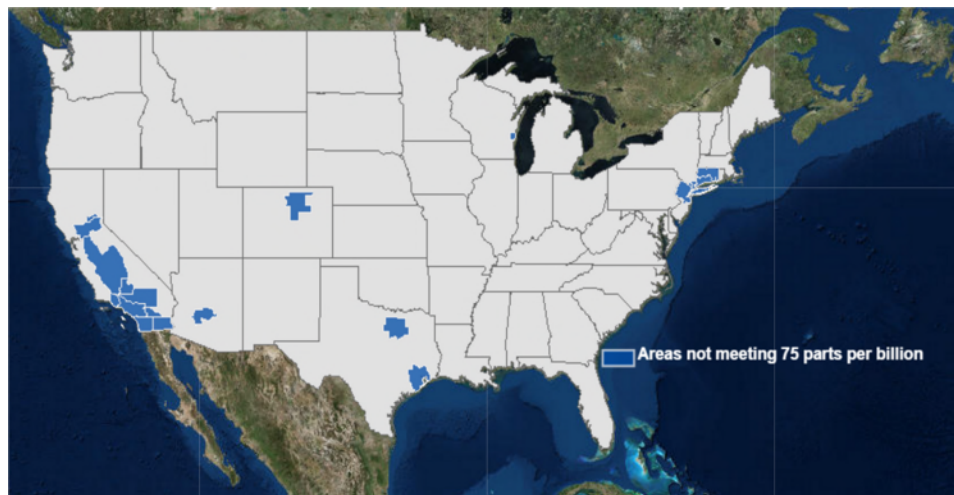
Section 182 of the Clean Air Act (“CAA” or the “Act”) requires states to revise their SIPs to include reasonably available control technology (“RACT”) requirements for existing sources of VOC emissions in areas of the country that have ground level ozone concentrations exceeding EPA’s national ambient air quality standard. These regions are called “non-attainment” areas. RACT is defined as “the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.” A SIP is a state-adopted plan that demonstrates how a non-attainment area will achieve the national ambient air quality standards, such as the EPA’s standards for ozone.

The CTG does not directly place any requirements on facilities. Instead, the guidelines serve as recommendations for state regulators to consider in setting RACT requirements for reducing VOC emissions in revised SIPs. States may use non-CTG technology and approaches, subject to EPA approval. While the CTG is not a regulation, and states do not have to comply with them, the states frequently take the CTG into account when setting requirements for non-attainment areas.

Effect on CTG of 2015 Revision of Ozone Standard

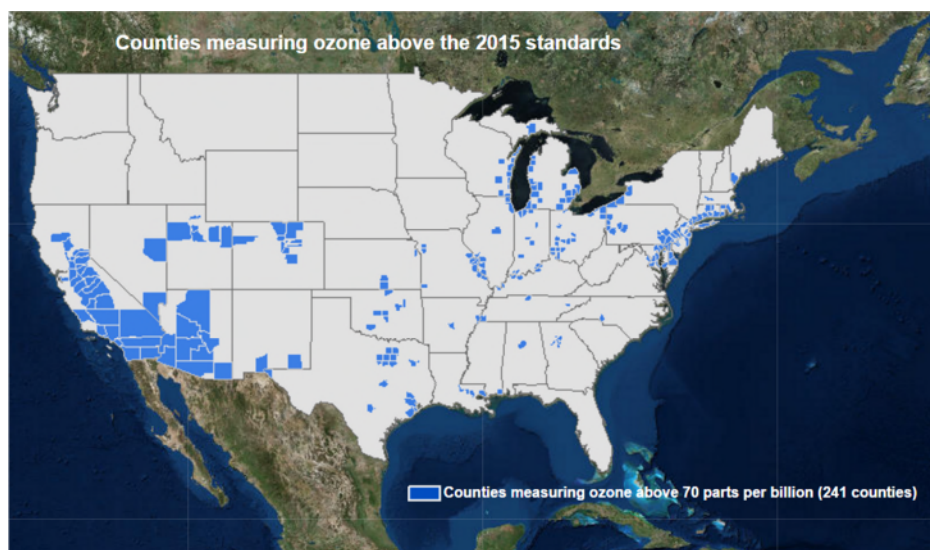
Because the CTG applies only to nonattainment areas, the reach of EPA’s 2016 CTG will be determined by EPA’s designation of attainment and nonattainment areas, based on the standards it set for ozone in 2015. In October 2015, EPA lowered the ozone standard from its 2008 level of 75 parts per billion (“ppb”) to 70 ppb. While EPA has not yet determined which areas of the country are out of attainment with the new standard, a number of projections from both EPA and the industry indicate that additional regions – including many of those used for oil and gas production – will be affected by the new standards.

The following map shows areas that EPA has designated as nonattainment as of 2012, based on the 2008 ozone level of 75 ppb:



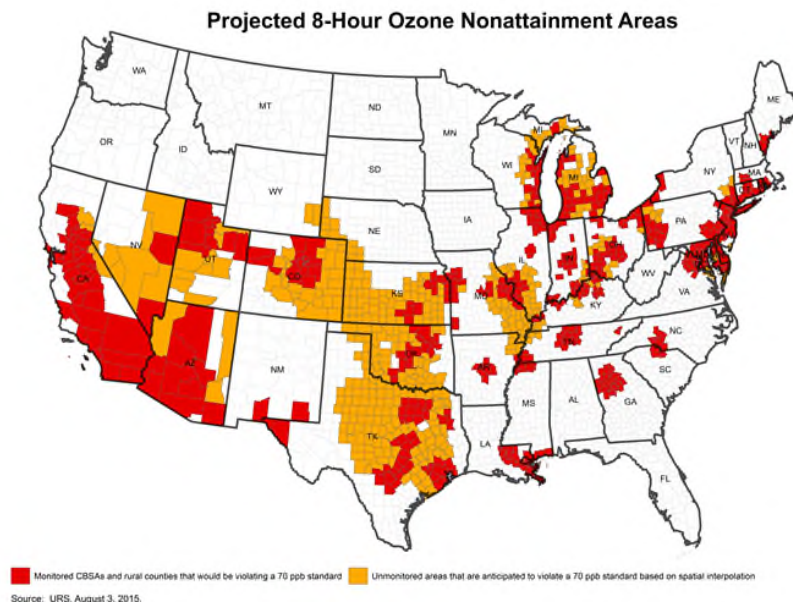
Source: ozoneairqualitystandards.epa.gov.

EPA projects that the areas it will designate as nonattainment based on the 2015 ozone level will increase substantially. Although EPA has not yet completed the formal process of designating areas as nonattainment, it has produced the following map of counties measuring ozone above the 2015 standards:



Source: ozoneairqualitystandards.epa.gov.

Industry groups, such as the American Petroleum Institute ("API"), note that there is currently no air monitoring in many rural areas, which may mean that additional areas not listed on EPA's map may be impacted by the new lower standard. API's projected nonattainment map shows that large swaths of Texas and Oklahoma are likely to be impacted:

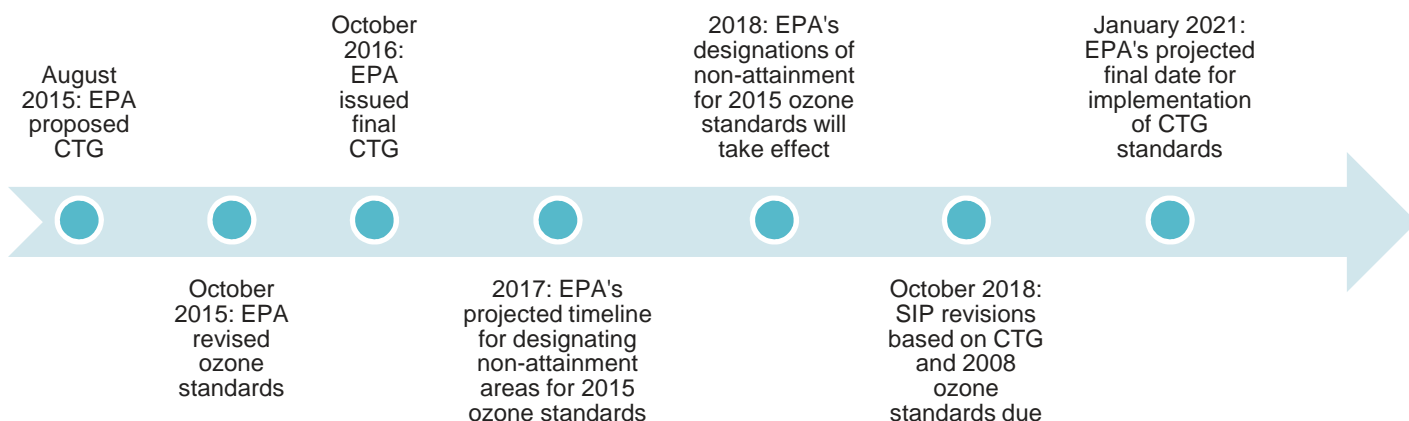


As these maps indicate, the 2015 revision of the ozone standard will place a number of areas in nonattainment for the first time, triggering requirements for states to revise their SIPs. If the CTG remains unaltered by the time EPA officially designates areas as nonattainment, states will be incentivized to adopt the CTGs or equivalent standards.

Timeline for Revisions to SIPs

States with nonattainment areas that are currently classified as “Moderate” and above based on the 2008 ozone standards have until October 2018 to submit revised SIPs that address the CTG. EPA states that it anticipates designating attainment and nonattainment areas for the 2015 ozone standards by fall 2017, with designations taking effect by 2018. States with nonattainment areas classified as “moderate” and above for those standards and states in the Ozone Transport Region would have to make RACT determinations for the sources covered by the CTG. SIP revisions that include these RACT determinations would be due to EPA no later than two years after the effective date of designations. In a memo EPA issued on October 20, 2016 alongside the CTG, EPA notes that SIPs must require that emissions controls for the covered sources be implemented as soon as practical, but no later than January 21, 2021.

The following timeline shows the past and proposed future dates associated with the CTG:



The CTG Recommendations for Specific Sources

Like EPA's new Quad Oa standards for methane and VOC emissions from new and modified oil and gas sources, the CTG applies to pneumatic controllers, pneumatic pumps, compressors, equipment leaks and fugitive emissions in the onshore production and processing segments of the oil and natural gas industry, as well as storage vessels in all segments (except distribution) of the oil and natural gas industry. The major difference between the two is that the CTG would apply these requirements to older, existing equipment that is not currently subject to Quad Oa's requirements. This could add meaningful costs to operations in non-attainment areas by requiring operators to make changes to their equipment and implement ongoing leak detection and repair programs at their well sites, compressor stations, and gas processing plants.

As the following chart shows, the CTG basically copies the Quad Oa requirements:

Source	CTG Recommendations	Requirements at Well Sites?	Same as Quad Oa NSPS Requirements?
Wet-Seal Centrifugal Compressors	95% emissions reduction by capture and routing to control device	None	Yes
Dry-Seal Centrifugal Compressors	None; RACT does not apply	None	Yes
Reciprocating Compressors	(1) Replace the rod packing on or before 26,000 hours of operation or 36 calendar months or (2) route emissions from the rod packing to a process through a closed-vent system under negative pressure	None	Yes
Pneumatic Controllers	Natural gas plants – zero gas-bleed rate All other locations – gas-bleed rate of 6 scf/h or less	Gas-bleed rate of 6 scf/h or less	Yes
Pneumatic Pumps	Natural gas plants – zero gas-bleed rate Compressor stations – none	95% reduction if there is an existing control or process on site Not required if: (1) routed to an existing control that achieves less than 95% or (2) technically infeasible to route to the existing control device or process (non-greenfield sites only) (3) operated less than 90 days per year	Yes
Storage Vessel	(1) Reduce emissions by 95% by capture and routing to control device or closed-vent system to a process or (2) maintain uncontrolled VOC emissions at less than 4 tpy ¹ Not required if: (1) emitting less than 6 tpy or (2) <i>subject to and in compliance with</i> 40 CFR part 60, subpart Kb; 40 CFR part 63, subparts G, CC, HH, or WW	Yes, same requirements	Yes
Liquids Unloading	None	None	Yes

Fugitive Emissions

The CTG for fugitive leaks at compressor stations and well sites essentially mirror Quad Oa, requiring leak detection surveys within 60 days of being subject to VOC regulations, semi-annual surveys for well sites, and quarterly surveys for compressor

¹ This is an alternative option available in certain circumstances after 12 months of compliance with the requirement to reduce emissions by 95%.

stations. The CTG also recommends adopting Quad Oa’s requirement of using either optical gas imaging (“OGI”) or Method 21 survey methods for well sites and implementing the 40 CFR part 60, subpart VVa leak detection and repair (“LDAR”) program for natural gas processing plants.

One key difference between Quad Oa and the CTG is that the CTG carves out an exemption for wells with a gas-to-oil ratio (“GOR”) of less than 300 that produce, on average, less than 15 barrel of oil equivalents (“boe”) per well per day. EPA originally considered but rejected a similar exemption for low-producing wells for Quad Oa, based on its conclusion that emissions from low-producing wells would be the same as from other higher-producing wells. Interestingly, EPA adopted the 15 boe exemption in the CTG after stating it considered “available data obtained in the development of the 2016 NSPS final rule, comments received on the draft CTG and 2015 NSPS proposed rule, and peer review comments received on the EPA’s equipment leaks white paper.”

The following chart summarizes the CTG recommendations and the differences, if any, between the CTG and the Quad Oa NSPS requirements:

Requirement	CTG Recommendations	Quad Oa NSPS Requirements
Initial Survey	Within 60 days of being subject to VOC emission-control requirements	Later of: 1 year from publication of final rule in the Federal Register, or 60 days after start of production (new well sites) or start up (compressor stations) or first day of production (modified well sites) or modification (compressor stations)
Periodic Survey Frequency	Semi-annually, at least 4 months apart for well sites	Same for well sites and compressor stations
Survey Method	Quarterly, at least 60 days between any two surveys for compressor stations OGI or Method 21 for well sites, except there is an exemption for wells with a GOR < 300 that produce, on average, < 15 boe per well per day	Same for well sites, except no exemption for well sites that produce < 15 boe per well per day
	Implement the 40 CFR part 60, subpart VVa LDAR program for natural gas processing plants	Same for natural gas processing plants
Time to Make Repairs	30 days	Same
Time from Repair to Resurvey	30 days	Same
Time to Repair When It Would Be Technically Infeasible or Unsafe	Soonest of: 2 years or next well shutdown; well shut-in; after an unscheduled, planned, or emergency vent blowdown	Same
Exemptions and Extensions	Unsafe, difficult-to-monitor	Same
Monitoring Plans	Company-defined area	Same

Other Efforts to Regulate Existing Sources – 2016 Information Collection Request

The CTG is not the only regulatory initiative that EPA has undertaken to begin regulating VOC and methane emissions from existing oil and gas sources. EPA is in the process of issuing an ICR that requires companies operating existing oil and gas facilities to provide information that the Agency intends to use to develop comprehensive regulations under Section 111(d) of the Act. Once finalized, the states will have to develop plans by which EPA determinations of the “best system of emission reduction” would be imposed on all existing sources, regardless of the attainment status of its location. After receiving public comments on its initial draft of the ICR, EPA has published a second draft for additional comments and review by the White House Office of Management and Budget. EPA may begin sending out these mandatory information requests as soon as this month (November 2016).

The regulations that result from this ICR have the potential to be much more expansive than either Quad Oa or the new RACT requirements based on the CTG. Unlike Quad Oa, which only applies to well sites, compressor stations, compressors, storage vessels, pneumatic pumps, and pneumatic controllers that are new, modified, or reconstructed after September 18, 2015, this new regulation could also apply to all older or existing such sources. And unlike the CTG, which only provide suggestions for

areas of the country that are not in attainment with the ozone standards, the new regulations would apply to all regions of the country.

The Agency explained that the ICR “seeks a broad range of information such as how equipment and emissions controls are, or can be, configured, and what installing those controls entails, including the associated costs. This information will help the Agency determine how best to address methane emissions from the oil and gas industry, including through rulemaking to reduce emissions.” EPA may simply decide to use this information to expand requirements like those found in the CTG or Quad Oa to apply to all (not just new) facilities in the oil and gas sector. The Agency’s guidance documents, however, suggest there are additional sources of emissions that EPA is considering regulating. Specifically, EPA is seeking information about natural gas venting that occurs as part of existing processes or maintenance activities, such as well and pipeline blowdowns, equipment malfunctions, and flashing emissions from storage tanks. EPA also is seeking information on existing low-producing wells and underground-storage facilities. More information about this ICR is available [here](#).

For more information, please contact Vinson & Elkins lawyers [Larry Nettles](#), [Eric Groten](#), [Margaret Peloso](#), [Corinne Snow](#), or [Travis Hunt](#). Visit our website to learn more about V&E’s [Environmental & Natural Resources](#) or [Climate Change](#) practices, or email one of the practice [contacts](#).