

Final VOC Control Techniques Guidelines for the Oil and Natural Gas Industry
Summary of RACT Recommendations
for Ozone Nonattainment Areas Classified as “Moderate” and Above,
and States in the Ozone Transport Region

NOTE: Please read the [CTG](#) for additional detail.

Sources Covered	Reasonably Available Control Technology (RACT) Recommendation
Storage Tanks	
<ul style="list-style-type: none"> Individual storage tanks with a potential to emit (PTE) ≥ 6 tons per year (tpy) of VOCs. 	<ul style="list-style-type: none"> 95% reduction of VOC emissions If owner/operators demonstrate that actual VOC emissions without controls are less than 4 tpy, as determined monthly, for 12 consecutive months, 95% control no longer required, provided uncontrolled VOC emissions remain below 4 tpy.
Pneumatic Controllers	
<ul style="list-style-type: none"> Individual continuous bleed, natural gas-driven pneumatic controller at a natural gas processing plant. 	<ul style="list-style-type: none"> Natural gas bleed rate of zero standard cubic feet per hour (scfh). Some exceptions for functional needs including, but not limited to, response time, safety and positive actuation that require higher bleed rate.
<ul style="list-style-type: none"> Individual continuous bleed natural gas-driven pneumatic controller located from the wellhead to the natural gas processing plant or point of custody transfer to an oil pipeline. 	<ul style="list-style-type: none"> Natural gas bleed rate ≤ 6 scfh. Some exceptions for functional needs including, but not limited to, response time, safety and positive actuation that require higher bleed rate.
Pneumatic Pumps	
<ul style="list-style-type: none"> Individual natural gas-driven diaphragm pump located at a natural gas processing plant. 	<ul style="list-style-type: none"> Zero VOC emissions.
<ul style="list-style-type: none"> Individual natural gas-driven diaphragm pump located at a well site. 	<ul style="list-style-type: none"> Require routing of VOC emissions from the pump to an existing onsite control device/process. Require 95% control, unless the onsite existing control device/process cannot achieve 95%. If onsite existing device/process cannot achieve 95%, maintain documentation demonstrating the percent reduction the control device is designed to achieve. Maintain records if there is no existing control device at the location of the pump.
<ul style="list-style-type: none"> Individual natural gas-driven diaphragm pump located at a well site that is in operation for any period of time each calendar day for less than a total of 90 days per calendar year. 	Not covered; RACT would not apply.

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Summary of Recommendations, cont.

Sources Covered	Reasonably Available Control Technology (RACT) Recommendation
Compressors (Centrifugal & Reciprocating)	
<ul style="list-style-type: none"> Individual reciprocating compressor located between the wellhead and point of custody transfer to the natural gas transmission and storage segment. 	<ul style="list-style-type: none"> Reduce VOC emissions by replacing reciprocating compressor rod packing on or before 26,000 hours of operation or 36 months since the most recent rod packing replacement. Alternatively, route rod packing emissions to a process through a closed vent system under negative pressure.
<ul style="list-style-type: none"> Individual reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site. 	Not covered; RACT would not apply.
<ul style="list-style-type: none"> Individual centrifugal compressor using wet seals that is located between the wellhead and point of custody transfer to the natural gas transmission and storage segment. 	<ul style="list-style-type: none"> Reduce VOC emissions from each centrifugal compressor wet seal fluid gassing system by 95%.
<ul style="list-style-type: none"> Individual centrifugal compressor using wet seals located at a well site, or an adjacent well site and serving more than one well site. 	Not covered; RACT would not apply.
<ul style="list-style-type: none"> Individual centrifugal compressor using dry seals. 	Not covered; RACT would not apply.
Leaks (Equipment Leaks and Fugitive Emissions)	
<ul style="list-style-type: none"> Equipment leaks from components in VOC service located at a natural gas processing plant. 	<ul style="list-style-type: none"> Implement the 40 CFR part 60, subpart VVa leak detection and repair (LDAR) program for natural gas processing plants.
<ul style="list-style-type: none"> Fugitive emissions (leaks) from individual well sites with wells with a gas-to-oil ratio (GOR) ≥ 300 that produce, on average, > 15 barrel of oil equivalents (boe) per well per day. 	<ul style="list-style-type: none"> Develop and implement semiannual optical gas imaging (OGI) monitoring and repair plan covering fugitive emissions components within a company-defined area. Method 21 can be used as an alternative to OGI at a 500 ppm repair threshold level.
<ul style="list-style-type: none"> Fugitive emissions (leaks) at individual gathering & boosting stations located from the wellhead to the point of custody transfer to the natural gas transmission and storage segment, or an oil pipeline. 	<ul style="list-style-type: none"> Develop and implement a quarterly OGI monitoring and repair plan that covers the collection of fugitive emissions components at gathering and boosting stations within a company-defined area. Method 21 can be used as an alternative to OGI at a 500 ppm repair threshold.