



# **Final Rulemaking: Control of VOC Emissions from Unconventional Oil and Natural Gas Sources**

Environmental Quality Board  
June 14, 2022

Tom Wolf, Governor

Patrick McDonnell, Secretary

## ➤ Rulemaking Revisions Since March 15 EQB

- Applicable only to unconventional sources of VOC emissions installed at unconventional well sites, gathering and boosting stations, or natural gas processing plants
  - Separate rulemaking for conventional sources of VOC emissions to follow
- Added definitions of unconventional formation, unconventional well, and unconventional well site
- Corrected cross-references related to reporting requirements, where applicable

# Basis of the Final Rulemaking

- Establishes VOC emission limitations and other requirements consistent with the RACT recommendations in EPA's Control Techniques Guidelines (CTG) for the Oil and Natural Gas Industry issued on October 27, 2016.
- **RACT = Reasonable Available Control Technology**
  - Considers technological and economic feasibility
- Ozone Transport Region member states must implement RACT statewide

# Basis of the Final Rulemaking

- The Commonwealth is required to submit a State Implementation Plan (SIP) revision addressing the RACT requirements to avoid sanctions triggered by two Findings of Failure to Submit issued by EPA.
  - The November 16, 2020 Finding relating to the 2008 Ozone NAAQS must be addressed by June 16, 2022.
  - The December 16, 2021 Finding relating to the 2015 Ozone NAAQS must be addressed by July 18, 2023.

# Affected Parties

- DEP identified 577 unconventional operators of affected facilities using the eFACTS database and the NAICS codes covered by the CTG, and estimates that 306 of these facility operators may meet the definition of small business.
- Owners and operators of approximately 3,388 unconventional well sites, 486 gathering and boosting stations, 120 transmission stations, and 15 natural gas processing plants may have sources affected by this final rulemaking.
- Owners and operators of approximately 12 facilities with storage vessels, 3,874 facilities with pneumatic controllers, 17 facilities with diaphragm pumps, 448 facilities with reciprocating compressors, and 2,881 facilities with fugitive emissions components may be subject to the final rulemaking's requirements.

# Economic Impacts

- Overall, the expected total cost to unconventional industry will be approximately \$21.9 million per year with approximately \$4.6 million per year in savings of recovered natural gas at a price of \$1.70/Mcf.
- This equates to costs of, on average, \$37,945 gross cost per operator or \$30,053 net cost per operator.
- Implementing the requirements of the final rulemaking will:
  - Contribute to attaining and maintaining the 2015 8-hour ozone NAAQS which may result in \$63 million or more in health benefits for the Commonwealth.
  - Help protect jobs and revenue in the agriculture and forestry industries.

# Environmental Impacts

- Total estimated emissions reductions from this final rulemaking across the unconventional oil and natural gas industry are 2,864 TPY of VOC emissions, with a co-benefit of reducing methane emissions by 45,278 TPY.
- Total estimated emissions reductions include 411 TPY VOC and 6,124 TPY methane from the additional stringency of this final rulemaking than EPA's CTG.
- The VOC emission control measures and other requirements in this final rulemaking will allow the Commonwealth to make substantial progress in achieving and maintaining the 8-hour ozone NAAQS statewide.

# Recommendation

The Department recommends the Board adopt this final rulemaking for publication in the *Pennsylvania Bulletin* as a final-form regulation.





Bureau of Air Quality

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