



**pennsylvania**

DEPARTMENT OF ENVIRONMENTAL PROTECTION



Bureau of Air Quality

# Concepts for Proposed General Permit for Well Pads and Proposed GP-5 Modifications

Air Quality Technical Advisory Committee  
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# Background

- On January 19, 2016, Governor Tom Wolf announced a four-point methane emission reduction strategy for Oil and Gas operations.
  - DEP will develop a new general permit for new unconventional well pad operations.
  - DEP will revise its current general permit (GP-5) updating the permitting requirements.
  - DEP will develop a regulation for existing sources for consideration by the Environmental Quality Board.
  - DEP will establish best management practices, including leak detection and repair programs to reduce emissions along production, gathering, transmission and distribution lines.

# Concepts for the General Permit for Well Pad Operations

- An owner or operator of natural gas compressor stations may request authorizations to use DEP's General Plan Approval and General Operating Permit for Natural Gas Compression and/or Processing Facilities (GP-5). Modifications to GP-5 are being developed for public review and comment.
- Oil and natural gas wells are currently exempted from permitting requirements provided the owner or operator complies with the Category No. 38 exemption criteria specified in DEP's list of "Air Quality Permit Exemptions." (Document No. 275-2101-003).
- As part of the DEP's Methane Emission Reduction Strategy, DEP is developing a new general permit to replace the Category No. 38 exemption criteria for well pad operations.

# Concepts for the General Permit for Well Pad Operations

- Most of the substantive requirements for the Category No. 38 exemption criteria will be proposed in the new general permit for well pads operations.
- The DEP is also exploring the possibility of proposing that diesel-fired engines used on drill rigs meet the EPA's Tier 4 standards.
- The leak detection and repair (LDAR) requirements proposed may be similar to the current GP-5, including quarterly LDAR inspections using an optical gas imaging system and monthly Audio Video Olfactory (AVO) inspections.

# Concepts for the General Permit for Well Pad Operations

- The first attempt at a leak repair would be done within five (5) calendar days of leak detection. If purchase of parts is necessary, the leak must be repaired within 15 calendar days, after the purchase of parts.
- VOC emissions from storage tanks must be controlled by at least 95%.
- Permitting requirements addressing fugitive dust control measures will also be proposed.

## Concepts for the General Permit for Well Pad Operations

- The DEP intends to propose no-bleed and/or low-bleed requirements for pneumatic controllers and pumps.
- Emissions from pumps may also be controlled through routing pump discharge streams into a closed loop system or a vapor recovery unit.
- The proposed GP may also require the operation of pig launchers without venting hydrocarbons into the atmosphere.

## Concepts for the General Permit for Well Pad Operations

- The proposed GP may require plunger lifts or flaring to reduce methane emissions from wellbore liquid unloading.
- The DEP is examining strategies to reduce emissions from produced water impoundment tanks. The DEP is considering add-on controls on enclosed storage tanks or a closed loop system for an efficient reuse of produced water.
- Annual compliance certifications may be required to be submitted to the DEP by a Responsible Official, as is the case under the current GP-5.

# Concepts for GP-5 Modifications

- The applicability of GP-5 may be extended to natural gas transmission operations.
- The DEP may require no-bleed and/or low-bleed pneumatic controllers.
- The first attempt at leak repair would be required within five (5) calendar days of leak detection. If the purchase of parts is necessary, the leak must be repaired within 15 calendar days, after the purchase of parts.

# Concepts for GP-5 Modifications

- The DEP intends to require owners and operators to prevent venting of VOCs and methane during all compressor maintenance and operational activities.
- The proposed GP-5 modifications will require control air contaminant emissions from storage tanks by at least 95%.
- The general permit may require the operation of pig launchers without venting hydrocarbons into the atmosphere.

# Concepts for GP-5 Modifications

- The DEP intends to propose the use electric pumps or routing pumps discharged to closed systems when electricity is not available.
- Emissions from pneumatic pumps driven by natural gas may also be controlled through routing pump discharge streams into a closed loop system or a vapor recovery unit, or the pumps may be replaced with zero bleed pumps.
- The use of dry seals or control of wet seal venting of methane from each compressor by 95% would also be included in the proposed GP-5 modifications.

# Useful Links

- [Methane Reduction Strategy Page](#)
  - <http://www.dep.pa.gov/Business/Air/Pages/Methane-Reduction-Strategy.aspx>
- [Methane Strategy Briefing Paper](#)
  - <http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Methane/DEP%20Methane%20Strategy%201-19-2016%20PDF.pdf>
- [Methane Strategy Briefing Paper Appendix](#)
  - <http://files.dep.state.pa.us/Air/AirQuality/AQPortalFiles/Methane/Appendix%20A%20-%20Comparison%20of%20PA-%20EPA%20NSPS%20Proposal-%20CSSD%20-%20CO%20Requirements%20for%20the%20Oil%20and%20Gas%20Sector%20%2012-15-2015.pdf>





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