

# Overview of Revisions to the Proposed GP-5A and GP-5

Citizens Advisory Council  
January 16, 2018

# Background

- On January 19, 2016, Governor Wolf released the Methane Reduction Strategy, to reduce:
  - Emissions at new unconventional natural gas well pads via best available technology (BAT) in a new General Permit.
  - Emissions at new compressor stations and processing facilities via BAT in an updated General Permit.
  - Emissions at existing oil and gas facilities through regulation approved by the Environmental Quality Board.
  - Emissions along production, gathering, transmission, and distribution lines through best management practices.

# Exemption 38a and 38b

- Exemption 38 has been subdivided into Exemptions 38a and 38b.
- Exemption 38a will cover existing facilities from August 10, 2013 to the effective date of the revised exemption list and General Permit. Minor changes to the original language of Exemption 38 were made where clarifications from various DEP documents were incorporated.
- Exemption 38b will cover new or modified facilities on or after the effective date of the revised exemption list and General Permit.

# Exemption 38a Clarifications

- Temporary activities, such as site preparation, drilling, and hydraulic fracturing are exempted from air quality permitting for both conventional and unconventional well sites.
- A modification at an existing well site must meet applicable criteria under Exemption 38b if done after the effective date of the Air Quality Permit Exemptions list or get DEP approval.
- The LDAR requirement was altered to allow gas leak detectors that meet the requirements of 40 CFR Part 60 Method 21 to be used for inspections.

# Exemption 38a Clarifications

- Clarifies that owners or operators must comply with the requirements for 40 CFR Part 60 Subpart OOOO or OOOOa, as applicable.
- Clarifies that condition (d)(ii) which requires 95% control for storage vessels/storage tanks or other equipment includes tanker truck load-out equipment.
- Clarifies well completion.

# Exemption 38b Conditions

- Temporary activities, such as site preparation, drilling, and hydraulic fracturing are exempted from air quality permitting for both conventional and unconventional well sites.
- Conventional wells, wellheads, and all other associated equipment.
- Unconventional natural gas well sites and remote pigging stations that meet the applicable requirements.
- Non-road engines as defined in 40 CFR §89.2.

# Exemption 38b Conditions

- LDAR must be conducted on a semi-annual basis consistent with the conditions of the current Exemption 38 and the federal NSPS.
- Facility-wide uncontrolled emissions must be less than 2.7 tpy VOC, less than 1.0 tpy total HAPs, and less than 0.5 tpy any single HAP to be exempt from air quality permitting.
- Each individual source at a facility must emit less than 200 tpy methane without control.

# Exemption 38b Conditions

- All stationary engines at a facility must emit less than 100 lbs/hr, 1000 lb/day, 2.75 tons per ozone season, and 6.6 tons per year of NO<sub>x</sub> combined on a 12-month rolling basis.
- Owners or operators must comply with the requirements for 40 CFR Part 60 Subpart OOOO or OOOOa, as applicable.
- An owner or operator of a new facility must receive approval from DEP if the conditions of Exemption 38b cannot be met.
- Removed the Compliance Demonstration Report requirement.



# General Permits 5 and 5A

- Draft GP-5 and GP-5A (GPs) were published in the Pa. Bulletin for public comment on February 4, 2017. The comment period ended on June 5, 2017.
- DEP received over 10,500 comments from advisory boards and committees, regulated industries, environmental organizations and the public.
- Revisions were made, as appropriate, based on the comments and supplementary information received.
- Revised draft GPs were posted on DEP's AQTAC website on November 30, 2017.

# Organizational Changes

- The revised draft GPs were reorganized so that sources common to both GP-5 and GP-5A are listed in common sections.
- Redundant requirements were removed.
- Federal requirements that do not differ from state Best Available Technology (BAT) determinations are incorporated by reference.
- Various terms and conditions in the proposed permits have been clarified.

# Key Revisions to GPs

- Application requirements have been updated, and may be submitted through e-permitting when available.
- Simplified the notification requirements for construction of sources.
- Made blowdown notification requirements consistent with the [GP-5 Malfunction Reporting Instructions](#).
- Changed annual report date from March 1st to the anniversary date of the authorization to use the GPs.

# Key Revisions to GPs

- Added a provision to allow the owner or operator to install or modify the source under certain conditions without seeking a new authorization.
- Replaced the section pertaining to the fugitive particulate matter requirements with a citation of state regulations.
- Removed the requirements for natural gas-fired combustion units exempt under state regulations.
- Removed the requirement for installation of fuel flow meter for engines.

# Key Revisions to GPs

- Re-determined BAT requirements for engines based on additional information received from public comments.
- Reduced the recordkeeping and reporting requirements for several source categories to reduce the administrative burden on the industry and DEP.
- Revised the condition for tanker-truck loadout operations so that control is required only if emissions from the associated storage vessel exceed control thresholds.

# Key Revisions to GPs

- Removed the leak quantification requirements using a high flow sampler from the fugitive emission components section.
- If pump emissions are greater than the control thresholds, 98% control for methane, VOC, and HAP is required.
- Provided flexibility to employ best management practices for pigging operations.

# Key Revisions to GP-5A

- GP-5A will be effective 60 days after publication in the Pa. Bulletin.
- Removed the requirements for temporary activities such as site preparation, well drilling, hydraulic fracturing and work-over activities and placed them under the revised conditional permit exemption.
- Added requirements for venting of the annular space.
- Removed the requirements for an operator to be present during manual unloading operations.

# Key Revisions to GP-5

- GP-5 will be effective 30 days after publication in the Pa. Bulletin.
- Removed the requirement for installation of fuel flow meter for turbines.
- Added a provision to provide relief from emission standards for turbines when ambient temperatures are very low.
- Re-determined BAT requirements for turbines based on additional information received from public comments.



# Existing Sources

- All air pollution sources at oil and natural gas production sites were exempted from air permitting requirements prior to August 10, 2013.
- On August 10, 2013, DEP finalized a conditional permit exemption for sources located at unconventional natural gas well sites.
- On October 27, 2016, EPA issued Control Techniques Guidelines (CTG) for the Oil and Natural Gas Industry for emission of volatile organic compounds (VOC) from existing sources.

# Background

- The Clean Air Act (CAA) provides that state implementation plans (SIPs) for non-attainment areas must include reasonably available control measures including reasonably available control technology (RACT), for existing sources of emissions.
- CAA Section 184(b) requires that states in ozone transport regions must revise their SIPs to implement RACT with respect to all sources of VOCs in the state covered by a CTG.
- Pennsylvania is in the Northeast Ozone Transport Region, so RACT is required statewide in Pennsylvania under Section 184 of the CAA for covered categories.

# What is RACT?

- EPA has defined RACT 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.”
- The term “reasonably available” rather than “best available” is intended to take into account the remaining economic life of the unit as well as factors that could increase the cost of installing a technology on an existing unit, when determining the appropriate control technology.

# ➤ Summary of RACT Recommendations

- EPA recommends RACT for storage vessels with a potential to emit (PTE) of 6 tpy of VOC must reduce emissions by 95% or more unless the owner or operator maintains actual emissions below 4 tpy VOC.
  - Exemption 38 requires that storage vessels with actual VOC emissions over 2.7 tpy must reduce emissions by 95% or more.
  - Therefore, storage vessels constructed on or after August 10, 2013 should already meet the RACT requirement.
- DEP will likely follow EPA's recommended RACT for other sources.

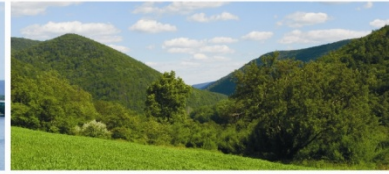
# Conclusion

- Even though EPA published the CTG to address VOC emissions from existing sources, there will be collateral reduction of methane emissions.
- DEP is required to submit SIP regulations for existing sources to minimize emissions by October 27, 2018.
- EPA has applied an implementation deadline of January 1, 2021, for all RACT requirements of the CTG as provided in 40 CFR §51.1112(a)(3).



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