

# Overview of GP-5A, GP-5, and Exemption 38

## Climate Change Advisory Committee Meeting June 26, 2018

# Unconventional Natural Gas Industry

## Methane Emissions Reported to Pennsylvania's Emission Inventory

Year	Number of Wells	Number of Mid-Stream Gas Processing Facilities	Methane (Tons Per Year)
2011	9,037	150	N/A
2012	8,962	453	121,234
2013	10,275	447	107,548
2014	10,010	508	102,751
2015	10,287	534	122,251

# Background

- Air pollutants, such as volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>) that can lead to ozone formation (smog), have serious impacts on the environment and public health, safety and welfare.
- Methane, the primary component of natural gas, has been identified by the EPA as the second-most prevalent greenhouse gas (GHG) emitted in the U.S. from human activities.
- According to federal estimates, the natural gas and oil industries account for a quarter of U.S. methane emissions.

# Governor's Methane Reduction Strategy

- On January 19, 2016, Governor Tom Wolf launched a groundbreaking Methane Reduction Strategy to reduce methane emissions from natural gas well sites, compressor stations and pipelines.
- In response, DEP is enhancing its oversight of air emission requirements under federal and state law in order to:
  - Reduce emissions that harm human health.
  - Reduce potent GHG emissions that contribute to climate change.
  - Prevent the waste of Pennsylvania's valuable natural resources.

# Public Comment

- Formal public comments periods were open from February 14, 2017 – June 5, 2017 (proposed general permits) and from March 31, 2018 - May 15, 2018 (draft final general permits).
- 9,357 individuals and organizations commented during the first public comment opportunity and 32 provided comment during the second
- DEP also received extensive input from advisory boards and committees, and industry and environmental organizations.
- The final GP-5A, GP-5, and Exemptions List published in the PA Bulletin on June 9, 2018, with an effective date of August 8, 2018.
- DEP has prepared a Comment and Response document for both comment periods, as well as a technical support document, all of which are available on the DEP's website.

# The Permitting Process

- All air contamination sources must get approval to construct and operate unless exempted from permitting. Many exempted activities must still meet applicable state and federal regulations.
- Construction approval is obtained through the plan approval process.
- Operating approval is obtained through either a state-only operating permit process for minor sources, or through the Title V operating permit process for major sources.
- As an alternative, sources may seek authorization to use General Permits.

# General Permits (GP)

- The Department may issue GPs for sources if it is determined that the sources are capable of being regulated using standardized conditions.
- The standardization reduces the administrative review time.
- Applicants seeking authorization to use GPs must demonstrate that all the terms and conditions will be met.

# Scope of GPs and Exemption 38

- The revision to Exemption 38 applies to certain unconventional well sites and activities and conventional gas well sites. Federal and state regulations still apply to activities exempted from the permitting process.
- GP-5A is a new general permit that is applicable to unconventional well sites and remote pigging stations.
- GP-5 is a revision to the existing GP-5 that is applicable to mid-stream, gas processing, and gas transmission facilities.
- Both GPs and Exemption 38 incorporate the most current state and federal regulatory requirements.



# GP-5

- **Proposed GP-5** is a *revision* of the existing GP-5.
  - Applicable to mid-stream compression, gas processing, *and* gas transmission facilities.
  - Issued June 9, 2018, effective for new facilities on August 8, 2018.



# GP-5

- Updates state BAT determinations for sources including engines, turbines.
- Incorporates updated federal New Source Performance Standards (NSPS) by reference.
- Incorporates state BAT for pigging operations.
- Incorporates emission control threshold for methane (200 tpy) for each source.
- Applies to gas transmission facilities.

# GP-5

- **Proposed GP-5A** is a new general permit.
  - Applicable to new or modified unconventional natural gas well site operations and remote pigging stations.
  - Issued June 9, 2018, effective August 8, 2018.



# GP-5A

- Establishes state BAT determinations for compressors, engines.
- Incorporates state BAT and federal New Source Performance Standards (NSPS) requirements for LDAR.
- Incorporates state BAT for pigging operations.
- Incorporates emission control threshold for methane (200 tpy) for each source.
- Incorporates federal NSPS and state requirements for other sources (e.g. tanks, dehydrators, wellbore liquids unloading operations).

# Air Quality Permit Exemptions

- Under 25 Pa. Code § 127.14(a), DEP has developed a list of sources of minor significance (based on certain qualifications) that are exempt from Plan Approval and/or Operating Permit requirements.
- Does not exempt sources from compliance with various operating regulations.
- One of the exemptions is Exemption 38, which applies to the oil and gas sector.

# Permit Exemption 38

## 38(a)

- Oil and gas production facilities.
- Constructed prior to August 10, 2013.

## 38(b)

- Conventional oil and gas production facilities.
- Unconventional oil and gas production facilities meeting specific conditions.
- Constructed between August 10, 2013 and August 7, 2018.

## 38(c)

- Conventional oil and gas production facilities.
- Unconventional oil and gas temporary sources and sources below thresholds.
- Constructed on and after August 8, 2018.

# Exemption 38(b)

## Notable Unconventional Production Facility Conditions:

- Reduced emission completions (i.e., green completions) at hydraulically fractured well sites
- LDAR – annually
- VOC Emissions – Less than 2.7 tpy
- Hazardous Air Pollutants (HAPs) – 0.5 tpy of individual HAP or 1 tpy of all HAPs.
- NOx emissions from engines – Less than 100 lbs/hr, or 1000 lbs./day or 2.75 tons per ozone season or 6.6 tpy
- Flaring Activities – In certain listed circumstances
- Compliance Demonstration – Must demonstrate compliance with exemption criteria within 180 days after well completion or installation of a source

# Exemption 38(c)

## Notable Unconventional Production Facility Conditions:

- Reduced emission completions (i.e., green completions) at hydraulically fractured well sites
- LDAR – semiannually
- Methane Emissions – Less than 200 tpy from each individual source
- VOC Emissions – Less than 2.7 tpy
- Hazardous Air Pollutants (HAPs) – 0.5 tpy of individual HAP or 1 tpy of all HAPs
- NOx emissions from engines – Less than 100 lbs/hr, or 1000 lbs./day or 2.75 tons per ozone season or 6.6 tpy
- Compliance Demonstration – Operator must keep adequate records demonstrating compliance with the exemption criteria



# ▶ What Will the Enhanced Permits Accomplish?

- Continue Pennsylvania's leadership in regulating air emissions from the oil and gas industry.
- Maintain provisions to find and reduce methane leaks to mitigate the impact of natural gas production, processing, and transmission on climate change.
- Implement sensible requirements to reduce emissions that impact human health and the environment.
- Create a clear, understandable, and implementable general permit for facilities in the natural gas industry.
- Reduce waste of valuable Pennsylvania resources.

# DEP Air Information

- Methane Reduction Strategy:
  - <http://www.dep.pa.gov/Business/Air/Pages/Methane-Reduction-Strategy.aspx>
- Air Quality Permit and Exemption Information:
  - <http://www.dep.pa.gov/Business/Air/BAQ/Permits/Pages/default.aspx>



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