



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Oil and Gas Management



# **Final Rulemaking: 25 Pa.Code Chapters 78 and 78a Environmental Protection Standards at Oil & Gas Well Sites**

**Environmental Quality Board  
February 3, 2016**

Tom Wolf, Governor

John Quigley, Secretary

# Purpose

- Update the Department's regulations relating to surface activities at oil and gas well sites
- Address statutory changes and new environmental protection standards under the 2012 Oil and Gas Act
- Address new technologies associated with extracting natural gas from unconventional formations which are also used to develop conventional formations

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- Address changes in the Department of Environmental Protection's other programs
- Address gaps in the Department's existing program addressed through other means (e.g., policies or permit applications)
- Address recommendations from State Review of Oil and Natural Gas Environmental Regulations (STRONGER)

# Unprecedented Public Participation

- April 2011: DEP Initiated Rulemaking
- August 27, 2013: Environmental Quality Board (EQB) adopted as proposed
- 20 Advisory Board/Committee Meetings
- 2 public comment periods
- 135 days of public comment
- 12 public hearings
- Almost 28,000 public comments received

# Bifurcation

- Based on extensive public comment and Act 126 of 2014, regulations relating to conventional oil and gas are promulgated separately from regulations relating to unconventional wells
  - Chapter 78 – Conventional
  - Chapter 78a – Unconventional

# Regulatory Development Process

- EQB regulation package
- Small business concerns
- Regulatory Analysis Form
- Engagement with industry, the public and advisory groups
  - Wide variation in positions expressed
  - Thoughtful and thorough consideration of all public comments and input;

# Costs – Conventional Wells

- Based on 1,334 wells drilled annually
- Maximum annual cost to conventional operators - \$28,622,568
- Containment for brine tanks
  - Only new, refurbished or replaced
- Quarterly tank inspections
- Disposal pits separation from groundwater

# Costs – Unconventional Wells

- Based on 1,300 wells drilled annually; 434 well sites constructed
- Maximum annual cost to unconventional operators - \$31,149,664
- Maximum initial cost - \$73,463,000
- Centralized impoundments
- Well development impoundments
- Tank standards
- Area of review

# Key Areas of Change

- Considers needs of industry with appropriate level of public health and environmental protections – responsible drilling
  - Improves protection of water resources
  - Adds public resources considerations
  - Protects public health and safety
  - Addresses landowner concerns
  - Enhances transparency and improves data management

# Significant Revisions from ANFR

- Noise Regulation (Unconventional Only)
  - Technical Challenges
  - Best Practices Guidance to be adopted
  - Future rulemaking considerations
- Centralized Tank Storage (Unconventional and Conventional Operations)
  - Off site waste issues regulated by DEP waste management program

# KEY SIMILARITIES BETWEEN UNCONVENTIONAL AND CONVENTIONAL REGULATIONS

# Permitting

- Water Resources
  - Well site within 100 feet from all bodies of water (includes wetlands) in HQ or EV watershed, must demonstrate protection of water quality.
- Permit may be renewed only one time for a two year period
- Public resources section amended for clarity

# Public Resource Protections

- Screening process to determine if DEP needs to condition permits to avoid probable harmful impacts
- Limit of disturbance versus vertical wellbore
- Added playgrounds, schools and DEP-approved well head protection areas as public resources
- DEP evaluation of impacts beyond the agency's traditional mission, including concepts such as recreation and aesthetics

# Pre-drilling Review

- All operators must evaluate the potential for their hydraulic fracturing operations to impact abandoned and operating wells.
- Surveys and monitoring tailored to well development
- Timing tied to drilling
- Recommendation for improvements to DEP's well development regulations by the STRONGER organization

# Water Supply Restoration Standards

- Pre-drill surveys submitted as a single report ten business days prior to commencement of drilling
- If oil and gas development degrades a water supply, the operator must restore or replace the supply with one that meets Safe Drinking Water Act standards or is as good as pre-drilling conditions if the water supply was better than the Drinking Water Act standards.

# Spill Reporting and Clean-up

- Spills greater than five gallons outside of containment of any substance that can pollute the environment must be reported to DEP.
- Spills greater than 42 gallons (one barrel) outside of containment must be cleaned up in accordance with the Land Recycling and Environmental Remediation Standards Act (Act 2) in a timely manner.
- Cleaning up spills to the scientifically based standards established by Act 2 is required of all industries.

# Centralized Impoundments

- Significant compliance issues with existing impoundments
- Proposed rule codified existing permit requirements
- Final-form rulemaking:
- All existing centralized impoundments have two options:
  - Appropriately closed within three years
  - Obtain a residual waste impoundment permit
- Costs

# **KEY DIFFERENCES BETWEEN UNCONVENTIONAL AND CONVENTIONAL REGULATIONS**

# Vandal-Proofing Tanks

- The unconventional industry will be required to install valve locks, open end caps, retractable ladders or other similar protective measures to prevent vandalism to their tanks.
- No such requirement exists for the conventional industry.

# Waste Management - Use of Pits

- The unconventional industry is prohibited from utilizing pits to store drill cuttings and waste fluids.
- The conventional industry will continue to be able to use pits that are less than 3,000 square feet and store less than 125,000 gallons of fluid under a permit by rule. Larger pits will require an individual permit.
- Use of open-topped structures to store production fluids is banned for both the unconventional and conventional industries.

# Disposal of Drill Cuttings

- The unconventional industry will be required to obtain an individual permit to dispose of drill cuttings at the well site, just like any other generator of residual waste.
- This practice is permitted by rule for the conventional industry and no changes to this practice are included in the final-form Chapter 78.

# Secondary Containment

- The unconventional industry must employ secondary containment around all storage vessels, trucks used to store regulated substances and drill rigs.
- Secondary containment is only required at new, replaced or refurbished brine tanks at conventional sites, or for tanks storing oil or condensate, in accordance with existing state and federal requirements.

# Gathering Lines

- The final-form unconventional rules contain new sections on gathering line construction and horizontal directional drilling beneath streams.
- The conventional rules do not contain these sections.

# Well Development Pipelines

- The final-form unconventional rules contain a new section on the installation and use of temporary lines used to transport freshwater and wastewater.
  - Pipelines that transport materials:
    - Used for the drilling or hydraulic fracture stimulation of a well and the residual waste generated; and,
    - Which lose functionality after the well site it serviced has been restored.
- The conventional rules do not contain this provision.

# Water Management Plans

- The final-form unconventional rules require operators to obtain a water management plan before they withdraw water for drilling or hydraulic fracturing purposes.
- The conventional rules do not contain this requirement.

# Beneficial Use of Brine

- Conventional operators have the ability to beneficially use their brine for dust suppression and de-icing purposes in accordance with the protective standards codified in Chapter 78.
- Waste fluid from unconventional wells may not be used for these purposes.

# Production and Waste Reporting

- Unconventional operators must report their product (gas and condensate) and waste on a monthly basis.
- Conventional operators must report annually.

# Final Rulemaking Recommendation

- DEP recommends that EQB approve the Environmental Protection Standards at Oil & Gas Well Sites final rulemaking.



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