

*Proposed Rulemaking  
Oil and Gas Well Casing and  
Cementing*

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**25 Pa. Code Chapter 78**

**Environmental Quality Board Meeting**

**Harrisburg, PA**

**May 17, 2010**

**Scott Perry**

**Director, Bureau of Oil and Gas Management**

**Pennsylvania Department of Environmental Protection**

**Commonwealth of Pennsylvania**



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DEPARTMENT OF ENVIRONMENTAL PROTECTION

# Proposed Rulemaking 25 Pa. Code Chapter 78

## Background

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- Initial draft presented to TAB September 17, 2009
  - DEP met with TAB and subcommittee four additional times (10/28/09, 1/14/10, 1/21/10, 3/25/10)
- DEP used Advanced Notice of Proposed Rulemaking to solicit public comments.
  - Published in Pa. Bul. Jan. 30, 2010, ended Mar.2, 2010.
  - Comments received from 87 commentators.
- TAB recommendation to proceed to Proposed Rulemaking - March 25, 2010.



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# Proposed Rulemaking 25 Pa. Code Chapter 78

## Topics

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- Water Supply Replacement
- Well Construction
- Inspection of Operating Wells
- Gas Migration Response
- Reporting Requirements



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# Proposed Rulemaking 25 Pa. Code § 78.51, 52

## Water Supply Replacement

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- Codifies existing case law for adequate replacement:
  - Adequacy as determined by DEP.
  - As reliable as previous supply and not require excessive maintenance
  - Permanent payment of O&M costs.
  - Quality adequate if it meets Safe Drinking Water Standards or comparable to unaffected supply if it didn't meet that standard.
  - Quantity adequate if meets user's needs and reasonable foreseeable uses.
  - Providing notice to DEP within 10 days of receipt of water supply complaint.
- Predrill survey results must be provided to DEP and landowner within 10 days of receipt.



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# Proposed Rulemaking 25 Pa. Code § 78.72,73, 75(a)

## Well Construction

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- Decreases the allowable pressure on surface casing.
- New wells shall not use surface casing as production casing unless the oil well is not producing gas or if pressure limits are not exceeded.
- Surface hole must be drilled with air or freshwater fluids and centralizers must be placed 50' from casing seat and at least every 150'.
- Provides a mechanism for DEP to propose an area where alternative methods must be used to safely drill, operate or plug wells where measures beyond those required by these regulations are needed.

## Proposed Rulemaking 25 Pa. Code § 78.83 (a-b)

### Well Construction

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- Casing and cementing plan must be on site for review by DEP.
  - DEP can request submittal of plan
  - Revision to plan can be made on site to meet well conditions and documented in plan.
- New section on lost circulation of cement.
  - Immediate notification to DEP and implement 1 of 4 options for surface casing cement as well as possibly logging the amount of casing cemented.



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## Proposed Rulemaking 25 Pa. Code § 78.84

# Well Construction

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- Specifying standard for new casing.
  - Rated for 20% greater than anticipated max. pressure.
- Used and welded casing to be pressure tested.
- Casing to which blow out preventer (BOP) in excess of 3,000 psi. rating is attached must be pressure tested.



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## Proposed Rulemaking 25 Pa. Code § 78.85

### Well Construction

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- Cement for surface, coal, or intermediate string serving as water string shall be ASTM Type I-III or API Spec 10 and meet performance standards, meet 350 psi. at casing seat and not disturbed for 8 hours.
- Notice to DEP one day before cementing surface casing.
- New requirement to maintain cement job log for 5 years and available to DEP.



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# Proposed Rulemaking 25 Pa. Code § 78.88

## Well Inspection

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- Operator conduct quarterly inspection of each well and record results with report available to DEP for 5 years.
  - Well head pressure or water level.
  - Flow or annulus pressure.
  - Visual evidence of gas escaping.
  - Progressive corrosion with immediate notice to DEP of options taken:
    - Reduce shut-in pressure.
    - Retrofit well.
    - Additional testing.
  - Annual report to DEP of inspection results.



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## Proposed Rulemaking 25 Pa. Code § 78.88

### Gas Migration Response

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- When operator becomes aware of gas migration immediate notice to DEP and if directed, conduct investigation and work with DEP and local agencies.
  - Investigate complaint.
  - Survey aerial extent/concentrations.
  - Establish monitoring locations.
  - If > 10% LEL immediate notice/assessment of wells w/in 2,500' and remedial measures, access control, advisories.
- Report to DEP by phone w/in 12 hours and written report in 3 days.



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## Proposed Rulemaking 25 Pa. Code § 78.92-96

### Plugging

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- Retrievable casing removed from definition section and placed in applicable plugging sections.
- Plug moved to be across the producing formations (50' below to 50' above).
- Plastic added as acceptable permanent marker and may be held by cement which allows inspection.

# Proposed Rulemaking 25 Pa. Code § 78.121-122

## Well Reporting

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- Production reporting timeframes changed to be consistent with Act 15.
- Mandatory electronic reporting.
- Completion report to include additional detail on stimulation including list of chemicals used and water sources.



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## **Proposed Rulemaking Recommendation**

- The Department recommends that you approve the proposed rulemaking for Oil and Gas wells.
- 30-day public comment period
- Your consideration of this proposed rulemaking is greatly appreciated



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