

EXECUTIVE SUMMARY

Oil and Gas Well Casing and Cementing (Amendments to Chapter 78)

The final-form rulemaking will further prevent gas migration and protect water supplies by updating existing requirements regarding the drilling, casing, cementing, testing, monitoring and plugging of oil and gas wells. The new and amended sections are §§78.1, .51, .52, .55, .71-.73, .81-.85, .88, .89, .91-.96, .121 and .122. The draft final-form modifications include updated material specifications and performance testing for casing and cementing and revised design, construction, operational, monitoring, plugging, water supply replacement, and gas migration reporting requirements.

Properly cementing and casing a well is critical to preventing gas migration. The updated casing and cementing requirements will ensure that oil and gas well in Pennsylvania will be constructed and operated properly thereby minimizing environmental impacts and public health and safety risks. Casing pressure tests will detect deficiencies before a well could create a safety or environmental problem. Minimizing annular pressure will substantially reduce the possibility of gas migration. The new quarterly inspections and annual reporting will detect potential well integrity problems early and avoid any environmental harm or a threat to public health or safety. The final form rulemaking will clarify a well operator's obligations to restore or replace a water supply that has been contaminated from drilling activities with a water supply that is at least as good as the user's unaffected supply. Additionally, the final form regulations outline the procedures the well operator and the Department will utilize if there is a reported gas migration event. The regulations also revise well plugging standards to require well operators to plug wells through the producing formation rather than setting the cement plug immediately above the formation. Lastly, the final form regulations require that production and waste volumes be reported electronically and require detailed reporting of chemicals used to hydraulically fracture wells on a well by well basis.

The final form rulemaking differs from the proposed rulemaking in several important respects. The differences reflect the concerns raised by the regulated community and the public, resulting in an improved rule. The changes to the final form rulemaking strengthen well design requirements to prevent gas migration incidents.

The significant revisions to the final form rulemaking include: the addition of a provision that requires operators to have a pressure barriers plan to minimize well control events; the addition of a provision that requires operators to keep a list of emergency contact phone numbers at the well site; amended provisions that clarify how and when blow-out prevention equipment is to be installed and operated; the addition of a provision that requires operators to condition the wellbore to ensure an adequate bond between the casing and the formation; the addition of provisions that require the use of centralizers to ensure that casings are properly positioned in the wellbore; the addition of a provision that improves the quality of the cement placed in the casing that protects fresh groundwater; amendments to the stimulation report requirements; and the addition of provisions that specify the actions an operator must take in the event of a gas migration incident.

The Department will present the final form rulemaking to the EQB at their October 12, 2010 meeting. The rulemaking will become effective upon publication in the *Pennsylvania Bulletin*, which is anticipated to occur in December 2010.

The proposed rulemaking was presented to the Oil and Gas Technical Advisory Board (TAB) for their consideration on September 17, 2009. Because of the scope of the changes, TAB requested additional time to review and provide comment. As part of their review, TAB formed a technical committee with representatives from various companies, trade groups and consultants. Since the initial meeting in September, the Department has met with TAB and their subcommittee on October 28, 2009, January 14, 2010, January 21, 2010 and March 25, 2010. At its March 25, 2010, meeting, TAB voted unanimously to recommend that the EQB offer these regulations as a proposed rulemaking.

In addition to TAB's input, the Department received input from industry representatives, consultants and environmental groups. On January 30, 2010 the Department published an Advanced Notice of Proposed Rulemaking for a 30 day comment period. The Department received comments from 87 individuals representing industry, consultants and environmental groups.

The proposed rulemaking was published in the *Pennsylvania Bulletin* on July 10, 2010. The public comment period closed on August 9, 2010. The Department also held five public hearings: July 19, 2010, in Tunkhannock, PA; July 21, 2010, in Williamsport, PA; July 22, 2010, in Meadville, PA; July 22, 2010, in Pittsburgh, PA; and July 26, 2010, in Pittsburgh, PA. Approximately 2,000 individuals submitted comment on the proposed rulemaking. The majority of comments received by the Department supported the rulemaking and encouraged the Department to enact stricter requirements.

The Department presented the draft final form rulemaking to TAB on September 16, 2010. During this discussion, TAB members made several recommendations regarding the definition of unconventional formations, use of blow-out preventers, cementing the intermediate casing, producing gas off the intermediate casing, and the actions the operator must take when it loses circulation of cement.