WEST VIRGINIA CODE: §22-6A-24

§22-6A-24. Casing and cement standards.

(a) The operator may only drill through fresh groundwater zones in a manner that will minimize any disturbance of the zones. Further, the operator shall construct the well and conduct casing and cementing activities for all horizontal wells in a manner that will provide for control of the well at all times, prevent the migration of gas and other fluids into the fresh groundwater and coal seams, and prevent pollution of or diminution of fresh groundwater.

(b) The secretary shall propose legislative and emergency rules in accordance with the provisions of article three, chapter twenty-nine-a of this code to carry out the purposes of this section.

(c) Rules promulgated by the secretary pursuant to this section shall include provisions to accomplish the following:

(1) Effective control of the horizontal well by the operator;

(2) Prevention of the migration of gas or other fluids into sources of fresh groundwater or into coal seams;

(3) Prevention of pollution of or diminution of fresh groundwater;

(4) Prevention of blowouts, explosions, or fires; and

(5) Appropriate disposition of brines and discharges from the drilling or operation of horizontal well.

(d) Procedures for the filing, approval, and revision of casing program:

(1) The operator shall prepare a casing program demonstrating how the horizontal well is to be drilled, cased, and cemented. The program shall comply with rules promulgated by the secretary.

(2) The rules regarding the casing program shall require the following information:

(A) The anticipated depth and thickness of any producing formation, expected pressures, anticipated fresh groundwater zones, and the method or information by which the depth of the deepest fresh groundwater was determined;

(B) The diameter of the borehole;

(C) The casing type, whether the casing to be utilized is new or used, and the depth,

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diameter, wall thickness, and burst pressure rating for the casing;

(D) The cement type, yield, additives, and estimated amount of cement to be used;

(E) The estimated location of centralizers;

(F) The proposed borehole conditioning procedures; and

(G) Any alternative methods or materials required by the secretary as a condition of the well work permit.

(3) A copy of casing program shall be kept at the well site.

(4) Supervisory oil and gas inspectors and oil and gas inspectors may approve revisions to previously approved casing programs when conditions encountered during the drilling process so require: Provided, That any revisions to casing programs approved by inspectors as aforesaid shall ensure that the revised casing programs are at least as protective of the environment as the casing and cementing standards required by this section. Any revisions to the casing program made as a result of on-site modifications shall be documented in the program by the inspector approving the modification. The person making any revisions to the program shall initial and date the revisions and make the revised program available for inspection by the department.

(e) The rules promulgated by the secretary shall provide procedures for the following:

(1) Appropriate installation and use of conductor pipe, which shall be installed in a manner that prevents the subsurface infiltration of surface water or fluids;

(2) Installation of the surface and coal protection casing including remedial procedures addressing lost circulation during surface or coal casing;

(3) Installation of intermediate production casing;

(4) Correction of defective casing and cementing, including requirements that the operator report the defect to the secretary within twenty-four hours of discovery by the operator;

(5) Investigation of natural gas migration, including requirements that the operator promptly notify the secretary and conduct an investigation of the incident; and

(6) Any other procedure or requirements considered necessary by the secretary.

(f) Minimum casing standards.

(1) All casing installed in the well, whether new or used, shall have a pressure rating that exceeds the anticipated maximum pressure to which the casing will be exposed and meet appropriate nationally recognized standards.

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(2) The casing shall be of sufficient quality and condition to withstand the effects of tension and maintain its structural integrity during installation, cementing, and subsequent drilling and production operations.

(3) Centralizers shall be used, with the proper spacing for such well, during the casing installation to ensure that the casing is centered in the hole.

(4) Casing may not be disturbed for a period of at least eight hours after the completion of cementing operations.

(5) No gas or oil production or pressure may exist on the surface casing or the annulus or the coal protection casing annulus.

(g) Minimum cement standards.

(1) All cement used in the well must meet the appropriate nationally recognized standards and must secure the casing to the wellbore, isolate the wellbore from all fluids, contain all pressures during all phases of drilling and operation of the well, and protect the casing from corrosion and degradation.

(2) Cement used in conjunction with surface and coal protection casing must provide zonal isolation in the casing annulus.

(h) Notwithstanding the minimum casing and cementing standards set forth in subsections (f) and (g) of this section, the secretary may:

(1) Revise the casing and cementing standards applicable to horizontal wells from time to time through the legislative rulemaking process so long as the revised casing and cementing standards are at least as protective of the environment; and

(2) Approve alternative casing programs submitted with applications for well work permits so long as the secretary determines that the casing program submitted with the application is at least as protective of the environment as the casing and cementing standards required by this section.

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