**Section 245.520 Cement Requirements**

All cementing activities for well construction shall meet the requirements of this Section.

a) *Cement must conform to* the industry standards set forth in the document referenced in Section 245.115(a)(1). (Section 1-70(d)(4) of the Act)

b) Cement *slurry must be prepared to minimize its free water content in accordance with the industry standards* set forth in the document referenced in Section 245.115(a)(1). (Section 1-70(d)(4) of the Act)

c) Cement activities shall be designed and constructed in a manner to:

1) *secure the casing in the wellbore* (Section 1-70(d)(4)(A) of the Act);

2) *isolate and protect fresh groundwater* (Section 1-70(d)(4)(B) of the Act);

3) *isolate abnormally pressured zones, lost circulation zones, and any potential flow zones, including hydrocarbon and fluid-bearing zones* (Section 1-70(d)(4)(C) of the Act);

4) *properly control formation pressure and any pressure from drilling, completion and production* (Section 1-70(d)(4)(D) of the Act);

5) *protect the casing from corrosion and degradation* (Section 1-70(d)(4)(E) of the Act); and

6) *prevent gas flow in the annulus* (Section 1-70(d)(4)(F) of the Act).

d) For all cementing activities, the *cement must be pumped at a rate and in a flow regime that inhibits channeling of the cement in the annulus* (Section 1-70(d)(7) of the Act).

e) Cement must be placed behind all surface, intermediate and production casing pursuant to the requirements of Sections 245.530, 245.560 and 245.570, respectively.

f) *After the cement is placed behind the casing, the permittee shall wait on cement to set until the cement achieves a calculated compressive strength of at least 500 pounds per square inch, and a minimum of 8 hours before the casing is disturbed in any way, including installation of a blowout preventer* (Section 1-70(d)(8) of the Act).

g) *Cement compressive strength tests must be performed on all* cemented *surface, intermediate, and production casing strings* in accordance with the industry standards set forth in the document referenced in Section 245.115(a)(1):

1) *the cement shall have a 72-hour compressive strength of at least 1,200 psi; and*

2) *the free water separation shall be no more than 6 milliliters per 250 milliliters of cement.* (Section 1-70(d)(8) of the Act)

h) Cement job logs must be kept for all cementing activities pursuant to the following requirements:

1) Cement job logs shall provide information about the cementing activities as specified on a form to be prescribed by the Department, including, but not limited to:

A) dates of cementing;

B) source of the cement;

C) type of cement; and

D) amount used;

2) *A copy of the cement job logs* and cement compressive strength test results *for* all *cemented* surface, intermediate, and production *casing strings in the well shall be maintained in the well file* and, upon notice by the Department, be made available to Department inspectorsat the well site during drilling and HVHHF operations *and* shall be made *available to the Department upon request* (Section 1-70(d)(9) of the Act);

3) Permittee shall provide the Department with a copy of all cement job logs and cement compressive strength test results 30 days after completion of cementing activities; and

4) Permittee shall retain these records for the life of the well until the well is plugged, abandoned and restored in accordance with the Illinois Oil and Gas Act, the administrative rules promulgated under that Act, and Subpart J of this Part.