

seeking authorization to inject pursuant to § 146.15.

[70 FR 70532, November 22, 2005]

**Subpart C—Criteria and Standards Applicable to Class II Wells**

**§ 146.21 Applicability.**

This subpart establishes criteria and standards for underground injection control programs to regulate Class II wells.

**§ 146.22 Construction requirements.**

(a) All new Class II wells shall be sited in such a fashion that they inject into a formation which is separated from any USDW by a confining zone that is free of known open faults or fractures within the area of review.

(b)(1) All Class II injection wells shall be cased and cemented to prevent movement of fluids into or between underground sources of drinking water. The casing and cement used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and cementing requirements, the following factors shall be considered:

- (i) Depth to the injection zone;
  - (ii) Depth to the bottom of all USDWs; and
  - (iii) Estimated maximum and average injection pressures;
- (2) In addition the Director may consider information on:
- (i) Nature of formation fluids;
  - (ii) Lithology of injection and confining zones;
  - (iii) External pressure, internal pressure, and axial loading;
  - (iv) Hole size;
  - (v) Size and grade of all casing strings; and
  - (vi) Class of cement.

(c) The requirements in paragraph (b) of this section need not apply to existing or newly converted Class II wells located in existing fields if:

- (1) Regulatory controls for casing and cementing existed for those wells at the time of drilling and those wells are in compliance with those controls; and
- (2) Well injection will not result in the movement of fluids into an under-

ground source of drinking water so as to create a significant risk to the health of persons.

(d) The requirements in paragraph (b) of this section need not apply to newly drilled wells in existing fields if:

(1) They meet the requirements of the State for casing and cementing applicable to that field at the time of submission of the State program to the Administrator; and

(2) Well injection will not result in the movement of fluids into an underground source of drinking water so as to create a significant risk to the health of persons.

(e) Where a State did not have regulatory controls for casing and cementing prior to the time of the submission of the State program to the Administrator, the Director need not apply the casing and cementing requirements in paragraph (b) of this section if he submits as a part of his application for primacy, an appropriate plan for casing and cementing of existing, newly converted, and newly drilled wells in existing fields, and the Administrator approves the plan.

(f) Appropriate logs and other tests shall be conducted during the drilling and construction of new Class II wells. A descriptive report interpreting the results of that portion of those logs and tests which specifically relate to (1) an USDW and the confining zone adjacent to it, and (2) the injection and adjacent formations shall be prepared by a knowledgeable log analyst and submitted to the director. At a minimum, these logs and tests shall include:

(1) Deviation checks on all holes constructed by first drilling a pilot hole and then enlarging the pilot hole, by reaming or another method. Such checks shall be at sufficiently frequent intervals to assure that vertical avenues for fluid movement in the form of diverging holes are not created during drilling.

(2) Such other logs and tests as may be needed after taking into account the availability of similar data in the area of the drilling site, the construction plan, and the need for additional information that may arise from time to time as the construction of the well progresses. In determining which logs