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- (ii) May inject at pressures greater than those specified in paragraph (a)(1)(i) of this section for the field or formation in which he is operating provided he submits a request in writing to the Regional Administrator, and demonstrates to the satisfaction of the Regional Administrator that such injection pressure will not violate the requirement of §144.28(f)(3)(ii) (A) and (B). The Regional Administrator may grant such a request after notice, opportunity for comment, and opportunity for a public hearing, according to the provisions of part 124, subpart A of this chapter.
- (2) Prior to such time as the Regional Administrator establishes rules for maximum injection pressure based on data provided pursuant to paragraph (a)(2)(ii) of this section the owner or operator shall:
- (i) Limit injection pressure to a value which will not exceed the operating requirements of §144.28(f)(3)(ii); and
- (ii) Submit data acceptable to the Regional Administrator which defines the fracture pressure of the formation in which injection is taking place. A single test may be submitted on behalf of two or more operators conducting operations in the same formation, if the Regional Administrator approves such submission. The data shall be submitted to the Regional Administrator within 1 year of the effective date of this program.
- (b) Casing and cementing. Where the Regional Administrator determines that the owner or operator of an existing enhanced recovery or hydrocarbon storage well may not be in compliance with the requirements of §§ 144.28(e) and 146.22, the owner or operator shall comply with paragraphs (b) (1) through (4) of this section, when required by the Regional Administrator:
 - (1) Protect USDWs by:
- (i) Cementing surface casing by recirculating the cement to the surface from a point 50 feet below the lowermost USDW; or
- (ii) Isolating all USDWs by placing cement between the outermost casing and the well bore; and
- (2) Isolate any injection zones by placing sufficient cement to fill the calculated space between the casing

and the well bore to a point 250 feet above the injection zone; and

- (3) Use cement:
- (i) Of sufficient quantity and quality to withstand the maximum operating pressure;
- (ii) Which is resistant to deterioration from formation and injection fluids: and
- (iii) In a quantity no less than 120% of the calculated volume necessary to cement off a zone.
- (4) The Regional Administrator may specify other requirements in addition to or in lieu of the requirements set forth in paragraphs (b) (1) through (3) as needed to protect USDWs.

Subpart D—Arizona

§147.150 State-administered program. [Reserved]

§147.151 EPA-administered program.

- (a) Contents. The UIC program that applies to all injection activities in Arizona, including those on Indian lands, is administered by EPA. The UIC program for Navajo Indian lands consists of the requirements contained in subpart HHH of this part. The program for all injection activity except that on Navajo Indian lands consists of the UIC program requirements of 40 CFR parts 124, 144, 146, 148, and any additional requirements set forth in the remainder of this subpart. Injection well owners and operators, and EPA shall comply with these requirements.
- (b) Effective dates. The effective date for the UIC program in Arizona, except for the lands of the Navajo Indians, is June 25, 1984. The effective date for the UIC program on the lands of the Navajo is November 25, 1988.

[53 FR 43086, Oct. 25, 1988, as amended at 56 FR 9412, Mar. 6, 1991]

§147.152 Aquifer exemptions. [Reserved]

Subpart E—Arkansas

§147.200 State-administered pro gram—Class I, III, IV, and V wells.

The UIC program for Class I, III, IV and V wells in the State of Arkansas, except those wells on Indian lands, is

the program administered by the Arkansas Department of Pollution Control and Ecology approved by EPA pursuant to section 1422 of the SDWA. Notice of this approval was published in the FEDERAL REGISTER on July 6, 1982 (47 FR 29236); the effective date of this program is July 6, 1982. This program consists of the following elements, as submitted to EPA in the State's program application.

- (a) Incorporation by reference. The requirements set forth in the State statutes and regulations cited in this paragraph are hereby incorporated by reference and made a part of the applicable UIC program under the SDWA for the State of Arkansas. This incorporation by reference was approved by the Director of the Federal Register on June 25, 1984.
- (1) Arkansas Water and Air Pollution Control Act, Act 472 of 1949 as amended, Arkansas Statutes Annotated sections 82–1901 through 82–1943 (1976);
- (2) Act 105 of 1939, Arkansas Statutes Annotated sections 53–101 through 53–130 (1971 and Supp. 1981); Act 937 of 1979, Arkansas Statutes Annotated sections 53–1301 through 53–1320 (Supp. 1981); Act 523 of 1981;
- (3) Arkansas Underground Injection Control Code, Department of Pollution Control and Ecology, promulgated January 22, 1982;
- (4) General Rule and Regulations, Arkansas Oil and Gas Commission (Order No. 2–39, revised July 1972);
- (5) Arkansas Hazardous Waste Management Code, Department of Pollution Control and Ecology, promulgated August 21, 1981.
- (b) The Memorandum of Agreement and Addendum No. 1 to the Memorandum of Agreement, between EPA Region VI and the Arkansas Department of Pollution Control and Ecology and the Arkansas Oil and Gas Commission, signed by the EPA Regional Administrator on May 25, 1982.
- (c) Statement of legal authority. (1) Letter from Chief Attorney, Arkansas Department of Pollution Control and Ecology, to Acting Regional Administrator, EPA Region VI, "Re: Legal Authority of the Department of Pollution Control and Ecology of the State of Arkansas to Administer an Underground

Injection Control Program," July 29, 1981;

- (2) Letter from Chief Attorney, Arkansas Department of Pollution Control and Ecology, to Acting Regional Counsel, EPA Region VI, "Re: Addendum to Legal Statement—Underground Injection Control Program," October 13 1981:
- (3) Letter from General Counsel, Arkansas Oil and Gas Commission, to Acting Regional Counsel, EPA Region VI, "Re: Supplemental Addendum to Legal Statement—Underground Injection Control Program," October 20, 1981:
- (4) Letter from Chief Attorney, Arkansas Department of Pollution Control and Ecology, to Attorney, Office of Regional Counsel, EPA Region VI (restatus as independent legal counsel), December 31, 1981;
- (5) Letter from General Counsel, Arkansas Oil and Gas Commission, to Acting Regional Counsel, EPA Region VI, "Re: Supplemental Addendum to Legal Statement—Underground Injection Control Program," January 13, 1982:
- (6) Letter from Chief Counsel, Arkansas Department of Pollution Control and Ecology, to Acting Regional Counsel, EPA Region VI, "Re: Addendum to Legal Statement—Underground Injection Control Program," February 15, 1982;
- (7) Letter from Chief Counsel, Arkansas Department of Pollution Control and Ecology, to Acting Regional Counsel, EPA Region VI, "Re: Addendum to Legal Statement—Underground Injection Control Program," May 13, 1982.
- (d) The Program Description and any other materials submitted as part of the application or as supplements thereto.

[49 FR 20197, May 11, 1984, as amended at 53 FR 43086, Oct. 25, 1988]

§147.201 State-administered program—Class II wells. [Reserved]

§147.205 EPA-administered program— Indian lands.

(a) Contents. The UIC program for all classes of wells on Indian lands in Arkansas is administered by EPA. This program consists of the UIC program requirements of 40 CFR parts 124, 144,

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146, 148 and any additional requirements set forth in this subpart. Injection well owners and operators, and EPA shall comply with these requirements.

(b) *Effective date.* The effective date of the UIC program for Indian lands in Arkansas is November 25, 1988.

[53 FR 43086, Oct. 25, 1988, as amended at 56 FR 9412, Mar. 6, 1991]

Subpart F—California

§147.250 State-administered program—Class II wells.

The UIC program for Class II wells in the State of California, except those on Indian lands, is the program administered by the California Division of Oil and Gas, approved by EPA pursuant to SDWA section 1425.

- (a) Incorporation by reference. The requirements set forth in the State statutes and regulations cited in this paragraph are hereby incorporated by reference and made a part of the applicable UIC program under the SDWA for the State of California. This incorporation by reference was approved by the Director of the Federal Register on June 25, 1984.
- (1) California Laws for Conservation of Petroleum and Gas, California Public Resources Code Div. 3, Chapt. 1, §§ 3000–3359 (1989);
- (2) California Administrative Code, title 14, §§1710 to 1724.10 (May 28, 1988).
- (b) The Memorandum of Agreement between EPA Region IX and the California Division of Oil and Gas, signed by the EPA Regional Administrator on September 29, 1982.
- (c) Statement of legal authority. (1) Letter from California Deputy Attorney General to the Administrator of EPA, "Re: Legal Authority of California Division of Oil and Gas to Carry Out Class II Injection Well Program," April 1, 1981;
- (2) Letter from California Deputy Attorney General to Chief of California Branch, EPA Region IX, "Re: California Application for Primacy, Class II UIC Program," December 3, 1982.
- (d) The Program Description and any other materials submitted as part of

the application or as supplements thereto.

[49 FR 20197, May 11, 1984, as amended at 52 FR 17681, May 11, 1987; 56 FR 9412, Mar. 6, 1991]

§147.251 EPA-administered program— Class I, III, IV and V wells and Indian lands.

- (a) Contents. The UIC program in the State of California for Class I, III, IV and V wells, and for all classes of wells on Indian lands, is administered by EPA. The program consists of the UIC program requirements of 40 CFR parts 124, 144, 146, 148, and any additional requirements set forth in the remainder of this subpart. Injection well owners and operators, and EPA shall comply with these requirements.
- (b) *Effective dates.* The effective date for the UIC program for all lands in California, including Indian lands, is June 25, 1984.

[52 FR 17681, May 11, 1987, as amended at 56 FR 9412, Mar. 6, 1991]

§147.252 Aquifer exemptions. [Reserved]

§147.253 Existing Class I, II (except enhanced recovery and hydrocarbon storage) and III wells authorized by rule.

Maximum injection pressure. The owner or operator shall limit injection pressure to the lesser of:

- (a) A value which will not exceed the operating requirements of §144.28(f)(3) (i) or (ii) as applicable; or
- (b) A value for well head pressure calculated by using the following formula:

Pm=(0.733 - 0.433 Sg)d where

Pm=injection pressure at the well head in pounds per square inch
Sg=specific gravity of inject fluid (unitless)
d=injection depth in feet.

Subpart G—Colorado

§147.300 State-administered program—Class II wells.

The UIC program for Class II wells in the State of Colorado, except those wells on Indian Lands, is the program administered by the Colorado Oil and