

§ 147.1655

- (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) of this section as needed to protect USDWs.

§ 147.1655 Requirements for wells authorized by permit.

- (a) The owner or operator of a Class I well authorized by permit shall install or shall ensure that the well has:
- (1) Surface casing present;
 - (i) Extending from the surface to a depth at least 50 feet below the base of the lowermost USDW; and
 - (ii) Cemented back to the surface by recirculating the cement; and
 - (2) Long string casing and tubing;
 - (i) Extending to the injection zone; and
 - (ii) Cemented back to 50 feet above the base of the next largest casing string.
- (b) The owner or operator of a new Class II well authorized by permit shall:
- (1) Install surface casing from the surface to at least 50 feet below the base of the lowermost USDW.
 - (2) Cement the casing by recirculating to the surface or by using no less than 120% of the calculated annular volume.
 - (3) For new enhanced recovery wells, install tubing or long string casing extending to the injection zone.
 - (4) For new salt water disposal wells, install long string casing and tubing extending to the injection zone.
 - (5) Isolate any injection zone by placing sufficient cement to fill the calculated volume to a point 50 feet above the injection zone.
- (c) The Regional Administrator may specify casing and cementing requirements other than those listed in paragraphs (a) and (b) of this section on a case by case basis as conditions of the permit.

40 CFR Ch. I (7-1-04 Edition)

Subpart II—North Carolina

§ 147.1700 State-administered program.

The UIC program for all classes of wells in the State of North Carolina, except those wells on Indian lands, is the program administered by the North Carolina Department of Environment, Health and Natural Resources approved by EPA pursuant to section 1422 of the SDWA. Notice of this approval was published in the FEDERAL REGISTER on April 19, 1984 (49 FR 15553); the effective date of this program is April 19, 1984. 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 North Carolina. This incorporation by reference was approved by the Director of the OFR in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained at the North Carolina Department of Environment, Health and Natural Resources, P.O. Box 27687, Raleigh, North Carolina 27611. Copies may be inspected at the Environmental Protection Agency, Region IV, 345 Courtland Street, NE., Atlanta, Georgia 30365, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

- (1) Administrative Procedure Act, N.C. GEN. STAT. 150B-1 through 150B-64 (1987 and Cumm. Supp. 1989);
- (2) North Carolina Well Construction Act, N.C. GEN. STAT. §§ 87-83 through 87-99 (1989 and Cumm. Supp. 1989);
- (3) Water and Air Resources, N.C. GEN. STAT. §§ 143-211 through 143-215.10 (1987 and Cumm. Supp. 1989);
- (4) Solid Waste Management, N.C. GEN. STAT. §§ 130A-290 through 130A-309.03 (1989);
- (5) North Carolina Drinking Water Act, N.C. GEN. STAT. §§ 130A-311 through 130A-332 (1989);