

**TRANSMITTAL SHEET FOR
NOTICE OF INTENDED ACTION**

Control 335 Department or Agency Environmental Management
Rule No. 335-6-8-.14
Rule Title: Class VI Well Permit Application and Application Review Requirements

X New Amend Repeal Adopt by Reference

Would the absence of the proposed rule significantly harm or endanger the public health, welfare, or safety? YES

Is there a reasonable relationship between the state's police power and the protection of the public health, safety, or welfare? YES

Is there another, less restrictive method of regulation available that could adequately protect the public? NO

Does the proposed rule have the effect of directly or indirectly increasing the costs of any goods or services involved and, if so, to what degree? NO

Is the increase in cost, if any, more harmful to the public than the harm that might result from the absence of the proposed rule? N/A

Are all facets of the rulemaking process designed solely for the purpose of, and so they have, as their primary effect, the protection of the public? YES

Does the proposed rule have an economic impact? NO


If the proposed rule has an economic impact, the proposed rule is required to be accompanied by a fiscal note prepared in accordance with subsection (f) of section 41-22-23, Code of Alabama 1975.

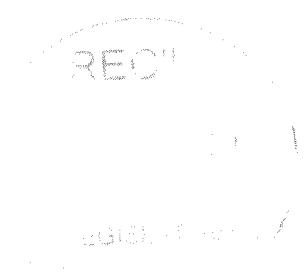
Certification of Authorized Official

I certify that the attached proposed rule has been proposed in full compliance with the requirements of Chapter 22, Title 41, Code of Alabama 1975, and that it conforms to all applicable filing requirements of the Administrative Procedure Division of the Legislative Reference Service.

Signature of certifying officer Nancy Ellett

Date May 20, 2011

Date Filed 



APA-2
11/96

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION**

NOTICE OF INTENDED ACTION

AGENCY NAME: Alabama Department of Environmental Management

Rule NO.	Title
335-6-8-.01	Purpose
335-6-8-.02	Definitions
335-6-8-.05	Prohibited Actions
335-6-8-.07	Permit Issuance Procedures
335-6-8-.08	Public Notice Requirements
335-6-8-.10	Class V Well Permit Application Requirements
335-6-8-.12	Class V Well Permit Requirements
335-6-8-.13	Class VI Well Applicability and General Requirements
335-6-8-.14	Class VI Well Permit Application and Application Review Requirements
335-6-8-.15	Class VI Well Minimum Criteria for Siting
335-6-8-.16	Class VI Well Area of Review and Area of Review Corrective Action
335-6-8-.17	Class VI Well Financial Responsibility Requirements
335-6-8-.18	Class VI Well Construction Requirements
335-6-8-.19	Class VI Well Logging, Sampling and Testing Requirements Prior to Injection Well Operation
335-6-8-.20	Class VI Well Operating Requirements
335-6-8-.21	Class VI Well Mechanical Integrity Requirements
335-6-8-.22	Class VI Well Testing and Monitoring Requirements
335-6-8-.23	Class VI Well Reporting Requirements
335-6-8-.24	Class VI Well Plugging Requirements
335-6-8-.25	Class VI Well Post-Injection Site Care and Site Closure Requirements
335-6-8-.26	Class VI Well Emergency and Remedial Response Requirements
335-6-8-.27	Class VI Well Permit Requirements
335-6-8-.28	Technical Submittals and Other Reports to the Department
335-6-8-.29	Coordination with EPA
335-6-8-.30	Confidentiality

INTENDED ACTION: Revise Division 6 of the ADEM Administrative Code with the addition or amendment of Rules 335-6-8-.01 (Purpose), 335-6-8-.02 (Definitions), 335-6-8-.05 (Prohibited Actions), 335-6-8-.07 (Permit Issuance Procedures), 335-6-8-.08

(Public Notice), 335-6-8-.10 (Class V Well Permit Application Requirements), 335-6-8-.12 (Permit Issuance Procedures), 335-6-8-.13 (Class VI Well Applicability and General Requirements), 335-6-8-.14 (Class VI Well Permit Application and Application Review Requirements), 335-6-8-.15 (Class VI Well Minimum Criteria for Siting), 335-6-8-.16 (Area of Review and Area of Review Corrective Action), 335-6-8-.17 (Class VI Well Financial Responsibility Requirements), 335-6-8-.18 (Class VI Well Construction Requirements), 335-6-8-.19 (Class VI Well Logging, Sampling and Testing Requirements Prior to Injection Well Operation), 335-6-8-.20 (Class VI Well Operating Requirements), 335-6-8-.21 (Class VI Well Mechanical Integrity Requirements), 335-6-8-.22 (Class VI Well Testing and Monitoring Requirements), 335-6-8-.23 (Class VI Well Reporting Requirements), 335-6-8-.24 (Class VI Well Plugging Plan), 335-6-8-.25 (Post-Injection Site Care and Site Closure Requirements), 335-6-8-.26 (Class VI Well Emergency and Remedial Response Requirements), 335-6-8-.27 (Class VI Well Permit Requirements), 335-6-8-.28 (Technical Submittals and Other Reports to the Department), 335-6-8-.29 (Coordination with EPA), and 335-6-8-.30 (Confidentiality).

SUBSTANCE OF PROPOSED ACTION:


Revisions to the Division 6 Code are being proposed to include requirements for Class VI injection wells, for geologic sequestration of carbon dioxide. The proposed additions and amendments are consistent with the federal regulations for Class VI wells published in the Federal Register on December 10, 2010.

TIME, PLACE, MANNER OF PRESENTING VIEWS:

Comments may be submitted in writing or orally at a public hearing to be held 1:00 p.m., July 11, 2011, in the ADEM Hearing Room, 1400 Coliseum Blvd., Montgomery, Alabama 36110.

FINAL DATE FOR COMMENT AND COMPLETION OF NOTICE: July 11, 2011

CONTACT PERSON AT AGENCY: Sonja Massey (334) 271-7832



Lance R. LeFleur
Director

335-6-8-.14 Coordination with EPA Class VI Well Permit Application and Application Review Requirements.

(1) Prior to the issuance of a permit for the construction and operation of a new Class VI well or the conversion of an existing Class II or Class V well to a Class VI well, the owner or operator shall submit to the Department; and pursuant to 335-6-8-.23(e), the owner or operator shall also submit to the EPA; and the Department shall consider, the following:

(a) Information required in 40 CFR Part 144.31(e)(1)through (6) which includes:

1. The activities conducted by the applicant which require it to obtain permits under the Resource Conservation and Recovery Act, the UIC program under the Safe Drinking Water Act, the National Pollutant Discharge Elimination System program under the Clean Water Act, or the Prevention of Significant Deterioration program under the Clean Air Act

2. Name, mailing address, and location of the facility for which the application is submitted.

3. Up to four SIC codes which best reflect the principal products or services provided by the facility.

4. The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.

5. Whether the facility is located on Indian lands.

6. A listing of all permits or construction approvals received or applied for under any of the following Programs within the State of Alabama:

(i) Hazardous Waste Management program under RCRA .

(ii) UIC program under SDWA.

(iii) NPDES program under CWA.

(iv) Prevention of Significant Deterioration (PSD) program under the Clean Air Act.

(v) Nonattainment program under the Clean Air Act.

(vi) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.

(vii) Ocean dumping permits under the Marine Protection Research and Sanctuaries Act.

(viii) Dredge and fill permits under section 404 of CWA.

(ix) Other relevant environmental permits, including State permits.

(b) A map showing the location of the proposed or existing injection well, including locational coordinates, for which a permit is sought, and the applicable area of review consistent with 335-6-8-.16. Within the area of review, the map must show the number or name, and location of all injection wells, producing wells, abandoned wells, plugged wells or dry holes, deep stratigraphic boreholes, State-or EPA-approved subsurface cleanup sites, surface bodies of water, springs, mines (surface and subsurface), quarries, water wells, other pertinent surface features including structures intended for human occupancy, State, Tribal and Territory boundaries, and roads. The map should also show faults, if known or suspected. Only information of public record is required to be included on this map;

(c) Information on the geologic structure and hydrogeologic properties of the proposed storage site and overlying formations, including:

1. Maps and cross sections of the area of review;

2. The location, orientation, and properties of known or suspected faults and fractures that may transect the confining zone(s) in the area of review and a determination that they would not interfere with containment;

3. Data on the depth, areal extent, thickness, mineralogy, porosity, permeability, and capillary pressure of the injection and confining zone(s); including geology/facies changes based on field data which may include geologic cores, outcrop data, seismic surveys, well logs, and names and lithologic descriptions;

4. Geomechanical information on fractures, stress, ductility, rock strength, and insitu fluid pressures within the confining zone(s);

5. Information on the seismic history including the presence and depth of seismic sources and a determination that the seismicity would not interfere with containment; and

6. Geologic and topographic maps and cross sections illustrating regional geology, hydrogeology, and the geologic structure of the local area.

(d) A tabulation of all wells within the area of review which penetrate the injection or confining zone(s). Such data must include a description of each well's type, construction, date drilled, location, depth record of plugging and/or completion, and any additional information the Department may require;

(e) Maps and stratigraphic cross sections indicating the general vertical and lateral limits of all USDWs, water wells and springs within the area of review, their positions relative to the injection zone(s), and the direction of water movement, where known;

(f) Baseline geochemical data on subsurface formations, including all USDWs in the area of review;

(g) Proposed operating data for the proposed geologic sequestration site:

1. Average and maximum daily rate and volume and/or mass and total anticipated volume and/or mass of the carbon dioxide stream;

2. Average and maximum injection pressure;

3. The source(s) of the carbon dioxide stream; and

4. An analysis of the chemical and physical characteristics of the carbon dioxide stream.

(h) Proposed pre-operational formation testing program to obtain an analysis of the chemical and physical characteristics of the injection zone(s) and confining zone(s) and that meets the requirements at 335-6-8-.19;

(i) Proposed stimulation program, a description of stimulation fluids to be used and a determination that stimulation will not interfere with containment;

(j) Proposed procedure to outline steps necessary to conduct injection operation;

(k) Schematics or other appropriate drawings of the surface and subsurface construction details of the existing or proposed well;

(l) Injection well construction procedures that meet the requirements of 335-6-8-.18;

(m) Proposed area of review and corrective action plan that meets the requirements under 335-6-8-.16;

(n) A demonstration, satisfactory to the Department, that the applicant has met the financial responsibility requirements under 335-6-8-.17;

(o) Proposed testing and monitoring plan required by 335-6-8-.22;

(p) Proposed post-injection site care and site closure plan required by 335-6-8-.25.

(q) At the Department's discretion, a demonstration of an alternative post-injection site care timeframe required by 335-6-8-.25(3);

(r) Proposed emergency and remedial response plan required by 335-6-8-.26(1);

(s) A list of contacts, submitted to the Department, for those States, Tribes, and Territories identified to be within the area of review of the Class VI project based on information provided in paragraph 335-6-8-.14(1)(b); and

(t) Any other information requested by the Department

(2) The Department shall notify, in writing, any States, Tribes, or Territories within the area of review of the Class VI project based on information provided in paragraphs 335-6-8-.14(1)(b) and 335-6-8-.14(1)(s) of the permit application.

(3) Prior to granting approval for the operation of a Class VI well, the Department shall consider the following information:

(a) The final area of review based on modeling, using data obtained during logging and testing of the well and formation in the case of a Class II or Class V well for which a Class VI permit application is being submitted; or using data obtained during logging and testing of the well and the formation, as required by paragraphs (3)(b), (c), (d), (f), (g), and (j), of this rule.

(b) Any relevant updates, based on data obtained during logging and testing of the well and the formation as required by paragraphs (3)(c), (3)(d), (3)(f), (3)(g) and (3)(j) of this rule, to the information on the geologic structure and hydrogeologic properties of the proposed storage site and overlying formations, submitted to satisfy the requirements of paragraph (1)(c) of this rule;

(c) Information on the compatibility of the carbon dioxide stream with fluids in the injection zone(s) and minerals in both the injection and the confining zone(s), based on the results of the formation testing program, and with the materials used to construct the well;

(d) The results of the formation testing program required at paragraph (1)(h) of this rule;

(e) Proposed injection well construction procedures that meet the requirements of 335-6-8-.18;

(f) The status of corrective action on wells in the area of review;

(g) All available logging and testing program data on the well required by 335-6-8-.19 ;

(h) A proposal for demonstration of mechanical integrity pursuant to 335-6-8-.21;

(i) Any updates to the proposed area of review and corrective action plan, testing and monitoring plan, injection well plugging plan, post-injection site care and site closure plan, or the emergency and remedial response plan submitted under paragraph (1) of this rule, which are necessary to address new information collected during logging and testing of the well and the formation as required by all paragraphs of this rule, and any updates to the alternative post-injection site care timeframe demonstration submitted under paragraph (1) of this rule, which are necessary to address new information collected during the logging and testing of the well and the formation as required by all paragraphs of this rule; and

(j) Any other information requested by the Department.

Author: Sonja Massey.

Statutory Authority: Code of Alabama 1975, §§ 22-22-9, 22-22A-5, 22-22A-6, 22-22A-8.

History: XXXXXX, 2011.