



**JOHN BEL EDWARDS**  
GOVERNOR

**State of Louisiana**  
**DEPARTMENT OF NATURAL RESOURCES**  
**OFFICE OF CONSERVATION**

**THOMAS F. HARRIS**  
SECRETARY

**RICHARD P. IEYOUB**  
COMMISSIONER OF CONSERVATION

June 9, 2016

Senator John A. Alario, Jr., President  
Senator Norbert Chabert, Natural Resource Committee Chairman  
Representative Taylor Barras, Speaker  
Representative Stuart Bishop, Natural Resources and Environment Committee Chairman

Via Statutorily Prescribed E-mail

Re: Report of Proposed Amendment to  
Office of Conservation Rules and Regulations  
LAC 43:XIX. 405 and 423.B (Statewide Order No. 29-B)  
Carbon Dioxide Enhanced Oil Recovery Application Requirements

Dear Oversight Authorities:

The Commissioner of Conservation proposes to amend LAC 43:XIX. to add section 405 and 423.B in accordance with the provisions of the Administrative Procedure Act R.S. 49:950 et seq., and pursuant to the power delegated under the laws of the state of Louisiana. The proposed amendment is made to implement application requirements for carbon dioxide enhanced oil recovery.

I. Copy of the rule as it is proposed for amendment per La R.S. 49:968.C(1):

See the attached Notice of Intent.

II. Statement of the proposed action per La R.S. 49:968.C(2):

The Louisiana Office of Conservation proposes to amend LAC 43:XIX. to add section 405. The proposed amendment is made to implement application requirements for carbon dioxide enhanced oil recovery.

III. The specific citation of the enabling legislation purporting to authorize amendment of the rule per La R.S. 49:968.C(3):

La R.S 30:4et seq.

IV. Statement of the circumstances requiring amendment of the rule per La R.S. 49:968.C(4):

Pre-hearing Report to Oversight Authorities

The proposed amendment was initiated in an effort to implement application requirements for carbon dioxide enhanced oil recovery. While there are currently application requirements for enhanced oil recovery generally, there are none specific to issues associated with the use of carbon dioxide.

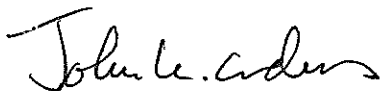
V. Statement of the fiscal and economic impact of the proposed rule amendment per La R.S. 49:968.C(5):

The fiscal and economic impact statement is attached to this report.

A notice of intent to initiate rule-making will be published in the Louisiana Register on June 20 2016, with a public comment period on the proposal scheduled to remain open until July 11, 2016 at 4:00 PM.

Please contact me at 225-342-7889 if there are any questions.

Yours very truly,



John W. Adams  
Attorney, Office of Conservation

JWA:jwa

Attachments

OFFICE OF THE STATE REGISTER INSERTION ORDER (eff.08/02)  
Claiborne Building 1201 North Third Street Suite 3-220 Post Office Box 94095  
Baton Rouge, LA 70804-9095 (225)342-5015 FAX (225)342-0284

(SUBMIT A SEPARATE INSERTION ORDER PER DOCUMENT)

EMERGENCY RULE     NOTICE OF INTENT     RULE     POTPOURRI

REFER TO INSTRUCTIONS ON REVERSE SIDE

OFFICE OF THE STATE REGISTER

This is your authority to publish in the (month) June, 2016 Louisiana Register the document indicated above.

Office of Conservation  
Office/Board/Commission promulgating this document

Department of Natural Resources  
Department under which office/board/commission is classified

Richard P. Ieyoub, Commissioner  
(name) (title)  
Name and title of person whose signature will appear in the publication (at the end of the document)

John Adams    225 342-7889    225 242-3663  
(name) (phone) (fax)  
Name, phone number, and FAX number of person to contact regarding this document

Johnny.Adams@la.gov  
E-mail address of contact person

Provide a short descriptive listing for this document to be used in the *Louisiana Register's* TABLE OF CONTENTS/INDEX (note: this description should match the fiscal statement title, if sending a Notice of Intent:

\*If sending a diskette, indicate the name of the file on diskette:

Amend. to LAC 43:XIX.Chapter 4

  
Signature of Agency Head or Designee

Important: If submitting both an Emergency Rule (ER) and a Notice of Intent (NOI) to be published this month, AND if the rule text in the ER is identical to the rule text in the NOI, check here:

Richard P. Ieyoub, Commissioner  
Print Name and Title of Agency Head or Designee

CERTIFICATION OF AVAILABLE FUNDS

DOCUMENT # \_\_\_\_\_

**ISIS AGENCY:** I certify the availability of fiscal year \_\_\_\_\_ appropriated funds for the payment of the above referenced publication and authorize the processing of an Interagency Billing with the following coding on the 30th of the month of the publication. Attach supplemental sheet for additional lines of coding.

432    4321010500    5950006    43200N0900    DNRMS1000009  
AGENCY    Cost Center    G/L    Fund    Internal Order

**NON-ISIS AGENCY:** I certify the availability of fiscal year \_\_\_\_\_ appropriated funds for the payment of the above referenced publication and agree to place corresponding invoice in line for payment upon receipt.

Billing Address for Agencies:  
Dept. of Natural Resources

  
Signature of Agency Head or Designee - Phone #

Agency Name  
PO Box 94275 Capitol Station  
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Baton Rouge    LA    70804  
City    State    Zip Code

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## NOTICE OF INTENT

### Department of Natural Resources Office of Conservation

#### Advanced Notice of Rulemaking and Solicitation of Comments on Carbon Dioxide Enhanced Oil Recovery (LAC 43:Part XIX.Subpart 1)

The Department of Natural Resources, Office of Conservation proposes to amend LAC 43: XIX.Subpart 1 in accordance with the provisions of the Administrative Procedure Act, R.S. 49:950 et seq., and pursuant to the power delegated under the laws of the state of Louisiana. The proposed amendment is made to implement application requirements for Carbon Dioxide Enhanced Oil Recovery.

#### Title 43

#### NATURAL RESOURCES

#### Part XIX. Office of Conservation – General Operations

#### Subpart 1. Statewide Order No. 29-B

#### Chapter 4. Pollution Control (Class II Injection/Disposal Well Regulations)

#### § 401. Definitions

Confining Zone—a geological formation, group of formations, or part of a formation that is capable of limiting fluid or gas movement above an injection zone.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:4 et seq.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of Conservation, LR: \_\_\_\_ (\_\_\_\_ 2015).

#### § 403. ...

#### § 405. Application Requirements for New Enhanced Recovery Injection and New Saltwater Disposal Wells

##### A. – B. ...

##### C. Area of Review For Enhanced Oil Recovery Wells Injecting Carbon Dioxide

1. The area of review (AOR) will be the approved enhanced oil recovery (EOR) project area plus the surrounding region where USDWs may be endangered by the carbon dioxide (CO<sub>2</sub>) injection activities, at a minimum, no less than ¼ mile beyond the project area. The AOR shall extend no closer than ½ mile, at a minimum, to any EOR well injecting or permitted to inject CO<sub>2</sub>. For EOR projects injecting CO<sub>2</sub> that are permitted as of the effective date of these regulations, the owner or operator of the project has thirty days from the effective date of these regulations to submit a plan to the commissioner to come into compliance with §405.C, D, and E.

2. If it is determined at any time that the injected CO<sub>2</sub> and associated reservoir fluids have migrated beyond the boundary of the approved EOR project area, the AOR shall be redefined to extend, at a minimum, no less than an additional ¼ mile beyond the migrating front.

3. The owner or operator of a Class II EOR CO<sub>2</sub> Injection Well must submit a plan acceptable to the commissioner to periodically reevaluate the AOR for the proposed CO<sub>2</sub> EOR project and perform corrective action for any identified deficient wells. The AOR must be reevaluated on a frequency not to exceed five years.

4. The owner or operator of the Class II EOR CO<sub>2</sub> Injection well must identify all penetrations within the defined AOR including active and abandoned wells, underground mines, and any other man-made penetrations

that penetrate the confining zone above the permitted EOR injection zone.

5. The owner or operator must determine which wells within the AOR have been constructed and/or plugged in a manner that prevents movement of CO<sub>2</sub> or other fluids that may endanger USDWs, and any wells which may require corrective action to ensure protection of USDWs.

6. For phased implementation of an EOR project injecting CO<sub>2</sub>, the commissioner may allow injection operations to commence prior to a complete evaluation of all wellbores within the AOR if the operator presents a plan acceptable to the commissioner to complete the evaluation and perform any required corrective action in advance of the injected carbon dioxide and associated reservoir fluids migration to the area. The plan must include a method to monitor the injected carbon dioxide and associated reservoir fluids to ensure that the AOR review and any corrective action is performed at least ½ mile ahead of the boundary of the migrating front.

#### D. Corrective Action For Enhanced Oil Recovery Projects Injecting Carbon Dioxide.

1. Owners or operators of Class II EOR CO<sub>2</sub> Injection Wells must perform corrective action on all wells in the area of review that the commissioner has determined to require corrective action.

2. Owners or operators of Class II EOR CO<sub>2</sub> Injection Wells shall submit a corrective action plan acceptable to the commissioner addressing all identified deficiencies within a time specified by the commissioner.

#### E. Emergency and Remedial Response For Enhanced Oil Recovery Projects Injecting Carbon Dioxide.

1. As part of the permit application for a Class II EOR CO<sub>2</sub> well, the owner or operator must provide the commissioner with an emergency and remedial response plan that outlines the actions the owner or operator must take to address movement of the injection or formation fluids that may cause an endangerment to a USDW during construction and operational periods.

2. If the owner or operator obtains evidence that the injected carbon dioxide and/or associated reservoir fluids are no longer confined to the permitted EOR injection zone or may cause an endangerment to a USDW, the owner or operator must:

- take all steps reasonably necessary to identify, characterize, and control any release;
- notify the commissioner within 24 hours; and
- implement the emergency and remedial response plan approved by the commissioner.

3. The owner or operator shall review the emergency and remedial response plan developed under §405.E.1 periodically, but at least once every five years. Based on this review, the owner or operator shall submit an amended emergency and remedial response plan or demonstrate to the commissioner that no amendment to the emergency and remedial response plan is needed. Any amendments to the emergency and remedial response plan must be approved by the commissioner and are subject to the permit modification requirements at §411, as appropriate. Amended plans or demonstrations shall be submitted to the commissioner as follows:

- within one year of an AOR reevaluation;
- following any significant changes to the EOR project, such as the addition of injection wells or the reclassification of wells; or

c. when required by the commissioner.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:4 et seq.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of Conservation, LR: \_\_\_:\_\_\_ (\_\_\_\_ 2015).

§407. - §421. ...

**§423. Plugging Requirements**

A. ...

B. Enhanced Oil Recovery Projects Injecting Carbon Dioxide. Prior to the conclusion of the Enhanced Oil Recovery (EOR) project, the operator shall present a plan of project abandonment (the "Plan"). The commissioner shall assess the Plan to ensure that it meets all applicable legal requirements and will protect the Underground Sources of Drinking Water (USDW) and the health, safety, and welfare of the public. After reviewing the Plan, the commissioner may require additional information before approval of such Plan, or impose additional requirements for the EOR project abandonment to assure protection of the USDW.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:4 et seq.

HISTORICAL NOTE: Promulgated by the Department of Natural Resources, Office of Conservation, LR: \_\_\_:\_\_\_ (\_\_\_\_ 2015)

§425. - §443. ...

**Family Impact Statement**

This Rule has no known impact on family formation, stability, and autonomy as described in R.S. 49:972.

**Poverty Impact Statement**

This Rule has no known impact on poverty as described in R.S. 49:973.

**Provider Impact Statement**

This Rule has no known impact on providers as described in HCR 170 of 2014.

**Small Business Statement**

This Rule has no known impact on small businesses as described in R.S. 49:965.6.

**Public Comments**

All interested parties will be afforded the opportunity to submit data, views, or arguments, in writing. Written comments will be accepted by hand delivery or USPS only, until 4 p.m., July 11, 2016, at Office of Conservation, Executive Division, P.O. Box 94275, Baton Rouge, LA 70804-9275; or Office of Conservation, Executive Division, 617 North Third Street, Room 931, Baton Rouge, LA 70802. Reference Docket No. I&M 2016-01. All inquiries should be directed to Stephen Lee at the above addresses or by phone to (225) 342-5569. No preamble was prepared.

**Fiscal and Economic Impact Statement**

**I. ESTIMATED IMPLEMENTATION COSTS (SAVINGS) TO STATE OR LOCAL GOVERNMENTAL UNITS (Summary)**

There are no anticipated implementation costs to state or local governmental units as a result of the proposed rule change. Application requirements already exist for Enhanced Oil Recovery methods, although none specifically address the use of carbon dioxide. The proposed rule seeks to implement application requirements for Carbon Dioxide Enhanced Oil Recovery. Carbon Dioxide Enhanced Oil Recovery is a process in which carbon dioxide is injected

into an oil reservoir to push any remaining oil to the top of the reservoir for extraction. It is typically used as a tertiary method of extraction after primary and secondary techniques have extracted the bulk of the oil from a reservoir. As such, the new requirements specific to Carbon Dioxide Enhanced Oil Recovery will be evaluated using existing documents and staff.

**II. ESTIMATED EFFECT ON REVENUE COLLECTIONS OF STATE OR LOCAL GOVERNMENTAL UNITS (Summary)**

The proposed rule change will have no effect on revenue collections of state or local governmental units.

**III. ESTIMATED COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NON-GOVERNMENTAL GROUPS (Summary)**

The group directly affected by these rules changes will be Exploration and Production (E&P) companies. There are currently two companies in the state using carbon dioxide techniques for extraction. The department believes that the companies affected by these regulations have already incorporated these standards and are currently in compliance. To that end, there are no anticipated increased costs to E&P companies or other non-governmental groups.

**IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)**

The proposed rule change will have no effect on competition and employment.

Richard P. Ieyoub  
Commissioner  
1501#032

Chief Economist