

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)

§ 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 (CO₂) 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 CO₂. For EOR projects injecting CO₂ 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 CO₂ stream and associated pressure front have migrated beyond the boundary of the approved EOR project area, the AOR shall be redefined to extend, at a minimum, no less than ¼ mile beyond the injected CO₂ stream and associated pressure front.

3. The owner or operator of a Class II EOR CO₂ Injection Well must submit a plan acceptable to the commissioner to periodically reevaluate the AOR for the proposed CO₂ 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 CO₂ 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 CO₂ 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 CO₂, 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 stream and associated pressure front. The plan must include a method to monitor the injected carbon dioxide stream and associated pressure front and ensure that the AOR review and any corrective action is performed at least ½ mile ahead of the boundary of the injected CO₂ stream and associated pressure front.

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

1. Owners or operators of Class II EOR CO₂ 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 CO₂ 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 CO₂ 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, operation, and post-injection site care periods.

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

- a. take all steps reasonably necessary to identify, characterize, and control any release;
- b. notify the commissioner within 24 hours; and
- c. 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:

- a. within one year of an AOR reevaluation;
- b. 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. At the conclusion of any enhanced oil recovery project injecting carbon dioxide, the operator shall depressurize, extract, and remove the carbon dioxide from the permitted EOR injection zone and any other formations impacted by the EOR project to the maximum extent practicable to ensure protection of the USDW.

§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, orally or in writing at the public hearing in accordance with R.S. 49:953. Written comments will be accepted by hand delivery or USPS only, until 4:30 p.m., October 5, 2015, at Office of Conservation, Executive Division, P.O. Box 94275, Baton Rouge, LA, 70804-9275; or Office of Conservation, Executive Division, 70804-9275; or Office of Conservation, Executive Division, 617 North Third Street, Room 931, Baton Rouge, LA 70802. Reference Docket No. CON RULE AMD 2015-08 on all correspondence. All inquiries should be directed to John Adams at the above addresses or by phone to (225) 342-7889. No preamble was prepared.

Public Hearing

The commissioner of conservation will conduct a public hearing at on Monday, September 28, 2015 at 9 a.m., in the LaBelle Room located on the first floor of the LaSalle Building, 617 North Third Street, Baton Rouge, LA.

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 STATE OR LOCAL COLLECTIONS OF REVENUE 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 standards listed in the proposed rule change are the standards currently in place, except for the new provision requiring extraction of CO2 at the end of the project. There may be an indeterminate increase in costs to E&P companies, but due to the unique nature of each project and reservoir, the costs associated with this provision cannot be accurately assessed until the oil recovery project is complete.

IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)

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

James H. Welsh
Commissioner
1501#032

Greg Albrecht
Chief Economist

**FISCAL AND ECONOMIC IMPACT STATEMENT
FOR ADMINISTRATIVE RULES**

Person Preparing Statement: John Adams Dept.: Natural Resources
Phone: 225-342-7889 Office: Conservation
Return Address: Executive Division Rule Title: General Operations,
P.O. Box 94275 Statewide Order 29-B
Baton Rouge, LA 70804-9275 LAC 43:XIX.405 (Application
Requirements)

Date Rule Takes Effect: Upon Promulgation (Nov.2015)

SUMMARY
(Use complete sentences)

In accordance with Section 953 of Title 49 of the Louisiana Revised Statutes, there is hereby submitted a fiscal and economic impact statement on the rule proposed for adoption, repeal or amendment. THE FOLLOWING STATEMENTS SUMMARIZE ATTACHED WORKSHEETS, I THROUGH IV AND WILL BE PUBLISHED IN THE LOUISIANA REGISTER WITH THE PROPOSED AGENCY RULE.

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

James H. Welsh
Signature of Agency Head or Designee

James H. Welsh, Commissioner of Conservation
Typed Name & Title of Agency Head or Designee

8-6-15

Date of Signature

Angie V. Clark
Legislative Fiscal Officer or Designee

8/7/2011

Date of Signature

FISCAL AND ECONOMIC IMPACT STATEMENT FOR ADMINISTRATIVE RULES

The following information is required in order to assist the Legislative Fiscal Office in its review of the fiscal and economic impact statement and to assist the appropriate legislative oversight subcommittee in its deliberation on the proposed rule.

- A. Provide a brief summary of the content of the rule (if proposed for adoption or repeal) or a brief summary of the change in the rule (if proposed for amendment). Attach a copy of the notice of intent and a copy of the rule proposed for initial adoption or repeal (or, in the case of a rule change, copies of both the current and proposed rules with amended portions indicated).

The proposed rule seeks to implement application requirements for Carbon Dioxide Enhanced Oil Recovery, including an expanded area of review and submission of a corrective action plan.

- B. Summarize the circumstances, which require this action. If the Action is required by federal regulation, attach a copy of the applicable regulation.

In reviewing applications for Carbon Dioxide Enhanced Oil Recovery, Conservation staff determined that an expanded area of review and submission of a corrective action plan would lead to greater safety and protection of the environment.

- C. Compliance with Act 11 of the 1986 First Extraordinary Session

- (1) Will the proposed rule change result in any increase in the expenditure of funds? If so, specify amount and source of funding.

No. The proposed rule change will not result in any increase in the expenditure of funds.

- (2) If the answer to (1) above is yes, has the Legislature specifically appropriated the funds necessary for the associated expenditure increase?

(a) _____ Yes. If yes, attach documentation.

(b) _____ NO. If no, provide justification as to why this rule change should be published at this time

FISCAL AND ECONOMIC IMPACT STATEMENT

WORKSHEET

I. A. COSTS OR SAVINGS TO STATE AGENCIES RESULTING FROM THE ACTION PROPOSED

1. What is the anticipated increase (decrease) in costs to implement the proposed action?

COSTS	FY 15-16	FY 16-17	FY 17-18
Personal Services	\$ 0.00	\$ 0.00	\$ 0.00
Operating Expenses	\$ 0.00	\$ 0.00	\$ 0.00
Professional Services	\$ 0.00	\$ 0.00	\$ 0.00
Other Charges	\$ 0.00	\$ 0.00	\$ 0.00
Equipment	\$ 0.00	\$ 0.00	\$ 0.00
Major Repairs & Constr.	\$ 0.00	\$ 0.00	\$ 0.00
TOTAL	\$ 0.00	\$ 0.00	\$ 0.00
POSITIONS (#)	0	0	0

2. Provide a narrative explanation of the costs or savings shown in "A. 1.", including the increase or reduction in workload or additional paperwork (number of new forms, additional documentation, etc.) anticipated as a result of the implementation of the proposed action. Describe all data, assumptions, and methods used in calculating these costs.

Not applicable. There are no costs or savings to State Agencies resulting from the proposed actions. The proposed rule may under certain circumstances effect an increased cost to Oil and Gas E&P operators in that they may experience increased application requirements in certain circumstances.

3. Sources of funding for implementing the proposed rule or rule change.

SOURCE	FY 15-16	FY 16-17	FY 17-18
State General Fund	\$ 0.00	\$ 0.00	\$ 0.00
Agency Self-Generated	\$ 0.00	\$ 0.00	\$ 0.00
Dedicated	\$ 0.00	\$ 0.00	\$ 0.00
Federal Funds	\$ 0.00	\$ 0.00	\$ 0.00
Other (Specify)	\$ 0.00	\$ 0.00	\$ 0.00
TOTAL	\$ 0.00	\$ 0.00	\$ 0.00

4. Does your agency currently have sufficient funds to implement the proposed action? If not, how and when do you anticipate obtaining such funds?

Not applicable.

B. COST OR SAVINGS TO LOCAL GOVERNMENTAL UNITS RESULTING FROM THE ACTION PROPOSED.

1. Provide an estimate of the anticipated impact of the proposed action on local governmental units, including adjustments in workload and paperwork requirements. Describe all data, assumptions and methods used in calculating this impact.

The proposed rule amendment is not anticipated to result in costs or savings to local government units.

2. Indicate the sources of funding of the local governmental unit, which will be affected by these costs or savings.

Not applicable.

FISCAL AND ECONOMIC IMPACT STATEMENT

WORKSHEET

II. EFFECT ON REVENUE COLLECTIONS OF STATE AND LOCAL GOVERNMENTAL UNITS

A. What increase (decrease) in revenues can be anticipated from the proposed action?

REVENUE INCREASE/DECREASE	FY 15-16	FY 16-17	FY 17-18
State General Fund	\$ 0.00	\$ 0.00	\$ 0.00
Agency Self-Generated	\$ 0.00	\$ 0.00	\$ 0.00
Dedicated Funds*	\$ 0.00	\$ 0.00	\$ 0.00
Federal Funds	\$ 0.00	\$ 0.00	\$ 0.00
Local Funds	\$ 0.00	\$ 0.00	\$ 0.00
TOTAL	\$ 0.00	\$ 0.00	\$ 0.00

*Specify the particular fund being impacted.

B. Provide a narrative explanation of each increase or decrease in revenues shown in "A." Describe all data, assumptions, and methods used in calculating these increases or decreases.

There is no anticipated effect on revenue collections of state and local government units.

III. COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NON-GOVERNMENTAL GROUPS

A. What persons or non-governmental groups would be directly affected by the proposed action? For each, provide an estimate and a narrative description of any effect on costs, including workload adjustments and additional paperwork (number of new forms, additional documentation, etc.), they may have to incur as a result of the proposed action.

The group directly affected by these rules changes will be Exploration and Production (E&P) companies. Currently, Denbury Onshore, LLC and Marlin Resources, L.L.C. are the only companies in the state using carbon dioxide techniques for extraction. The standards listed in the proposed rule change are the standards currently in place, except for the new provision requiring extraction of CO2 at the end of the project. While it may be reasonable to assume that these companies provided for CO2 removal costs in their project budgets, if they didn't, there may be an indeterminable increase in costs, but due to the unique nature of each project and reservoir, the costs associated with this provision cannot be accurately assessed until the oil recovery project is complete.

B. Also provide an estimate and a narrative description of any impact on receipts and/or income resulting from this rule or rule change to these groups.

The group directly affected by these rules changes will be Exploration and Production (E&P) companies. Currently, Denbury Onshore, LLC and Marlin Resources, L.L.C. are the only companies in the state using carbon dioxide techniques for extraction. The standards listed in the proposed rule change are the standards currently in place, except for the new provision requiring extraction of CO2 at the end of the project. While it may be reasonable to assume that these companies provided for CO2 removal costs in their project budgets, if they didn't, there may be an indeterminable increase in costs, but due to the unique nature of each project and reservoir, the costs associated with this provision cannot be accurately assessed until the oil recovery project is complete.

IV. EFFECTS ON COMPETITION AND EMPLOYMENT

Identify and provide estimates of the impact of the proposed action on competition and employment in the public and private sectors. Include a summary of any data, assumptions and methods used in making these estimates.

There are no anticipated effects on competition and employment resulting from the proposed rule change.