2Crosswalk for Louisiana UIC Regulations Submitted with Primacy Applications Under Section 1422 of the SDWA

The following tables compare the regulatory language submitted by Louisiana to EPA's regulations applicable to Class VI wells, specifically Parts 124, 144, and 146 under Title 40 of the CFR. Under Section 1422 of the SDWA, the State's program must meet the requirements of EPA UIC regulations. Cadmus reviewed the crosswalk and Louisiana's draft UIC regulations provided to EPA on April 2, 2020; notes of this review (completed in May 2020) are provided in the "Cadmus review" column. Cadmus reviewed an updated crosswalk in August 2020; any notes of this review are in the "Cadmus review" column, preceded by the text "August 2020 review." Blue and/or track change text =LA additions or deletions; **Purple text- EPA Review**

Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
PART 124--PROCEDURES FOR DECISION MAKING						
SUBPART A--GENERAL PROGRAM REQUIREMENTS						
40 CFR 124.3 Application for a permit						
1	40 CFR 124.3(a)(1) (See also 145.11(a)(24))	Applicable to State programs, see §145.11 (UIC). (1) Any person who requires a permit under the UIC programs shall complete, sign, and submit to the Director an application for each permit required under §144.1 (UIC). ~~Applications are not required for underground injections authorized by rules (§§ 144.21 through 144.26).~~	§605.C through 605.C.1 -------- §603.E through 603.E.1	C. Application Required 1. Permit Application. New applicants, permittees, and any person required to have a permit shall complete, sign, and submit an application to the commissioner as described in this Section. a. the applicant shall submit one signed paper version of the application and an exact duplicate of the application in an electronic format approved by the commissioner. The commissioner may request additional paper copies of the application—either in its entirety or in part—as needed. b. the electronic version of the application shall contain the following certification statement: This document is an electronic version of the application titled (Insert Document Title) dated (Insert Application Date). This electronic version is an exact duplicate of the paper copy submitted in (Insert the Number of Volumes Comprising the Full Application) to the Louisiana Office of Conservation. c. The applicant shall submit the application identified in §605.C.1 above to the USEPA in an electronic format approved by the USEPA. --------- E. Authorization of Underground Injection by Rule 1. Class VI wells cannot be authorized by rule to inject carbon dioxide. Owners or operators of Class VI wells must obtain a permit.	Language has been added at §605.C to clarify requirements for submission of permit applications. These include more stringent requirements compared to the federal rule. The struck-out text of 40 CFR 124.3(a)(1) will not be adopted. Authorization by rule for Class VI wells will be prohibited.	Reviewed; no issues found.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

2	40 CFR 124.3(a)(2) (See also 145.11(a)(24))	The Director shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. See §144.31 (UIC).	§611.B.2 through 611.B.3	2. Check for completeness: a. the commissioner shall not issue a permit before receiving an application form and any required supplemental information which are completed to his satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity; ~~the commissioner shall not issue a permit before receiving an application form and any required supplemental information which are completed to his satisfaction;~~ b. each application for a permit submitted for a new UIC injection well will be reviewed for completeness by the commissioner and the applicant will be notified of the commissioner's decision within 30 days of its receipt. Each application for a permit submitted for an existing injection well will be reviewed for completeness and the applicant will be notified of the commissioner's decision within 60 days of receipt. Upon completing the review, the commissioner shall notify the applicant in writing whether the application is complete. 3. Incomplete Applications a. If the application is incomplete, the commissioner shall list in the notification in §611.B.2.b above, the information necessary to make the application complete. When the application is for an existing UIC injection well, the commissioner shall specify in the notice a date for submitting the necessary information. The commissioner shall notify the applicant that the application is complete upon receiving this information. The commissioner may request additional information from an applicant only when necessary to clarify, modify, or supplement previously submitted material. Requests for such additional information will not render an application incomplete. b. If an applicant fails or refuses to correct deficiencies found in the application, the permit may be denied and, for existing wells, appropriate enforcement actions may be taken under the applicable statutory provision.		Text is similar, with no impact on stringency. Note that 611.B.3 was not in the crosswalk LA submitted; added in review. August 2020 review: revised text addresses the above comment; state provision is similar to CFR, except for emergency permits. No concerns for stringency.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

3	40 CFR 124.3(a)(3) (See also 145.11(a)(24))	Permit applications must comply with the signature and certification requirements of § 144.32 (UIC).	§605.E through 605.G	E. Signature Requirements. All permit applications shall be signed as follows. 1. Corporations. By a principal executive officer of at least the level of vice-president, or duly authorized representative of that person if the representative performs similar policy making functions for the corporation. A person is a duly authorized representative only if: a. the authorization is made in writing by a principle executive officer of at least the level of vice-president; b. the authorization specifies either an individual or position having responsibility for the overall operation of a sequestration well, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and c. the written authorization is submitted to the Office of Conservation. 2. Limited Liability Company (LLC). By a member if the LLC is member-managed, by a manager if the LLC is manager-managed, or by a duly authorized representative only if: a. the authorization is made in writing by an individual who would otherwise have signature authority as outlined in §605.E.2 above; b. the authorization specifies either an individual or position having responsibility for the overall operation of a solution-mining well, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and c. the written authorization is submitted to the Office of Conservation. 3. Partnership or Sole Proprietorship. By a general partner or proprietor, respectively; or 4. Public Agency. By either a principal executive officer or a ranking elected official of a municipality, state, federal, or other public agency. F. Signature Reauthorization. If an authorization under §605.E is no longer accurate	While the language at §607.E through 607.E.4 is not verbatim to 40 CFR 144.32, the intent of the federal rule is preserved; that being, designation of a duly authorized representative by applicants, permittees, or any person required to have a permit.	Text is similar, with no impact on stringency. See also 144.32 for specifics of the comparison to LA vs. CFR.

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				because a different individual or position has responsibility for the overall operation of a sequestration well, a new authorization satisfying the signature requirements must be submitted to the Office of Conservation before or concurrent with any reports, information, or applications required to be signed by an authorized representative. G. Certification. Any person signing a document under §605.E shall make the following certification on the application: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment."		
40 CFR 124.5 Modification, revocation and reissuance, or termination of permits.						
4	40 CFR 124.5(a) (See also 145.11(a)(25))	(Applicable to State programs, see §145.11 (UIC).) Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Director's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in § 144.39 or 144.40 (UIC). All requests shall be in writing and shall contain facts or reasons supporting the request.	§613.B.2 through 613.B.3	2. The permittee shall furnish to the commissioner, within 30 days, any information which the commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating a permit, or to determine compliance with the permit. The permittee shall also furnish to the commissioner, upon request, copies of records required to be kept by the permit. 3. The commissioner may, upon his own initiative or at the request of any interested person, review any permit to determine if cause exists to modify, revoke and reissue, or terminate the permit for the reasons specified in §613.C, D, and E. All requests shall be in writing and shall contain facts or reasons supporting the request.	In addition to the text at 40 CFR 145.11 the following language has been added at §613.B.2: the permittee shall furnish to the commissioner, within 30 days, any information which the commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating a permit, or to determine compliance with the permit. The permittee shall also furnish to the commissioner, upon request, copies of records required to be kept by the permit.	Text is similar, with no impact on stringency.

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5	40 CFR 124.5(b)	If the Director decides the request is not justified, he or she shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings. Denials by the Regional Administrator may be informally appealed to the Environmental Appeals Board by a letter briefly setting forth the relevant facts. The Environmental Appeals Board may direct the Regional Administrator to begin modification, revocation and reissuance, or termination proceedings under paragraph (c) of this section. The appeal shall be considered denied if the Environmental Appeals Board takes no action on the letter within 60 days after receiving it. This informal appeal is, under 5 U.S.C. 704, a prerequisite to seeking judicial review of EPA action in denying a request for modification, revocation and reissuance, or termination.	§613.B.4	4. If the commissioner decides the request is not justified, he shall send the person making the request a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings.		Text is identical but does not include "Denials by the Regional Administrator…" (that provision is specific to EPA decisions and not applicable to states).
6	40 CFR 124.5(c)(1) (See also 145.11(a)(25))	(Applicable to State programs, see 40 CFR 145.11 (UIC)). (1) If the Director tentatively decides to modify or revoke and reissue a permit under 404 CFR 144.39 (UIC), he or she shall prepare a draft permit under § 124.6 incorporating the proposed changes. The Director may request additional information and, in the case of a modified permit, may require the submission of an updated application. In the case of revoked and reissued permits, the Director shall require the submission of a new application.	§613.B.5	5. If the commissioner decides to modify or revoke and reissue a permit under §613.C, D, and E, he shall prepare a draft permit under §611.C incorporating the proposed changes. The commissioner may request additional information and, in the case of a modified permit, may require the submission of an updated permit application. In the case of revoked and reissued permits, the commissioner shall require, if necessary, the submission of a new application.		Text drops "tentatively" and makes the submission of a new application required only if necessary. No impact on stringency.
7	40 CFR 124.5(c)(2) (See also 145.11(a)(25))	In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.	§613.B.5	6. In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.		Text is identical.

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8	40 CFR 124.5(c)(3) (See also 145.11(a)(25))	''Minor modifications'' as defined in § 144.41 (UIC) are not subject to the requirements of this section.	§613.D	D. Minor Modifications of Permits. Upon the consent of the permittee, the commissioner may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this Section without issuing a draft permit and providing for public comment. Minor modifications may only:		Text is similar, with no impact on stringency.
9	40 CFR 124.5(d)(1) (See also 145.11(a)(25))	(Applicable to State programs, see §145.11 (UIC) of this chapter.) (1) If the Director tentatively decides to terminate: A permit under § 144.40 (UIC) of this chapter, he or she shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under § 124.6 of this chapter.	§613.E.2	2. If the commissioner decides to terminate a permit, he shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under §611.C.		Text is similar, with no impact on stringency.
40 CFR 124.6 Draft permits.						
10	40 CFR 124.6(a) (See also 145.11(a)(26))	(Applicable to State programs, see §145.11 (UIC).) Once an application is complete, the Director shall tentatively decide whether to prepare a draft permit or to deny the application.	§611.C.1	1. Once an application is complete, the commissioner shall prepare a draft permit or deny the application.		Text is similar, with no impact on stringency.
11	40 CFR 124.6(b)	If the Director tentatively decides to deny the permit application, he or she shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under this section. See § 124.6(e). If the Director's final decision (§ 124.15) is that the tentative decision to deny the permit application was incorrect, he or she shall withdraw the notice of intent to deny and proceed to prepare a draft permit under paragraph (d) of this section.	N/A			N/A. This provision is not required for state programs.
12	40 CFR 124.6(d) (See also 145.11(a)(26))	(Applicable to State programs, see §145.11 (UIC).) If the Director decides to prepare a draft permit, he or she shall prepare a draft permit that contains the following information:	§611.C.3	3. If the commissioner prepares a draft permit, it shall contain the following information where appropriate:	In addition to the text at 40 CFR 145.11(a)(26), the following language has been added at §611.C.3: where appropriate.	Text is similar, with no impact on stringency.
13	40 CFR 124.6(d)(1) (See also 145.11(a)(26))	All conditions under §144.51 and 144.42 (UIC);	§609.C.3.a	a. all conditions under §§609, §615, §617, §619, §621, §623, §625, §627, §629, and §631;		Text is similar, with no impact on stringency. August 2020 review: minor edits, no impact on stringency.

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14	40 CFR 124.6(d)(2) (See also 145.11(a)(26))	All compliance schedules under §144.53 (UIC);	§609.C.3.b	b. all compliance schedules under §609.N; and		Text is similar, with no impact on stringency.
15	40 CFR 124.6(d)(3) (See also 145.11(a)(26))	All monitoring requirements under §144.54 (UIC); and	§609.C.3.c	c. all monitoring requirements under applicable Paragraphs in §625.		Text is similar, with no impact on stringency.
16	40 CFR 124.6(d)(4)(ii) (See also 145.11(a)(26))	For: *** UIC permits, permit conditions under § 144.52;	§609.O, §617, §615.C, §621, §625, §609.C, §609.P	See §§ 609.O, 617, 615.C, 621, 625, 609.C, and 609.P.		Reviewed; no issues found.
17	40 CFR 124.6(e) (See also 145.11(a)(26))	(Applicable to State programs, see §145.11 (UIC).) Draft permits prepared by a State shall be accompanied by a fact sheet if required under § 124.8.	§611.C.4	4. All draft permits prepared under this Section may be accompanied by a fact sheet pursuant to §611.D, and shall be publicly noticed in accordance with §611.E, and made available for public comment pursuant to §611.F.		Text is similar, with no impact on stringency.
40 CFR 124.8 Fact sheet.						
18	40 CFR 124.8(a) (See also 145.11(a)(27))	A fact sheet shall be prepared for every draft permit for a major, UIC facility or activity, and for every draft permit which the Director finds is the subject of wide-spread public interest or raises major issues. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Director shall send this fact sheet to the applicant and, on request, to any other person.	§611.D.1	1. A fact sheet shall be prepared for every draft permit for all major UIC facilities or activities and for every draft permit which the commissioner finds is the subject of wide-spread public interest or raises major issues. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permits. The commissioner shall send this fact sheet to the applicant and, on request, to any other person.		Text is similar, with no impact on stringency.
19	40 CFR 124.8(b) (See also 145.11(a)(27))	The fact sheet shall include, when applicable:	§611.D.2	2. The fact sheet shall include, when applicable:		Text is identical.
20	40 CFR 124.8(b)(1) (See also 145.11(a)(27))	A brief description of the type of facility or activity which is the subject of the draft permit;	§611.D.2.a	a. a brief description of the type of facility or activity which is the subject of the draft permit;		Text is identical.
21	40 CFR 124.8(b)(2) (See also 145.11(a)(27))	The type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected~~, emitted, or discharged.~~	§611.D.2.b	b. the type and quantity of wastes, fluids, or pollutants which are proposed to be or are being injected;	The struck-out text of 40 CFR 124.8(b)(2) will not be adopted.	Text also does not include provisions for wastes being treated, stored, or disposed of. This is not an issue for CO_2 injection for GS.
22	40 CFR 124.8(b)(4) (See also 145.11(a)(27))	A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions;	§611.D.2.c	c. a brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions;		Text is identical.

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23	40 CFR 124.8(b)(5) (See also 145.11(a)(27))	Reasons why any requested variances or alternatives to required standards do or do not appear justified;	§611.D.2.d	d. reasons why any requested variances or alternatives to required standards do or do not appear justified;		Text is identical.
24	40 CFR 124.8(b)(6) (See also 145.11(a)(27))	A description of the procedures for reaching a final decision on the draft permit including: (i) The beginning and ending dates of the comment period under § 124.10 and the address where comments will be received; (ii) Procedures for requesting a hearing and the nature of that hearing; and (iii) Any other procedures by which the public may participate in the final decision.	§§611.D.2.e.i though 611.D.2.e.iii	i. the beginning and ending dates of the comment period under §611.F and the address where comments will be received; ii. procedures for requesting a hearing and the nature of that hearing; and iii. any other procedures by which the public may participate in the final decision;		Text is identical. §611.D.2.e matches the introductory clause.
25	40 CFR 124.8(b)(7) (See also 145.11(a)(27))	Name and telephone number of a person to contact for additional information.	§611.D.2.f	f. name and telephone number of a person to contact for information.		Text is identical.
40 CFR 124.10 Public notice of permit actions and public comment period.						
26	40 CFR 124.10(a)(1) (See also 145.11(a)(28))	Scope. (1) The Director shall give public notice that the following actions have occurred:	§611.E.1.a	a. The commissioner shall give public notice that the following actions have occurred:		Text is identical.
27	40 CFR 124.10(a)(1)(i)	A permit application has been tentatively denied under § 124.6(b);	N/A			N/A. This provision is not required for state programs.
28	40 CFR 124.10(a)(1)(ii) (See also 145.11(a)(28))	(Applicable to State programs, see §145.11 (UIC).) A draft permit has been prepared under § 124.6(d);	§611.E.1.a.i	i. a draft permit has been prepared under §611.C; and		Text is similar, with no impact on stringency.
29	40 CFR 124.10(a)(1)(iii) (See also 145.11(a)(28))	(Applicable to State programs, see §145.11 (UIC).) A hearing has been scheduled under § 124.12;	§611.E.1.a.ii	ii. a hearing has been scheduled under §611.G.		Text is similar, with no impact on stringency.
30	40 CFR 124.10(a)(1)(iv)	An appeal has been granted under § 124.19(c);	N/A			N/A. This provision is not required for state programs.
31	40 CFR 124.10(a)(2)	No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under § 124.5(b). Written notice of that denial shall be given to the requester and to the permittee.	N/A			N/A. This provision is not required for state programs.

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32	40 CFR 124.10(b)(1) (See also 145.11(a)(28))	Timing (applicable to State programs, see §145.11 (UIC)). Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under paragraph (a) of this section shall allow ~~at least~~ 30 days for public comment.	§611.E.2.a	a. Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under §611.E.1 shall allow 30 days for public comment.	The struck-out text of 40 CFR 124.10(b)(1) will not be adopted.	§611.E.1 does not include notice of intent to deny a permit application. Elimination of the struck out text is acceptable as long as the comment period may not be shorter than 30 days. August 2020 review: the added text would address the above comment and make the state provision similar to the CFR. However, this text is not included in the July version of the Rule. EPA: LA should add their inserted crosswalk text from the "LA Rule Text" column "(including a notice of intent to deny a permit application)" to LA Rule under 611.E.2.a
33	40 CFR 124.10(b)(2) (See also 145.11(a)(28))	Public notice of a public hearing shall be given ~~at least~~ 30 days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)	§611.E.2.b	b. Public notice of a public hearing shall be given 30 days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined).	The struck-out text of 40 CFR 124.10(b)(2) will not be adopted.	Text is similar, with no impact on stringency. Elimination of the struck out text is acceptable as long as notice of a hearing may not be less than 30 days.
34	40 CFR 124.10(c)(1) (See also 145.11(a)(28))	Methods (applicable to State programs, see 40 CFR 145.11 (UIC)). Public notice of activities described in paragraph (a)(1) of this section shall be given by the following methods: (1) By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this paragraph may waive his or her rights to receive notice for any classes and categories of permits);	§611.E.3. through 611.E.3.a	3. Methods. Public notice of activities described in §611.E.1.a shall be given by the following methods: a. by electronic mailing (emailing) or by mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this Section may waive his rights to receive notice for any classes and categories of permits):	The following language has been added at §611.E.3.a: or by electronic mailing (e-mailing).	Clarification may be needed regarding whether all interested members of the public without email addresses will receive notice. August 2020 review: added text addresses the above comment; no concerns for stringency.
35	40 CFR 124.10(c)(1)(i) (See also 145.11(a)(28))	The applicant;	§611.E.3.a.i	i. the applicant;		Text is identical.

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36	40 CFR 124.10(c)(1)(ii) (See also 145.11(a)(28))	Any other agency which the Director knows has issued or is required to issue a RCRA, UIC, PSD (or other permit under the Clean Air Act), NPDES, 404, sludge management permit, or ocean dumping permit under the Marine Research Protection and Sanctuaries Act for the same facility or activity (including EPA when the draft permit is prepared by the State);	§611.E.3.a.ii	ii. any other agency which the commissioner knows has issued or is required to issue a permit for the same facility or activity (including EPA);	While the language at §611.E.3.a.ii is not verbatim to 40 CFR 124.10(c)(1)(ii), the intent of the federal rule is preserved: that being, any agency that has issued or is required to issue a permit for the same facility or activity shall receive a copy of a public notice of activities.	Reviewed; no issues found.
37	40 CFR 124.10(c)(1)(iii) (See also 145.11(a)(28))	Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected States (Indian Tribes). (For purposes of this paragraph, and in the context of the Underground Injection Control Program only, the term State includes Indian Tribes treated as States.)	§611.E.3.a.iii	iii. federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the Advisory Council on Historic Preservation, the State Archeological Survey and Antiquities Commission, the Director of the Public Water Supply Supervision program in the State, the Department of Natural Resources, and other appropriate government authorities, including any unit of local government having jurisdiction over the area where the facility is proposed to be located, any affected states or Indian Tribes; and	While the language at §611.E.3.a.iii is not verbatim to 40 CFR 124.10(c)(1)(iii), the intent of the federal rule is preserved: that being, although the state requirements do not specify that notice be given to the same entities required by the federal rule, they do include notice to "other appropriate government authorities."	Text does not include stipulation that Indian Tribes be treated as states, or that they are included as "appropriate government authorities." State is specifically defined under §601 to mean the state of Louisiana. August 2020 review: added text addresses the above comment; state provision is now similar to CFR.
38	40 CFR 124.10(c)(1)(ix)(A) (See also 145.11(a)(28))	Persons on a mailing list developed by: (A) Including those who request in writing to be on the list;	§611.E.3.a.iv and 611.E.3.a.iv.(a)	iv. persons on a UIC mailing list developed by: (a). including those who request in writing to be on the list;		Text is identical.
39	40 CFR 124.10(c)(1)(ix)(B) (See also 145.11(a)(28))	Soliciting persons for "area lists" from participants in past permit proceedings in that area; and	§611.E.3.a.iv	(b). soliciting persons for "area lists" from participants in past permit proceedings in that area; and		Text is identical.
40	40 CFR 124.10(c)(1)(ix)(C) (See also 145.11(a)(28))	Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as Regional and State funded newsletters, environmental bulletins, or State law journals. (The Director may update the mailing list from time to time by requesting written indication of continued interest from those listed. The Director may delete from the list the name of any person who fails to respond to such a request.)	§611.E.3.a.iv	(c). notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as Regional and State funded newsletters, environmental bulletins, or State law journals. (The commissioner may update the mailing list from time to time by requesting written indication of continued interest from those listed. The commissioner may delete from the list the name of any person who fails to respond to such a request.)		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
41	40 CFR 124.10(c)(1)(x) (See also 145.11(a)(28))	(A) To any unit of local government having jurisdiction over the area where the facility is proposed to be located; and (B) to each State agency having any authority under State law with respect to the construction or operation of such facility.	§611.E.3.a.ii through 611.E.3.a.iii	ii. any other agency which the commissioner knows has issued or is required to issue a permit for the same facility or activity (including EPA); iii. federal and state agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the Advisory Council on Historic Preservation, the State Archeological Survey and Antiquities Commission, the Director of the Public Water Supply Supervision program in the State, the Department of Natural Resources, and other appropriate government authorities, including any unit of local government having jurisdiction over the area where the facility is proposed to be located, any affected states or Indian Tribes; and	While the language at 40 CFR 124.10(c)(1)(x) is not adopted, the intent of the federal rule is preserved, in that the notification process outlined at §611.E.3.a.ii though 611.E.3.a.iii sufficiently account for notification agencies or government bodies that might be deemed to have an interest in the proceedings even if that body is not explicitly enumerated in the text.	The text leaves out any provision for the notification of local units of government. August 2020 review: revised text addresses the above comment; state provision is now similar to CFR.
42	40 CFR 124.10(c)(1)(xi) (See also 145.11(a)(28))	For Class VI injection well UIC permits, mailing or emailing a notice to State and local oil and gas regulatory agencies and State agencies regulating mineral exploration and recovery, the Director of the Public Water Supply Supervision program in the State, and all agencies that oversee injection wells in the State.	§611.E.3.a.iii	See above.	While the language at §611.E.3.a.iii is not verbatim to 40 CFR 124.10(c)(1)(xi), the intent of the federal rule is preserved: that being, ~~although the state requirements does not specify that notice be given to the same entities required by the federal rule, they do include notice to "other appropriate government authorities."~~the Department of Natural Resources, as the agency that regulates oil and gas, mineral exploration and recovery, and injection wells, will be notified.	The text does not stipulate whether State and local oil and gas regulatory agencies, or State agencies regulating mineral exploration and recovery, are considered "appropriate government authorities." It should be noted that LA chose to specifically mention the Director of the Public Water Supply Supervision program, but omitted the other agencies mentioned by the CFR text. August 2020 review: added text addresses the above comment.
43	40 CFR 124.10(c)(2)(i) (See also 145.11(a)(28))	~~For major permits~~ publication of a notice in a daily or weekly newspaper within the area affected by the facility or activity;	§611.E.3.b	c. publication of a notice in a daily or weekly newspaper within the area affected by the facility or activity;	The struck-out text of 40 CFR 124.10(c)(2)(i) will not be adopted.	Reviewed; no issues found.
44	40 CFR 124.10(c)(3) (See also 145.11(a)(28))	When the program is being administered by an approved State, in a manner constituting legal notice to the public under State law; and	§611.E.3.c	c. in a manner constituting legal notice to the public under state law; and		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
45	40 CFR 124.10(c)(4) (See also 145.11(a)(28))	Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.	§611.E.3.d	d. any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other form or medium to elicit public participation.		Text is identical.
46	40 CFR 124.10(d)(1) (See also 145.11(a)(28))	Contents (applicable to State programs, see §145.11 (UIC))—(1) All public notices. All public notices issued under this part shall contain the following minimum information:	§611.E.4.a	a. All Public Notices. Public notices issued under this Section shall contain the following information:	While the language at §611.E.4.a is not verbatim to 40 CFR 124.10(d)(1), the intent of the federal rule is preserved: that being, the language in §611.E.4.a.vi indicates that preceding list of information items is not necessarily comprehensive.	Reviewed; no issues found.
47	40 CFR 124.10(d)(1)(i) (See also 145.11(a)(28))	Name and address of the office processing the permit action for which notice is being given;	§611.E.4.a.i	i. name and address of the Division of the Office of Conservation processing the permit action for which notice is being given;		Text is similar, with no impact on stringency.
48	40 CFR 124.10(d)(1)(ii) (See also 145.11(a)(28))	Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit;	§611.E.4.a.ii	ii. name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit;		Text is identical.
49	40 CFR 124.10(d)(1)(iii) (See also 145.11(a)(28))	A brief description of the business conducted at the facility or activity described in the permit application or the draft permit.	§611.E.4.a.iii	iii. a brief description of the business conducted at the facility or activity described in the permit application or the draft permit;		Text omits "draft permit;" assuming these refer to the same thing, this would not affect stringency. August 2020 review: added text addresses the above comment; state provision is similar to CFR.
50	40 CFR 124.10(d)(1)(iv) (See also 145.11(a)(28))	Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit, fact sheet, and the application; and	§611.E.4.a.iv	iv. name, address, and telephone number of a person from whom interested persons may obtain copies of the draft permit, the fact sheet, the application, and further information concerning the application;	In addition to the text at 40 CFR 124.10(d)(1)(iv), the following language has been added at §611.E.4.a.iv: and further information concerning the application;	Text does not allow for obtaining the application itself. August 2020 review: added text addresses the above comment; state provision is similar to CFR.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
51	40 CFR 124.10(d)(1)(v) (See also 145.11(a)(28))	A brief description of the comment procedures required by §§ 124.11 and 124.12 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision.	§611.E.4.a.v	v. a brief description of the comment procedures required by §611.F and the time and place of any hearing that will be held, including a *brief* statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision; and	In addition to the text at 40 CFR 124.10(d)(1)(v), the following emphasized language has been added. *brief.*	Text is similar, with no impact on stringency. Adds "brief" before statement. August 2020 review: added text in "difference" column addresses the above comment; state text is similar to CFR.
52	40 CFR 124.10(d)(1)(x) (See also 145.11(a)(28))	Any additional information considered necessary or proper.	§611.E.4.a.vi	vi. any additional information considered necessary or proper.		Text is identical. EPA: FYI; EPA had an error in the original crosswalk template; The CFR citation is now correctly cited as 124.10 (d)(1)(x)
53	40 CFR 124.10(d)(2) (See also 145.11(a)(28))	Public notices for hearings. In addition to the general public notice described in paragraph (d)(1) of this section, the public notice of a hearing under § 124.12 shall contain the following information:	§611.E.4.b	b. Public Notices for Hearings. In addition to the general public notice described in §611.E.4.a, the public notice of a hearing under §611.G shall contain the following information:		Text is similar, with no impact on stringency.
54	40 CFR 124.10(d)(2)(i) (See also 145.11(a)(28))	Reference to the date of previous public notices relating to the permit;	§611.E.4.b.i	i. reference to the date of previous public notices relating to the permit;		Text is identical.
55	40 CFR 124.10(d)(2)(ii) (See also 145.11(a)(28))	Date, time, and place of the hearing;	§611.E.4.b.ii	ii. date, time, and place of the hearing; and		Text is identical.
56	40 CFR 124.10(d)(2)(iii) (See also 145.11(a)(28))	A brief description of the nature and purpose of the hearing, including the applicable rules and procedures;	§611.E.4.b.iii	iii. a brief description of the nature and purpose of the hearing, including the applicable rules and procedures.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
57	40 CFR 124.10(e) (See also 145.11(a)(28))	(Applicable to State programs, see §145.11 (UIC).) In addition to the general public notice described in paragraph (d)(1) of this section, all persons identified in paragraphs (c)(1) (i), (ii), (iii), and (iv) of this section shall be mailed a copy of the fact sheet, the permit application (if any) and the draft permit (if any).	§611.D.3	3. All persons identified in §§611.E.3.a.i, ii, iii, and iv shall be mailed or emailed a copy of the fact sheet, the draft permit, and a notice that the permit application will be available online.	While the language at §611.D.3 is not verbatim to 40 CFR 124.10(e), the intent of the federal rule is preserved; that being, although copies of the draft application will not be mailed to all persons identified §611.E.3.a.i, ii, iii, and iv, they will be notified that the application is available online.	Clarification may be needed regarding whether all interested members of the public without Internet access will receive proper notice (i.e., if the permit application would be mailed upon request). Note that the draft rule text reads: 3. A copy of the fact sheet shall be mailed to all persons identified in §611.E.3.a.i, ii, iii, and iv. August 2020 review: the rule revision does not directly address the above comment. However, since 611.E.4.a.iv stipulates that the fact sheet include a contact for obtaining information concerning the application, this is likely acceptable.
40 CFR 124.11 Public comments and requests for public hearings.						
58	40 CFR 124.11 (See also 145.11(a)(29))	(Applicable to State programs, see §145.11 (UIC).) During the public comment period provided under§ 124.10, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in § 124.17.	§611.F	F. Public Comments and Requests for Public Hearings. During the public comment period provided under §611.G, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in §611.H.		Text is similar, with no impact on stringency.
40 CFR 124.12 Public hearings.						
59	40 CFR 124.12(a)(1) (See also 145.11(a)(30))	(Applicable to State programs, see §145.11 (UIC).) (1) The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit(s);	§611.G.1	1. The commissioner shall hold a public hearing whenever he finds, on the basis of requests, a significant degree of public interest in (a) draft permit(s). The commissioner also may hold a public hearing at his discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision. Public notice of the hearing shall be given as specified in §611.G.	The language from 40 CFR 124.12(a)(2) and 40 CFR 124.12(a)(4) has been added to the text from 40 CFR 124.12(a)(1).	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
60	40 CFR 124.12(a)(2) (See also 145.11(a)(30))	The Director may also hold a public hearing at his or her discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision;	§611.G.1	See above.	See above.	Reviewed; no issues found.
61	40 CFR 124.12(a)(4) (See also 145.11(a)(30))	Public notice of the hearing shall be given as specified in § 124.10.	§611.G.1	See above.	See above.	Reviewed; no issues found.
62	40 CFR 124.12(c)	Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under § 124.10 shall automatically be extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing.	§611.G.2	2. Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under §611.G shall automatically be extended to the close of any public hearing under this Section. The hearing officer may also extend the comment period by so stating at the hearing.		Text is similar, with no impact on stringency.
63	40 CFR 124.12(d)	A tape recording or written transcript of the hearing shall be made available to the public.	§611.G.3	3. A tape recording or written transcript of the hearing shall be made available to the public.		Text is identical.
40 CFR 124.15 Issuance and effective date of permit						
64	40 CFR 124.15 (a)	After the close of the public comment period under § 124.10 on a draft permit, the Regional Administrator shall issue a final permit decision. The Regional Administrator shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. ~~This notice shall include reference to the procedures for appealing a decision on a UIC permit under § 124.19 of this part.~~ For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.	§611.I	I. Permit Issuance and Effective Date 1. After closure of the public comment period, including any public hearing, under §611.G on a draft permit, the commissioner shall issue a final permit decision *within 30 days*. The commissioner shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedure for appealing a decision on a UIC permit under La. Title 30 R.S. §30.15. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.	In addition to the text at 40 CFR 124.15 (a), the following emphasized language has been added at §611.I.1: *within 30 days.* The struck-out text of 40 CFR 124.15 (a) will not be adopted.	LA comment omits emphasized addition: "within 30 days." The rule text as written has no impact on stringency. The state rule does not include a provision to describe procedures for appealing a permit decision. August 2020 review: added text addresses the above comments; state provision is similar to CFR. No concerns for stringency.
65	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§611.I.3	3. Approval or the granting of a permit to construct a Class VI well shall be valid for a period of one year and if not begun in that time, the permit shall be null and void. The permittee may request an extension of this one-year requirement; however, the commissioner shall approve the request for extenuating circumstances only.		Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
40 CFR 124.17 Response to comments.						
66	40 CFR 124.17(a) (See also 145.11(a)(31))	(Applicable to State programs, see § 145.11 (UIC).) At the time that any final permit decision is issued under § 124.15, the Director shall issue a response to comments. ~~States are only required to issue a response to comments when a final permit is issued.~~ This response shall:	§611.H.1	1. At the time that any final permit is issued the commissioner shall issue a response to comments. This response shall:	The struck-out text of 40 CFR 124.17(a) will not be adopted.	Reviewed; no issues found.
67	40 CFR 124.17(a)(1) (See also 145.11(a)(31))	Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and	§611.H.1.a	a. specify which provisions; if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and		Text is identical.
68	40 CFR 124.17(a)(2) (See also 145.11(a)(31))	Briefly describe and respond to all significant comments on the draft permit raised during the public comment period, or during any hearing.	§611.H.1.b	b. briefly describe and respond to all significant comments on the draft permit or the permit application raised during the public comment period, or during any hearing.		Text is similar, with no impact on stringency.
69	40 CFR 124.17(c) (See also 145.11(a)(31))	(Applicable to State programs, see §145.11 (UIC).) The response to comments shall be available to the public.	§611.H.2	2. The response to comments shall be available to the public.		Text is identical.
PART 144--UNDERGROUND INJECTION CONTROL PROGRAM						
SUBPART A--GENERAL PROVISIONS						
40 CFR 144.1 Purpose and scope of Part 144.						
70	40 CFR 144.1(f)(1)(viii	Subpart H of 40 CFR 146 sets forth requirements for owners or operators of Class VI injection wells.				No analogous state text; no impact on stringency. (This row was not in the state's original crosswalk.)

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
71	40 CFR 144.1(g)	*Scope of the permit or rule requirement.* The UIC permit program regulates underground injection by six classes of wells (see definition of ''well injection,'' 40 CFR 144.3). The six classes of wells are set forth in 40 CFR 144.6. All owners or operators of these injection wells must be authorized either by permit or rule by the Director. In carrying out the mandate of the SDWA, this subpart provides that no injection shall be authorized by permit or rule if it results in the movement of fluid containing any contaminant into underground sources of drinking water (USDWs –see 40 CFR 144.3 for definition), if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 141 or may adversely affect the health of persons (40 CFR 144.12). Existing Class IV wells which inject hazardous waste directly into an underground source of drinking water are to be eliminated over a period of six months and new such Class IV wells are to be prohibited (40 CFR 144.13). For Class V wells, if remedial action appears necessary, a permit may be required (40 CFR 144.25) or the Director must require remedial action or closure by order (40 CFR 144.6(c)). During UIC program development, the Director may identify aquifers and portions of aquifers which are actual or potential sources of drinking water. This will provide an aid to the Director in carrying out his or her duty to protect all USDWs. An aquifer is a USDW if it fits the definition under § 144.3, even if it has not been "identified." The Director may also designate "exempted aquifers" using the criteria in 40 CFR 146.4 of this chapter.	N/A		Note that states are not expected to have language equivalent to this section, as the requirements mentioned here are described in more detail in other parts of the regulation. They are included here to provide background on and a summary of the UIC program. …	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
72	40 CFR 144.1(g) continued	Such aquifers are those which would otherwise qualify as "underground sources of drinking water" to be protected, but which have no real potential to be used as drinking water sources. Therefore, they are not USDWs. No aquifer is an exempted aquifer until it has been affirmatively designated under the procedures at § 144.7. Aquifers which do not fit the definition of "underground source of drinking water" are not "exempted aquifers." They are simply not subject to the special protection afforded USDWs. During initial Class VI program development, the Director shall not expand the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption for Class VI injection wells and EPA shall not approve a program that applies for aquifer exemption expansions of Class II-Class VI exemptions as part of the program description. All Class II to Class VI aquifer exemption expansions previously issued by EPA must be incorporated into the Class VI program descriptions pursuant to requirements at § 145.23(f)(9).	N/A			Reviewed; no issues found.
40 CFR 144.3 Definitions.						
73	40 CFR 144.3	*Administrator* means the Administrator of the United States Environmental Protection Agency, or an authorized representative.	N/A		This language is required only if the state's regulation does not explicitly use the term "EPA Administrator" when referring to the EPA Administrator. For example, if the state refers to the EPA Administrator as simply "the Administrator," this definition is required. If the state uses the term "EPA Administrator" in its rule language, no definition is required.	Reviewed; no issues found. Note that the state regulations do not make any reference to the EPA Administrator. This provision is not required for state programs.
74		*Application* means the EPA standard national forms for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in approved States, including any approved modifications or revisions.	§601.A	Application—the filing by a person on the Office of Conservation forms for an underground injection permit, including any additions, revisions or modifications to the forms.		Text is similar, with no impact on stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
75		*Appropriate Act and regulations* means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA); or Safe Drinking Water Act (SDWA), whichever is applicable; and applicable regulations promulgated under those statutes.	N/A			N/A. This provision is not required for state programs.
76		*Approved State Program* means a UIC program administered by the State or Indian Tribe that has been approved by EPA according to SDWA sections 1422 and/or 1425.	N/A			N/A. This provision is not required for state programs.
77		*Aquifer* means a geological "formation," group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.	§601.A	Aquifer—a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.		Text is identical.
78		*Area of review* means the area surrounding an injection well described according to the criteria set forth in § 146.06 or in the case of an area permit, the project area plus a circumscribing area the width of which is either 1/4 of a mile or a number calculated according to the criteria set forth in § 146.06.	N/A		A Class VI specific definition of area of review is included with the crosswalk analysis of definitions under 40 CFR 146.81(d)	No state equivalent. The state rules define the area of review for Class VI projects in §615.B.1 (see 146.84). August 2020 review: no concerns for stringency.
79		*Cesspool* means a "drywell" that receives untreated sanitary waste containing human excreta, and which sometimes has an open bottom and/or perforated sides.	N/A			N/A. This provision is not required for state programs.
80		*Contaminant* means any physical, chemical, biological, or radiological substance or matter in water.	§601.A	Contaminant—any physical, chemical, biological, or radiological substance or matter in water.		Text is identical.
81		*Director* means the Regional Administrator, the State director or the Tribal director as the context requires, or an authorized representative. When there is no approved State or Tribal program, and there is an EPA administered program, "Director" means the Regional Administrator. When there is an approved State or Tribal program, "Director" normally means the State or Tribal director. In some circumstances, however, EPA retains the authority to take certain actions even when there is an approved State or Tribal program. In such cases, the term "Director" means the Regional Administrator and not the State or Tribal director.	§601.A	Commissioner—the Assistant Secretary of the Office of Conservation, Department of Natural Resources.		Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
82		*Draft permit* means a document prepared under §124.6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." ~~A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in §124.5 are types of "draft permits."~~ A denial of a request for modification, revocation and reissuance, or termination, as discussed in §124.5 is not a "draft permit."	§601.A	Draft Permit—a document prepared under §611.C.1 indicating the commissioner's decision to issue or deny, modify, revoke and reissue, terminate, or reissue a permit. A denial of request for modification, revocation and reissuance, or termination, as discussed in §613.E is not a draft permit.	~~The struck-out text of the federal definition will not be adopted. A notice of intent to terminate a permit and a notice to deny a permit will not be issued by the commissioner.~~	Reviewed; no issues found. See also §611.I/40 CFR 124.15(a).
83		*Drilling mud* means a heavy suspension used in drilling an "injection well," introduced down the drill pipe and through the drill bit.	§601.A	Drilling Mud—heavy suspension used in drilling an injection well introduced down the drill pipe and through the drill bit.		Text is identical.
84		*Drywell* means a well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids.	§601.A	Drywell—a well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids.		Text is identical.
85		*Eligible Indian Tribe* is a Tribe that meets the statutory requirements established at 42 U.S.C. 300j-11(b)(1).	N/A			N/A. This provision is not required for state programs.
86		*Emergency permit* means a UIC "permit" issued in accordance with § 144.34.	§601.A	Emergency Permit—a UIC permit issued in accordance with §115 or §515.		Text is similar, with no impact on stringency.
87		*Environmental Protection Agency* ("EPA") means the United States Environmental Protection Agency.	§601.A	USEPA—the United States Environmental Protection Agency.		Text is similar, with no impact on stringency.
88		*Exempted aquifer* means an "aquifer" or its portion that meets the criteria in the definition of "underground source of drinking water" but which has been exempted according to the procedures in §144.7.	§601.A	Exempted Aquifer—an aquifer or its portion that meets the criteria of the definition of underground source of drinking water but which has been exempted according to the procedures set forth in §603.F.		Text is similar, with no impact on stringency.
89		*Existing injection* well means an "injection well" other than a "new injection well."	§601.A	Existing Injection Well or Project—an injection well or project other than a new injection well or project.	Language added to include injection projects.	Reviewed; no issues found.
90		*Facility or activity* means any UIC "injection well," or any other facility or activity that is subject to regulation under the UIC program.	§601.A	Facility or Activity—any facility or activity, including land or appurtenances thereto, that is subject to these regulations.	While the language at §601.A is not verbatim to the federal definition, the intent of the federal rule is preserved; that being, the facility, activity, and relevant features are subject to these regulations.	Reviewed; no issues found.
91		*Fluid* means any material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.	§601.A	Fluid—any material or substance which flows or moves whether in a semisolid, liquid, sludge, gas or any other form or state.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
92		*Formation* means a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailingly, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.	§601.A	Formation—a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity revealingly, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.		Text omits reference to consolidated or unconsolidated. No impact on stringency. August 2020 review: definition is similar to CFR; no concerns for stringency.
93		*Formation fluid* means "fluid" present in a "formation" under natural conditions as opposed to introduced fluids, such as "drilling mud."	§601.A	Formation Fluid—fluid present in a formation under natural conditions as opposed to introduced fluids, such as drilling muds.		Text is similar, with no impact on stringency.
94		*Generator* means any person, by site location, whose act or process produces hazardous waste identified or listed in 40 CFR part 261.	§601.A	Generator—any person, by site location, whose act or process produces hazardous waste identified or listed in the Louisiana Hazardous Waste Management Program; or any person or entity who generates or causes to be generated any fluid for well injection.	In addition to the federal definition, the following language has been added: or any person or entity who generates or causes to be generated any fluid for well injection.	Reviewed; no issues found.
95		*Geologic sequestration* means the long-term containment of a gaseous, liquid, or supercritical carbon dioxide stream in subsurface geologic formations. This term does not apply to carbon dioxide capture or transport.	§601.A	Geologic Sequestration—the long-term containment of a gaseous, liquid, or supercritical carbon dioxide stream in subsurface geologic formations. This term does not apply to carbon dioxide capture or transport.		Text is identical.
96		*Ground water* means water below the land surface in a zone of saturation.	§601.A	Ground Water—water below the land surface in a zone of saturation.		Text is identical.
97		*Hazardous waste* means a hazardous waste as defined in 40 CFR 261.3.	§601.A	Hazardous Waste—a hazardous waste as defined in the Louisiana Hazardous Waste Management Program.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
98		*Hazardous waste management facility* ("HWM facility") means all contiguous land, and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combination of them). *HWM facility* means "Hazardous Waste Management facility"	N/A			N/A. This provision is not required for state programs.
99		*Improved sinkhole* means a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface.	N/A			N/A. This provision is not required for state programs.
100		*Indian lands* means "Indian country" as defined in 18 U.S.C. 1151. That section defines Indian country as: (a) All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; (b) All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State; and (c) All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.	N/A			N/A. This provision is not required for state programs.
101		*Indian Tribe* means any Indian Tribe having a Federally recognized governing body carrying out substantial governmental duties and powers over a defined area.	N/A			N/A. This provision is not required for state programs.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
102		*Injection well* means a "well" into which "fluids" are being injected.	§601.A	Injection Well—a well into which fluids are being injected other than fluids associated with active drilling operations.	While the language at §601.A is not verbatim to the federal definition, the intent of the federal rule is preserved; that being, injected fluids are those that are injected for the purpose of storage or disposal. The description at §601.A is a narrower definition of injection well that only applies to wells where fluids are injected for the purpose of storage and is more stringent compared to the federal rule.	Text applies only wells where fluid is injected for storage, which is a narrower definition of injection well than the federal regulation. This difference should not impact stringency for the purpose of CO_2 injection for GS. August 2020 review: no concerns for stringency.
103		*Injection zone* means a geological "formation" group of formations, or part of a formation receiving fluids through a "well."	N/A		A Class VI-specific definition is at §601.A; see 40 CFR 146.81(d).	No state equivalent. A Class VI-specific definition is at §601.A; see 146.81(d). August 2020 review: no concerns for stringency.
104		*Interstate Agency* means an agency of two or more States established by or under an agreement or compact approved by the Congress, or any other agency of two or more States or Indian Tribes having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator under the "appropriate Act and regulations."	N/A			N/A. This provision is not required for state programs.
105		*Major facility* means any UIC "facility or activity" classified as such by the Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director.	§601.A	Major Facility—any Class I or IV hazardous waste injection well facility or activity.		Text applies only to hazardous waste injection well facilities.
106		*Manifest* means the shipping document originated and signed by the "generator" which contains the information required by subpart B of 40 CFR part 262.	§601.A	Manifest—the shipping document originated and signed by the generator which contains the information required by the Hazardous Waste Management Program.		Text is similar, with no impact on stringency.
107		*New injection* wells means an "injection well" which began injection after a UIC program for the State applicable to the well is approved or prescribed.	§601.A	New Injection Well—a well which began injection after the Louisiana Underground Injection Control program is approved and the applicable (Office of Conservation) rules and regulations are promulgated.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
108		*Owner or operator* means the owner or operator of any "facility or activity" subject to regulation under the UIC program.	§601.A	Operator—the person recognized as being responsible to the Office of Conservation for the well, site, facility, or activity subject to regulatory authority under these rules and regulations. The operator can, but need not be, the owner of the well, site, facility, or activity. Owner—the person that owns any well, site, facility, or activity subject to regulation under the UIC program. The owner can, but need not be, the operator of the well, site, facility, or activity.		Text is similar, with no impact on stringency.
109		*Permit* means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of this part, parts 145, 146 and 124. "Permit" includes an area permit (§144.33) and an emergency permit (§144.34). Permit does not include UIC authorization by rule (§144.21), or any permit which has not yet been the subject of final agency action, such as a "draft permit."	§601.A	Permit—an authorization, license, or equivalent control document issued by the commissioner to implement the requirements of these regulations. Permit includes, but it is not limited to, area permits and emergency permits. Permit does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit.		Text is similar, with no impact on stringency.
110		*Person* means an individual, association, partnership, corporation, municipality, state, federal, or tribal agency, or an agency or employee thereof	§601.A	Person—any natural person, individual, association, corporation, partnership, limited liability company, or other entity, receiver, tutor, curator, executor, administrator, fiduciary, municipality, state or federal agency, or an agent or employee of the aforementioned thereof.	In addition to the federal definition, the following language has been added: ~~partnership,~~ limited liability company, or other entity, receiver, tutor, curator, executor, administrator, fiduciary.	Reviewed; no issues found. Partnership is included in the CFR text. August 2020 review: no concerns for stringency.
111		*Plugging* means the act or process of stopping the flow of water, oil or gas into or out of a formation through a borehole or well penetrating that formation.	§601.A	Plugging—the act or process of stopping the flow of water, oil or gas into or out of a formation through a borehole or well penetrating that formation.		Text is identical.
112		*Point of injection* means the last accessible sampling point prior to waste fluids being released into the subsurface environment through a Class V injection well. For example, the point of injection of a Class V septic system might be the distribution box—the last accessible sampling point before the waste fluids drain into the underlying soils. For a dry well, it is likely to be the well bore itself.	§601.A	Point of Injection—the last accessible sampling point prior to waste fluids being released into the subsurface environment through a Class V injection well. For example, the point of injection of a Class V septic system might be the distribution box, the last accessible sampling point before the waste fluids drain into the underlying soils. For a dry well, it is likely to be the well bore itself.		Text is identical.
113		*Project* means a group of wells in a single operation.	§601.A	Project—a group of wells in a single operation.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
114		*Radioactive Waste* means any waste which contains radioactive material in concentrations which exceed those listed in 10 CFR part 20, appendix B, table II, column 2.	§601.A	Radioactive Waste—any waste which contains radioactive material for which no use or reuse is intended and which is to be discarded.	While the language at §601.A defines radioactive waste with regards to intended use or reuse of radioactive material rather than the concentration referenced in the federal language, the difference does not impact stringency of Class VI rules.	Text makes no reference to concentrations of said waste. No impact on stringency for Class VI purposes. August 2020 review: no concerns for stringency.
115		*RCRA* means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94–580, as amended by Pub. L. 95–609, Pub. L. 96–510, 42 U.S.C. 6901 et seq.).	§601.A	RCRA—the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (P.L. 94-580 as amended by P.L. 95-609, 42 U.S.C. 6901 et seq.).		Text is similar, with no impact on stringency.
116		*Regional Administrator* means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.	N/A			N/A. This provision is not required for state programs.
117		*Sanitary waste* means liquid or solid wastes originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses, and utensils are cleaned. Sources of these wastes may include single or multiple residences, hotels and motels, restaurants, bunkhouses, schools, ranger stations, crew quarters, guard stations, campgrounds, picnic grounds, day-use recreation areas, other commercial facilities, and industrial facilities provided the waste is not mixed with industrial waste.	N/A			N/A. This provision is not required for state programs.
118		*Schedule of compliance* means a schedule of remedial measures included in a "permit," including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations."	N/A			N/A. This provision is not required for state programs.
119		*Septic system* means a "well" that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system.	N/A			N/A. This provision is not required for state programs.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
120		*SDWA* means the Safe Drinking Water Act (Pub. L. 93–523, as amended; 42 U.S.C. 300f et seq.).	N/A			N/A. This provision is not required for state programs.
121		*Site* means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.	§601.A	Site—the land or water area where any facility or activity is physically located or conducted including adjacent land used in connection with the facility or activity.		The state did not include the LA text in their crosswalk; added in review. Text is identical.
122		*State* means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, the Trust Territory of the Pacific Islands, the Commonwealth of the Northern Mariana Islands, or an Indian Tribe treated as a State.	§601.A	State—the state of Louisiana.	The usage of the term "state" in these regulations does not encompass tribal entities.	The state did not include the LA text in their crosswalk; added in review. Text makes no mention of Indian tribes. August 2020 review: state comment is acknowledged; no concerns for stringency.
123		*State Director* means the chief administrative officer of any State, interstate, or Tribal agency operating an "approved program," or the delegated representative of the State director. If the responsibility is divided among two or more States, interstate, or Tribal agencies, "State Director" means the chief administrative officer of the State, interstate, or Tribal agency authorized to perform the particular procedure or function to which reference is made.	§601.A	Commissioner—the Assistant Secretary of the Office of Conservation, Department of Natural Resources.		Text is similar, with no impact on stringency.
124		*State/EPA agreement* means an agreement between the Regional Administrator and the State which coordinates EPA and State activities, responsibilities and programs.	N/A			N/A. This provision is not required for state programs.
125		*Stratum* (plural strata) means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.	§601.A	Stratum (plural Strata)—a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.		Text is identical.
126		*Subsurface fluid distribution system* means an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground.	§601.A	Subsurface Fluid Distribution System—an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground.		Text is identical.
127		*Total dissolved solids* means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR part 136.	§601.A	Total Dissolved Solids—the total dissolved filterable solids as determined by use of the method specified in the 14th edition, pp. 91-92, of Standard Methods for the Examination of Water and Waste Water.		Text is similar, with no impact on stringency. This provision is not required for state programs.
128		*Transferee* means the owner or operator receiving ownership and/or operational control of the well.	N/A			N/A. This provision is not required for state programs.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
129		*Transferor* means the owner or operator transferring ownership and/or operational control of the well.	N/A			N/A. This provision is not required for state programs.
130		*UIC* means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved State program."	§601.A	UIC—the Louisiana State Underground Injection Control Program.		Text is similar, with no impact on stringency.
131		*Underground injection* means a "well injection."	§601.A	Underground Injection—a well injection.		Text is identical.
132		*Underground source of drinking water* (USDW) means an aquifer or its portion: (a)(1) Which supplies any public water system; or (2) Which contains a sufficient quantity of ground water to supply a public water system; and (i) Currently supplies drinking water for human consumption; or (ii) Contains fewer than 10,000 mg/l total dissolved solids; and (b) Which is not an exempted aquifer.	§601.A	Underground Source of Drinking Water (USDW)—an aquifer or its portion: a. which supplies any public water system; or b. which contains a sufficient quantity of ground water to supply a public water system; and i. currently supplies drinking water for human consumption; or ii. contains fewer than 10,000 mg/1 total dissolved solids; and which is not an exempted aquifer.		Text is identical.
133		*Well* means: A bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; or, a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole; or, a subsurface fluid distribution system.	§601.A	Well—a bored, drilled or driven shaft, whose depth is greater than the largest surface dimension; or, a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole; or, a subsurface fluid distribution system.		Text is similar, with no impact on stringency.
134		*Well injection* means the subsurface emplacement of fluids through a well.	§601.A	Well Injection—the subsurface emplacement of fluids through an injection well.		Text is identical.
40 CFR 144.5 Confidentiality of information.						

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
135	40 CFR 144.5 (a)	In accordance with 40 CFR part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR part 2 (Public Information).	§603.I	I. Confidentiality of Information. Information obtained by any rule, regulations, order, or permit term or condition adopted or issued hereunder, or by any investigation authorized thereby, shall be available to the public, unless nondisclosure is requested in writing and such information is determined by the commissioner to require confidentiality to protect trade secrets, processes, operations, style of work, apparatus, statistical data, income, profits, losses, or in order to protect any plan, process, tool, mechanism, or compound; provided that such nondisclosure shall not apply to information that is necessary for use by duly authorized officers or employees of state or federal government in carrying out their responsibilities under these regulations or applicable federal or state law. If no claim is made at the time of submission, the commissioner may make the information available to the public without further notice. Claims of confidentiality for the following information shall be denied:	While the language at §601.A is not verbatim to the federal definition, the intent of the federal rule is preserved; that being, information that is not determined to require confidentiality shall be made available to the public.	Reviewed; no issues found.
136	40 CFR 144.5 (b) (See also 145.11(a)(1))	Claims of confidentiality for the following information will be denied: (1) The name and address of any permit applicant or permittee; (2) Information which deals with the existence, absence, or level of contaminants in drinking water.	§603.I through 603.I.2	1. the name and address of any permit applicant or permittee; and 2. information which deals with the existence, absence, or level of contaminants in drinking water or zones other than the approved injection zone.	The following language has been added at §603.I.2: or zones other than the approved injection zone. This language is more restrictive than the federal equivalent as it refers to the presence of contaminants in any formation outside of the approved injection zone rather than just the USDW or in the drinking water.	EPA: legal staff input on the addition of "other than the approved injection zone" is requested. This should be acceptable, since the injection zone will by definition not be a USDW. August 2020 review: rule text addresses comment; no concerns for stringency.
40 CFR 144.6 Classification of wells						
137	40 CFR 144.6 (See also 145.11(a)(2))	Injection wells are classified as follows:				

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
137	40 CFR 144.6(f) (See also 145.11(a)(2))	*Class VI.* Wells that are not experimental in nature that are used for geologic sequestration of carbon dioxide beneath the lowermost formation containing a USDW; ~~or, wells used for geologic sequestration of carbon dioxide that have been granted a waiver of the injection depth requirements pursuant to requirements at § 146.95 of this chapter~~; or, wells used for geologic sequestration of carbon dioxide that have received an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption pursuant to §§ 146.4 of this chapter and 144.7(d).	§603.C.1	1. Class VI. Wells not experimental in nature that are used for geologic sequestration of carbon dioxide beneath the lowermost formation containing a USDW; or wells used for geologic sequestration of carbon dioxide that have received an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption pursuant to the appropriate parts of §603.F.	~~The struck-out text of 40 CFR 144.6(f) will not be adopted. Waivers of the injection depth requirements for Class VI wells will not be granted.~~	Reviewed; no issues found.
40 CFR 144.7 Identification of underground sources of drinking water and exempted aquifers						
138	40 CFR 144.7(a) (See also 145.11(a)(3))	The Director may identify (by narrative description, illustrations, maps, or other means) and shall protect as underground sources of drinking water, all aquifers and parts of aquifers which meet the definition of ''underground source of drinking water'' in § 144.3, except to the extent there is an applicable aquifer exemption under paragraph (b) of this section or an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption for the exclusive purpose of Class VI injection for geologic sequestration under paragraph (d) of this section. Other than EPA approved aquifer exemption expansions that meet the criteria set forth in § 146.4(d) of this chapter, new aquifer exemptions shall not be issued for Class VI injection wells. Even if an aquifer has not been specifically identified by the Director, it is an underground source of drinking water if it meets the definition in § 144.3.	§603.F.1	1. The commissioner may identify (by narrative description, illustrations, maps, or other means) and shall protect as an underground source of drinking water, all aquifers or parts of aquifers which meet the definition of an underground source of drinking water~~.~~, except where there is an applicable aquifer exemption under §§603.F.2 and 4, or an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption for the exclusive purpose of Class VI injection for geologic sequestration under §~~103~~603.F.4. Other than approved aquifer exemption expansions that meet the criteria set forth in §~~103~~603.F.2.d, new aquifer exemptions shall not be issued for Class VI injection wells. Even if an aquifer has not been specifically identified by the commissioner, it is an underground source of drinking water if it meets the definition.		Text is similar, with no impact on stringency. Note, there is a typo (errant period) in state rule text. Should the references to §103.F.4. and §103.F.2.d refer to §603? August 2020 review: revised citations address the above comments; state provision is now similar to CFR.
139	40 CFR 144.7(b)(1) (See also 145.11(a)(3))	The Director may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the Director proposes to designate as exempted aquifers using the criteria in 40 CFR 146.4.	§603.F.2	2. After notice and opportunity for a public hearing the commissioner may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the commissioner proposes to designate as exempted aquifers if they meet the following criteria:	In addition to the text at 40 CFR 144.7(b)(1), the following language has been added at §603.F.2: after notice and opportunity for a public hearing.	Reviewed; no issues found.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
140	40 CFR 144.7(b)(2) (See also 145.11(a)(3))	No designation of an exempted aquifer submitted as part of a UIC program shall be final until approved by the Administrator as part of a UIC program. No designation of an expansion to the areal extent of a Class II enhanced oil recovery or enhanced gas recovery aquifer exemption for the exclusive purpose of Class VI injection for geologic sequestration shall be final until approved by the Administrator as a revision to the applicable Federal UIC program under part 147 or as a substantial revision of an approved State UIC program in accordance with § 145.32 of this chapter.	§603.F.3	3. No designation of an exempted aquifer submitted as part of the state's UIC program shall be final until approved by the USEPA. No designation of an expansion to the areal extent of a Class II enhanced oil recovery or enhanced gas recovery aquifer exemption for the exclusive purpose of Class VI injection for geologic sequestration shall be final until approved by the USEPA as a substantial revision of the state's UIC program in accordance with 40 CFR 145.32.		Text is similar, with no impact on stringency.
141	40 CFR 144.7(d) (See also 145.11(a)(3))	*Expansion to the areal extent of existing Class II aquifer exemptions for Class VI wells.* ~~Owners or~~ operators of Class II enhanced oil recovery or enhanced gas recovery wells may request that the Director approve an expansion to the areal extent of an aquifer exemption already in place for a Class II enhanced oil recovery or enhanced gas recovery well for the exclusive purpose of Class VI injection for geologic sequestration. Such requests must be treated as a revision to the applicable Federal UIC program under part 147 or as a substantial program revision to an approved State UIC program under § 145.32 of this chapter and will not be final until approved by EPA.	§603.F.4	4. Expansion to the Areal Extent of Existing Class II Aquifer Exemptions for Class VI Wells. Operators of Class II enhanced oil recovery or enhanced gas recovery wells may request that the commissioner approve an expansion to the areal extent of an aquifer exemption already in place for a Class II enhanced oil recovery or enhanced gas recovery well for the exclusive purpose of Class VI injection for geologic sequestration. Such requests are treated as a substantial program revision to the state's UIC program and will not be final until approved by USEPA.	~~The struck-out text of 40 CFR 144.7(d) will not be adopted. Based on the §601 definitions of *operator* and *owner*, the language at §603.F.4 will not impact the stringency of state requirements compared to the federal rule.~~	Text limits this provision to operators, not owners; no impact on stringency, given the definition of these terms. August 2020 review: no impact on stringency.
142	40 CFR 144.7(d)(1) (See also 145.11(a)(3))	The ~~owner or~~ operator of a Class II enhanced oil recovery or enhanced gas recovery well that requests an expansion of the areal extent of an existing aquifer exemption for the exclusive purpose of Class VI injection for geologic sequestration must define (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) that are clear and definite, all aquifers or parts thereof that are requested to be designated as exempted using the criteria in § 146.4 of this chapter.	§603.F.4.a	a. The operator of a Class II enhanced oil recovery or enhanced gas recovery well that requests an expansion of the areal extent of an existing aquifer exemption for the exclusive purpose of Class VI injection for geologic sequestration must define (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) that are clear and definite, all aquifers or parts thereof that are requested to be designated as exempted using the criteria in §~~103~~603.F.2.d.	~~The struck-out text of 40 CFR 144.7(d)(1) will not be adopted. Based on the §601 definitions of *operator* and *owner*, the language at §603.F.4 will not impact the stringency of state requirements compared to the federal rule.~~	Text limits this provision to operators, not owners; no impact on stringency, given the definition of these terms. Should the reference to §103.F.2.d refer to §603? August 2020 review: revised citation addresses the above comment. However, the July LA rule text should be corrected to read "§603.F.2.d" instead of "§103.F.2.d"

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
143	40 CFR 144.7(d)(2) (See also 145.11(a)(3))	In evaluating a request to expand the areal extent of an aquifer exemption of a Class II enhanced oil recovery or enhanced gas recovery well for the purpose of Class VI injection, the Director must determine that the request meets the criteria for exemptions in § 146.4. In making the determination, the Director shall consider:	§603.F.4.b	b. In evaluating a request to expand the areal extent of an aquifer exemption of a Class II enhanced oil recovery or enhanced gas recovery well for the purpose of Class VI injection, the commissioner must determine that the request meets the criteria for exemptions. In making the determination, the commissioner shall consider:		Text is similar, with no impact on stringency.
144	40 CFR 144.7(d)(2)(i) (See also 145.11(a)(3))	Current and potential future use of the USDWs to be exempted as drinking water resources;	§603.F.4.b.i	i. current and potential future use of the USDWs to be exempted as drinking water resources;		Text is identical.
145	40 CFR 144.7(d)(2)(ii) (See also 145.11(a)(3))	The predicted extent of the injected carbon dioxide plume, and any mobilized fluids that may result in degradation of water quality, over the lifetime of the GS project, as informed by computational modeling performed pursuant to § 146.84(c)(1), in order to ensure that the proposed injection operation will not at any time endanger USDWs including non-exempted portions of the injection formation;	§603.F.4.b.ii	ii. the predicted extent of the injected carbon dioxide plume, and any mobilized fluids that may result in degradation of water quality, over the lifetime of the project, as informed by computational modeling, in order to ensure that the proposed injection operation will not at any time endanger USDWs including non-exempted portions of the injection formation; and		Text is similar, with no impact on stringency.
146	40 CFR 144.7(d)(2)(iii) (See also 145.11(a)(3))	Whether the areal extent of the expanded aquifer exemption is of sufficient size to account for any possible revisions to the computational model during reevaluation of the area of review, pursuant to § 146.84(e); and	§603.F.4.b.iii	iii. whether the areal extent of the expanded aquifer exemption is of sufficient size to account for any possible revisions to the computational model during reevaluation of the area of review.~~iii. whether the areal extent of the expanded aquifer exemption is of sufficient size to b account for any possible revisions to the computational model during reevaluation of the area of review.~~		Text is similar, with no impact on stringency. Note typo (state rule text appears ok). August 2020 review: revised text addresses the above comment.
147	40 CFR 144.7(d)(2)(iv) (See also 145.11(a)(3))	Any information submitted to support a waiver request made by the owner or operator under § 146.95, if appropriate.	N/A		The language at 40 CFR 144.7(d)(2)(iv) will not be adopted. Waivers of the injection depth requirements for Class VI wells will not be granted.	Reviewed; no issues found.
40 CFR 144.8 Noncompliance and program reporting by the Director						
148	40 CFR 144.8(a) (See also 145.11(a)(4))	The Director shall prepare quarterly and annual reports as detailed below. When the State is the permit-issuing authority, the State Director shall submit any reports required under this section to the Regional Administrator. (a) *Quarterly reports*. The Director shall submit quarterly narrative reports for major facilities as follows:	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
149	40 CFR 144.8(a)(1)(i) (See also 145.11(a)(4))	*Format.* The report shall use the following format: (i) Provide an alphabetized list of permittees. When two or more permittees have the same name, the lowest permit number shall be entered first.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
150	40 CFR 144.8(a)(1)(ii) (See also 145.11(a)(4))	For each entry on the list, include the following information in the following order: (A) Name, location, and permit number of the noncomplying permittees. (B) A brief description and date of each instance of noncompliance for that permittee. Instances of noncompliance may include one or more the kinds set forth in paragraph (a)(2) of this section. When a permittee has noncompliance of more than one kind, combine the information into a single entry for each such permittee. (C) The date(s) and a brief description of the action(s) taken by the Director to ensure compliance. (D) Status of the instance(s) of noncompliance with the date of the review of the status or the date of resolution. (E) Any details which tend to explain or mitigate the instance(s) of noncompliance.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
151	40 CFR 144.8(a)(2) (See also 145.11(a)(4))	*Instances of noncompliance to be reported.* Any instances of noncompliance within the following categories shall be reported in successive reports until the noncompliance is reported as resolved. Once noncompliance is reported as resolved it need not appear in subsequent reports.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
152	40 CFR 144.8(a)(2)(i) (See also 145.11(a)(4))	*Failure to complete construction elements.* When the permittee has failed to complete, by the date specified in the permit, an element of a compliance schedule involving either planning for construction or a construction step (for example, begin construction, attain operation level); and the permittee has not returned to compliance by accomplishing the required elements of the schedule within 30 days from the date a compliance schedule report is due under the permit.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
153	40 CFR 144.8(a)(2)(ii) (See also 145.11(a)(4))	*Modifications to schedules of compliance.* When a schedule of compliance in the permit has been modified under §§144.39 or 144.41 because of the permittee's noncompliance.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
154	40 CFR 144.8(a)(2)(iii) (See also 145.11(a)(4))	*Failure to complete or provide compliance schedule or monitoring reports.* When the permittee has failed to complete or provide a report required in a permit compliance schedule (for example, progress report or notice of noncompliance or compliance) or a monitoring report; and the permittee has not submitted the complete report within 30 days from the date it is due under the permit for compliance schedules, or from the date specified in the permit for monitoring reports.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
155	40 CFR 144.8(a)(2)(iv) (See also 145.11(a)(4))	*Deficient reports.* When the required reports provided by the permittee are so deficient as to cause misunderstanding by the Director and thus impede the review of the status of compliance.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
156	40 CFR 144.8(a)(2)(v) (See also 145.11(a)(4))	*Noncompliance with other permit requirements.* Noncompliance shall be reported in the following circumstances:	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
157	40 CFR 144.8(a)(2)(v)(A) (See also 145.11(a)(4))	Whenever the permittee has violated a permit requirement (other than reported under paragraph (a)(2)(i) or (ii) of this section), and has not returned to compliance within 45 days from the date reporting of noncompliance was due under the permit; or	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
158	40 CFR 144.8(a)(2)(v)(B) (See also 145.11(a)(4))	When the Director determines that a pattern of noncompliance exists for a major facility permittee over the most recent four consecutive reporting periods. This pattern includes any violation of the same requirement in two consecutive reporting periods, and any violation of one or more requirements in each of four consecutive reporting periods; or	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
159	40 CFR 144.8(a)(2)(v)(C) (See also 145.11(a)(4))	When the Director determines significant permit noncompliance or other significant event has occurred, such as a migration of fluids into a USDW.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
160	40 CFR 144.8(a)(2)(vi) (See also 145.11(a)(4))	*All other.* Statistical information shall be reported quarterly on all other instances of noncompliance by major facilities with permit requirements not otherwise reported under paragraph (a) of this section.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
161	40 CFR 144.8(b)(1) (See also 145.11(a)(4))	*Annual reports* — (1) *Annual noncompliance report.* Statistical reports shall be submitted by the Director on nonmajor UIC permittees indicating the total number reviewed, the number of noncomplying nonmajor permittees, the number of enforcement actions, and number of permit modifications extending compliance deadlines. The statistical information shall be organized to follow the types of noncompliance listed in paragraph (a) of this section.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
162	40 CFR 144.8(b)(2)(i) (See also 145.11(a)(4))	For State-administered UIC Programs only. In addition to the annual noncompliance report, the State Director shall: Submit each year a program report to the Administrator (in a manner and form prescribed by the Administrator) consisting of:	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
163	40 CFR 144.8(b)(2)(i)(A) (See also 145.11(a)(4))	A detailed description of the State's implementation of its program;	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
164	40 CFR 144.8(b)(2)(i)(B) (See also 145.11(a)(4))	Suggested changes, if any to the program description (see § 145.23(f)) which are necessary to reflect more accurately the State's progress in issuing permits;	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
165	40 CFR 144.8(b)(2)(i)(C) (See also 145.11(a)(4))	An updated inventory of active underground injection operations in the State.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
166	40 CFR 144.8(b)(2)(ii) (See also 145.11(a)(4))	In addition to complying with the requirements of paragraph (b)(2)(i) of this section, the Director shall provide the Administrator, on February 28th and August 31st of each of the first two years of program operation, the information required in 40 CFR 146.13, 146.23, and 146.33.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
167	40 CFR 144.8(b)(2)(iii) (See also 145.11(a)(4))	All Class VI program reports shall be consistent with reporting requirements set forth in §146.91 of this chapter.	§629	A. Reporting Requirements. The owner or operator must provide, at a minimum, the following reports to the commissioner—and the USEPA as specified in §629.A.5—for each permitted Class VI well:		Text is similar, with no impact on stringency.
168	40 CFR 144.8(c)(1) (See also 145.11(a)(4))	Schedule. (1) For all quarterly reports. On the last working day of May, August, November, and February, the State Director shall submit to the Regional Administrator information concerning noncompliance with permit requirements by major facilities in the State in accordance with the following schedule. The Regional Administrator shall prepare and submit information for EPA-issued permits to EPA Headquarters in accordance with the same schedule. QUARTERS COVERED BY REPORTS ON NONCOMPLIANCE BY MAJOR FACILITIES [Date for completion of reports] January, February, and March: 1 May 31 April, May, and June: 1 Aug. 31 July, August, and September: 1 Nov. 30 October, November, and December: 1 Feb. 28 1 Reports must be made available to the public for inspection and copying on this date.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
169	40 CFR 144.8(c)(2) (See also 145.11(a)(4))	For all annual reports. The period for annual reports shall be for the calendar year ending December 31, with reports completed and available to the public no more than 60 days later.	N/A	This is a requirement of the state, and it need not be included in a state's Class VI regulation.	This requirement is addressed in the Memorandum of Agreement.	This will be addressed in the primacy application review.
SUBPART B--GENERAL PROGRAM REQUIREMENTS						
40 CFR 144.11 Prohibition of unauthorized injection.						
170	40 CFR 144.11 (See also 145.11(a)(5))	Any underground injection, except into a well authorized by rule or except as authorized by permit issued under the UIC program, is prohibited. The construction of any well required to have a permit is prohibited until the permit has been issued.	§603.B	B. Prohibition of Unauthorized Injection. Any underground injection, except as authorized by a permit or rule, is prohibited after the effective date of these regulations. Construction or operation of any well required to have a permit under these regulations is prohibited until the permit has been issued.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
40 CFR 144.12 Prohibition of movement of fluid into underground sources of drinking water.						
171	40 CFR 144.12(a) (See also 145.11(a)(6))	No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 141~~2~~ or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.	§603.D.1	1. No authorization by permit or rule shall allow the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 141~~2~~ or of the Louisiana Drinking Water Regulations, Chapter VIII of the State Sanitary Code or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of this Section are met	While the language at §603.D.1 is not verbatim to 40 CFR 144.12(a), the intent of the federal rule is preserved; that being, injection activity that allows movement of any contaminant that may cause a violation of equivalent state regulations shall be prohibited. The following language has been added at §603.D.1: or of the Louisiana Drinking Water Regulations, Chapter VIII of the State Sanitary Code	Does EPA want to recommend that this provision also reference the national primary drinking water regulations at 40 CFR 141 to ensure that it is always current to federal rulemakings? Note that reference to "authorization by … rule" would not apply to Class VI wells. August 2020 review: revised text addresses the above comment. However, the CFR reference should be to 40 CFR 141, the location of the primary drinking water regulations (there is a typo in the CFR). This was due to an error in EPA's crosswalk template; CFR text should refer to 40 CFR part "141" not 142. Therefore, LA's rule text should be corrected to refer to "141".
172	40 CFR 144.12(b) (See also 145.11(a)(6))	For Class I, II, III, and VI wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, except as authorized under part 146, the Director shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, these additional requirements shall be imposed by modifying the permit in accordance with §144.39, or the permit may be terminated under §144.40 if cause exists, or appropriate enforcement action may be taken if the permit has been violated. In the case of wells authorized by rule, see §§ 144.21 through 144.24.	§603.D.2	2. For Class VI wells, if any water quality monitoring of a USDW indicates the movement of any contaminant into the USDW, except as authorized under §603.F, the commissioner shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, these additional requirements shall be imposed by modifying the permit in accordance with §613.C, or the permit may be terminated under §613.E if cause exists, or appropriate enforcement action may be taken if the permit has been violated. In the case of wells authorized by rule, see §603.E.1.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
173	40 CFR 144.12(e) (See also 145.11(a)(6))	Notwithstanding any other provision of this section, the Director may take emergency action upon receipt of information that a contaminant which is present in or likely to enter a public water system or underground source of drinking water may present an imminent and substantial endangerment to the health of persons.	§603.D.4	4. Notwithstanding any other provision of this Section, the commissioner may take emergency action upon receipt of information that a contaminant which is present in or likely to enter a public water system or underground source of drinking water may present an imminent and substantial endangerment to the health or safety of persons.		Text omits reference to entering an underground source of drinking water. This should be added for consistency with the non-endangerment intent of the CFR. August 2020 review: added text addresses the above comment; state provision is now similar to CFR.
40 CFR 144.15 Prohibition of non-experimental Class V wells for geologic sequestration						
174	40 CFR 144.15	The construction, operation or maintenance of any non-experimental Class V geologic sequestration well is prohibited.	§603.C.2	2. Prohibition of Non-Experimental Class V Wells for Geologic Sequestration. The construction, operation or maintenance of any non-experimental Class V geologic sequestration well is prohibited.		Text is identical.
40 CFR 144.16 Waiver of requirement by Director						
175	40 CFR 144.16	**40 CFR 144.16 Waiver of requirement by Director**	N/A			Note: this row was omitted from the template initially provided to the state. This provision is not required of state programs, however.
40 CFR 144.18 Requirements for Class VI wells.						
176	40 CFR 144.18	Owners or operators of Class VI wells must obtain a permit. Class VI wells cannot be authorized by rule to inject carbon dioxide.	§603.E.1	1. Class VI wells cannot be authorized by rule to inject carbon dioxide. Owners or operators of Class VI wells must obtain a permit.		Text is similar, with no impact on stringency.
40 CFR 144.19 Transitioning from Class II to Class VI.						
177	40 CFR 144.19(a)	Owners or operators that are injecting carbon dioxide for the primary purpose of long- term storage into an oil and gas reservoir must apply for and obtain a Class VI geologic sequestration permit when there is an increased risk to USDWs compared to Class II operations. In determining if there is an increased risk to USDWs, the owner or operator must consider the factors specified in §144.19(b).	§603.G.1	1. ~~Wells~~ Operators of wells used to inject carbon dioxide for the primary purpose of long-term storage into an oil or gas reservoir must ~~be permitted for~~apply for and obtain a Class VI geologic sequestration permit when there is an increased risk to USDWs compared to Class II operations. The factors specified in §603.G.2 below must be considered in determining if there is an increased risk to USDWs.	While the language at §603.G.1 is not verbatim to 40 CFR 144.19(a), the intent of the federal rule is preserved; that being, a Class VI geologic sequestration permit must be obtained when there is an increased risk to USDWs compared to Class II operations.	Reviewed; no issues found. EPA recommends that the state rule clarify that the owner or operator must apply for a Class VI permit. August 2020 review: revised text addresses the above comment.
178	40 CFR 144.19(b)	The Director shall determine when there is an increased risk to USDWs compared to Class II operations and a Class VI permit is required. In order to make this determination the Director must consider the following:	§603.G.2	2 The commissioner shall determine when there is an increased risk to USDWs compared to Class II operations and when a Class VI permit is required. The commissioner must consider the following in order to make this determination:		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
179	40 CFR 144.19(b)(1)	Increase in reservoir pressure within the injection zone(s);	§603.G.2.a	a. increase in reservoir pressure within the injection zone(s);		Text is identical.
180	40 CFR 144.19(b)(2)	Increase in carbon dioxide injection rates;	§603.G.2.b	b. increase in carbon dioxide injection rates;		Text is identical.
181	40 CFR 144.19(b)(3)	Decrease in reservoir production rates;	§603.G.2.c	c. decrease in reservoir production rates;		Text is identical.
182	40 CFR 144.19(b)(4)	Distance between the injection zone(s) and USDWs;	§603.G.2.d	d. distance between the injection zone(s) and USDWs;		Text is identical.
183	40 CFR 144.19(b)(5)	Suitability of the Class II area of review delineation;	§603.G.2.e	e. suitability of the Class II enhanced oil or gas recovery area of review delineation;		Text is similar, with no impact on stringency.
184	40 CFR 144.19(b)(6)	Quality of abandoned well plugs within the area of review;	§603.G.2.f	f. quality of abandoned well plugs within the area of review;		Text is identical.
185	40 CFR 144.19(b)(7)	The owner's or operator's plan for recovery of carbon dioxide at the cessation of injection;	§603.G.2.g	g. the owner's or operator's plan for recovery of carbon dioxide at the cessation of injection;		Text is identical.
186	40 CFR 144.19(b)(8)	The source and properties of injected carbon dioxide; and	§603.G.2.h	h. the source and properties of injected carbon dioxide; and		Text is identical.
187	40 CFR 144.19(b)(9)	Any additional site-specific factors as determined by the Director.	§603.G.2.i	i. any additional site-specific factors as determined by the commissioner.		Text is similar, with no impact on stringency.
SUBPART C—AUTHORIZATION OF UNDERGROUND INJECTION BY RULE						
40 CFR 144.22 Existing Class II enhanced recovery and hydrocarbon storage wells.						
188	40 CFR 144.22(b) (See also 145.11(a)(9))	*Duration of well authorization by rule*. Well authorization under this section expires upon the effective date of a permit issued pursuant to § 144.19, § 144.25, § 144.31, § 144.33 or § 144.34; after plugging and abandonment in accordance with an approved plugging and abandonment plan pursuant to §§ 144.28(c) and 146.10 of this chapter; and upon submission of a plugging and abandonment report pursuant to § 144.28(k); or upon conversion in compliance with § 144.28(j).	§603.E.1.a	1. Class VI wells cannot be authorized by rule to inject carbon dioxide. Owners or operators of Class VI wells must obtain a permit. a. Any authorization by rule for an existing Class II enhanced recovery or hydrocarbon storage well shall expire upon the effective date of a Class VI permit issued pursuant to §603.G, or well plug and abandonment according to an approved plug and abandonment plan, or upon well conversion.	Authorization by rule for Class VI wells will be prohibited.	Reviewed; no issues found.
SUBPART D—AUTHORIZATION BY PERMIT						
40 CFR 144.31 Application for a permit; authorization by permit.						

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
189	40 CFR 144.31(a) (See also 145.11(a)(10))	Permit application. Unless an underground injection well is authorized by rule under subpart C of this part, all injection activities including construction of an injection well are prohibited until the owner or operator is authorized by permit. An owner or operator of a well currently authorized by rule must apply for a permit under this section unless well authorization by rule was for the life of the well or project. Authorization by rule for a well or project for which a permit application has been submitted terminates for the well or project upon the effective date of the permit. Procedures for applications, issuance and administration of emergency permits are found exclusively in § 144.34. A RCRA permit applying the standards of part 264, subpart C of this chapter will constitute a UIC permit for hazardous waste injection wells for which the technical standards in part 146 of this chapter are not generally appropriate.	§603.B	B. Prohibition of Unauthorized Injection. Any underground injection, except as authorized by a permit or rule, is prohibited after the effective date of these regulations. Construction or operation of any well required to have a permit under these regulations is prohibited until the permit has been issued.	While the language at §605.B is not verbatim to 40 CFR 144.31(a), the intent of the federal rule is preserved: that being, all injection activities are prohibited unless authorized by a permit.	Reviewed; no issues found.
190	40 CFR 144.31(b) (See also 145.11(a)(10))	Who applies? When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit.	§605.D	D. Who Applies. It is the duty of the owner of a facility or activity to submit an application for permit. When a facility is owned by one person and operated by another, it is the operator's duty to obtain a permit.	While the language at §605.D is not verbatim to 40 CFR 144.31(b), the intent of the federal rule is preserved: that being, it remains the operator's duty to obtain a permit if the facility is owned by another person.	Reviewed; no issues found.
191	40 CFR 144.31(c) (See also 145.11(a)(10))	Time to apply. Any person who performs or proposes an underground injection for which a permit is or will be required shall submit an application to the Director in accordance with the UIC program as follows:	§605.C.2	2. Time to Apply. Any person who performs or proposes an underground injection for which a permit is or will be required shall submit an application to the commissioner.		Text is similar, with no impact on stringency.
192	40 CFR 144.31(c)(2) (See also 145.11(a)(10))	For new injection wells, except new wells in projects authorized under § 144.21(d) ~~or authorized by an existing area permit under § 144.33(c),~~ a reasonable time before construction is expected to begin.	§605.C.2.a	a. for new Class VI injection wells, a reasonable time before construction is expected to begin.	The struck-out text of 40 CFR 144.31(c)(2) will not be adopted. Authorization by area permit for Class VI wells will be prohibited.	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
193	40 CFR 144.31(d) (See also 145.11(a)(10))	Completeness. The Director shall not issue a permit before receiving a complete application for a permit ~~except for emergency permits~~. An application for a permit is complete when the Director receives an application form and any supplemental information which are completed to his or her satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity.	§611.B.2.a	a. the commissioner shall not issue a permit before receiving an application form and any required supplemental information which are completed to his satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity;	While the language at §611.B.2.a is not verbatim to 40 CFR 144.31(d), the intent of the federal rule is preserved: that being, the commissioner shall not issue a permit before receiving an application form and any supplemental information which are completed to his or her satisfaction. The struck-out text of 40 CFR 144.31(d) will not be adopted. Emergency permits will not be granted for Class VI wells.	Text does not make any provision for judging the status of an application independently of the status of any other application or permit for the same facility or activity. August 2020 review: added text addresses the above comment; state provision is similar to CFR, except for emergency permits. No concerns for stringency.
194	40 CFR 144.31(e) (See also 145.11(a)(10))	Information requirements. All applicants for Class I, II, III, and V permits shall provide the following information to the Director, using the application form provided by the Director. Applicants for Class VI permits shall follow the criteria provided in §146.82 of this chapter.	§607.C through 607.C.3	C. Application Contents: An application submitted to construct a new Class VI well or convert any existing well to Class VI shall contain the following geological and technical information: … 3. The commissioner shall notify in writing, any states or tribes within the area of review based on information provided by the applicant in §607.C.1.a.i and §607.C.2.s.	§607.C is an entirely new section specific to Class VI wells, being equivalent to 40 CFR Part 146, Subpart H. The remaining language of 40 CFR 144.31(e) already exists at LAC 43:XVII.105.E. and F., which was approved by the USEPA in prior amendments of LAC 43:XVII.Chapter 1. The underlined text in the far left column does not directly appear in the state requirements, but §607.C through 607.C.3 clearly contains the requirements for Class VI well permits.	Reviewed; no issues found. See also 146.82 below.
195	40 CFR 144.31(e)(1) (See also 145.11(a)(10))	The activities conducted by the applicant which require it to obtain permits under RCRA, UIC, the National Pollution Discharge Elimination system (NPDES) program under the Clean Water Act, or the Prevention of Significant Deterioration (PSD) program under the Clean Air Act.	§607.B.7	7. the activity or activities conducted by the applicant which require the applicant to obtain a permit under these regulations;	While the language at §605.B.7 is not verbatim to 40 CFR 144.31(e)(1), the intent of the federal rule is preserved; that being, requiring the disclosure of all activities that require the applicant to obtain permits.	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
196	40 CFR 144.31(e)(2) (See also 145.11(a)(10))	Name, mailing address, and location of the facility for which the application is submitted.	§607.B.3	3. the name and mailing address of the applicant and the physical address of the sequestration well facility;		Text is similar, with no impact on stringency.
197	40 CFR 144.31(e)(3) (See also 145.11(a)(10))	Up to four SIC codes which best reflect the principal products or services provided by the facility.	§607.B.8	8. up to four SIC Codes which best reflect the principal products or services provided by the facility;		Text is identical.
198	40 CFR 144.31(e)(4) (See also 145.11(a)(10))	The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.	§607.B.4 through 607.B.5	4. the operator's name, address, telephone number, and e-mail address; 5. ownership status, and status as federal, state, private, public, or other entity;	In addition to the text at 40 CFR 144.31(e)(4), the following language has been added at §607.B.4: and email address.	Text adds "e-mail address." August 2020 review: revised text addresses the above comment; state provision is similar to CFR.
199	40 CFR 144.31(e)(5) (See also 145.11(a)(10))	Whether the facility is located on Indian lands.	§607.B.10	10. acknowledgment as to whether the facility is located on Indian lands or other lands under the jurisdiction or protection of the federal government, or whether the facility is located on state water bottoms or other lands owned by or under the jurisdiction or protection of the state of Louisiana;	In addition to the text at 40 CFR 144.31(e)(5), the following language has been added at §607.B.10: or other lands under the jurisdiction or protection of the federal government, or whether the facility is located on state water bottoms or other lands owned by or under the jurisdiction or protection of the state of Louisiana;	Reviewed; no issues found.
200	40 CFR 144.31(e)(6) (See also 145.11(a)(10))	A listing of all permits or construction approvals received or applied for under any of the following programs:	§607.B.9	9. a listing of all permits or construction approvals that the applicant has received or applied for under any of the following programs ~~and~~ or which specifically affect the legal or technical ability of the applicant to undertake the activity or activities to be conducted by the applicant under the permit being sought:	The following language has been added: or which specifically affect the legal or technical ability of the applicant to undertake the activity or activities to be conducted by the applicant under the permit being sought. ~~In addition to the text at 40 CFR 144.31(e)(6), the following language has been added at §607.B.9: and which specifically affect the legal or technical ability of the applicant to undertake the activity or activities to be conducted by the applicant under the permit being sought.~~	Text limits the listing to only permits which affect their legal or technical ability to conduct GS, rather than all permits. The rule text should be clarified to avoid unintentionally limiting this provision. August 2020 review: revised text addresses the above comment. No concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
201	40 CFR 144.31(e)(6)(i) (See also 145.11(a)(10))	Hazardous Waste Management program under RCRA.	§607.B.9.a	a. the Louisiana Hazardous Waste Management;	§607.B.9.a refers to the state equivalent of the federal program.	Reviewed; no issues found.
202	40 CFR 144.31(e)(6)(ii) (See also 145.11(a)(10))	UIC program under SDWA.	§607.B.9.b	b. this or any other Underground Injection Control Program;		Text is similar, with no impact on stringency.
203	40 CFR 144.31(e)(6)(iii) (See also 145.11(a)(10))	NPDES program under CWA.	§607.B.9.c	c. NPDES Program under the Clean Water Act;		Text is similar, with no impact on stringency.
204	40 CFR 144.31(e)(6)(iv) (See also 145.11(a)(10))	Prevention of Significant Deterioration (PSD) program under the Clean Air Act.	§607.B.9.d	d. Prevention of Significant Deterioration (PSD) Program under the Clean Air Act;		Text is identical.
205	40 CFR 144.31(e)(6)(v) (See also 145.11(a)(10))	Nonattainment program under the Clean Air Act.	§607.B.9.e	e. Nonattainment Program under the Clean Air Act;		Text is identical.
206	40 CFR 144.31(e)(6)(vi) (See also 145.11(a)(10))	National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.	§607.B.9.f	f. National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act;		Text is identical.
207	40 CFR 144.31(e)(6)(vii) (See also 145.11(a)(10))	Ocean dumping permits under the Marine Protection Research and Sanctuaries Act.	§607.B.9.g	g. Ocean Dumping Permit under the Marine Protection Research and Sanctuaries Act;		Text is similar, with no impact on stringency.
208	40 CFR 144.31(e)(6)(viii) (See also 145.11(a)(10))	Dredge and fill permits under section 404 of CWA.	§607.B.9.h	h. dredge or fill permits under Section 404 of the Clean Water Act; and		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
209	40 CFR 144.31(e)(6)(ix) (See also 145.11(a)(10))	Other relevant environmental permits, including State permits.	§607.B.9.i	i. other relevant environmental permits including, but not limited to any state permits issued under the Louisiana Coastal Resources Program, the Louisiana Surface Mining Program or the Louisiana Natural and Scenic Streams System;	While the language at §607.B.9.i is not verbatim to 40 144.31(e)(6)(ix), the intent of the federal rule is preserved: being that, all other relevant environmental permits including but not limited to the enumerated state permits must be listed by the applicant.	Reviewed; no issues found.
210	40 CFR 144.31(e)(8) (See also 145.11(a)(10))	A brief description of the nature of the business.	§607.B.6	6. a brief description of the nature of the business associated with the activity;		Text is similar, with no impact on stringency.
211	40 CFR 144.31(e)(9) (See also 145.11(a)(10))	For EPA-administered programs, the applicant shall identify and submit on a list with the permit application the names and addresses of all owners of record of land within one-quarter mile of the facility boundary. ~~This requirement may be waived by the Regional Administrator where the site is located in a populous area and the Regional Administrator determines that the requirement would be impracticable.~~	§607.B.12	12. names and addresses of all property owners within the area of review of the Class VI well or project.	The language at §607.B.12 specifies the area of review rather than property within one-quarter mile of the facility boundary. The struck-out text of 40 CFR 144.31(e)(9) will not be adopted.	Text specifies area of review, rather than ¼ mile. August 2020 review: no concerns for stringency.
40 CFR 144.32 Signatories to permit applications and reports						
212	40 CFR 144.32(a) (See also 145.11(a)(11))	Applications. All permit applications~~, except those submitted for Class II wells (see paragraph (b) of this section)~~, shall be signed as follows:	§605.E	E. Signature Requirements. All permit applications shall be signed as follows. ~~124.3(a)(3)~~	The struck-out text of 40 CFR 144.32(a) will not be adopted.	Reviewed; no issues found. Note that the draft rule text does not include 124.3(a)(3). August 2020 review: revision addresses comment; no concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
213	40 CFR 144.32(a)(1) (See also 145.11(a)(11))	For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means;	§605.E.1 through 605.E.1.c	1. Corporations. By a principal executive officer of at least the level of vice-president, or duly authorized representative of that person if the representative performs similar policy making functions for the corporation. A person is a duly authorized representative only if: a. the authorization is made in writing by a principle executive officer of at least the level of vice-president; b. the authorization specifies either an individual or position having responsibility for the overall operation of a solution-mining well, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and c. the written authorization is submitted to the Office of Conservation.	While the language at §607.E through 607.E.4 is not verbatim to 40 CFR 144.32(a)(1), the intent of the federal rule is preserved; that being, requiring the signature of a responsible executive officer or that person's duly authorized representative.	Reviewed; no issues found.
214	40 CFR 144.32(a)(1)(i) (See also 145.11(a)(11))	A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or	§605.E.1.a through 605.E.1.c	See above.	See above.	Reviewed; no issues found.
215	40 CFR 144.32(a)(1)(ii) (See also 145.11(a)(11))	the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. NOTE: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in § 144.32(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under § 144.32(a)(1)(ii) rather than to specific individuals.	§605.E.1.a through 605.E.1.c	See above.	See above. Also, the language at 40 CFR 144.32(a)(1)(ii) regarding facility size or sales requirements will not be adopted.	Text (see above) does not include similar facility size or sales requirements. August 2020 review: no concerns for stringency without this specificity.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
216	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§605.E.2	2. Limited Liability Company (LLC). By a member if the LLC is member-managed, by a manager if the LLC is manager-managed, or by a duly authorized representative only if:		Reviewed; no issues found.
217	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§605.E.2.a through 605.E.2.c	a. the authorization is made in writing by an individual who would otherwise have signature authority as outlined in §605.E.2 above; b. the authorization specifies either an individual or position having responsibility for the overall operation of a sequestration well, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and c. the written authorization is submitted to the Office of Conservation.		Reviewed; no issues found.
218	40 CFR 144.32(a)(2) (See also 145.11(a)(11))	For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or	§605.E.3	3. Partnership or Sole Proprietorship. By a general partner or proprietor, respectively; or		Text is identical.
219	40 CFR 144.32(a)(3) (See also 145.11(a)(11))	For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:	§605.E.4	4. Public Agency. By either a principal executive officer or a ranking elected official of a municipality, state, federal, or other public agency.		Text is similar, with no impact on stringency.
220	40 CFR 144.32(a)(3)(i) (See also 145.11(a)(11))	The chief executive officer of the agency, or	§605.E.4	See above.		No state equivalent.
221	40 CFR 144.32(a)(3)(ii) (See also 145.11(a)(11))	a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).	§605.E.4	See above.		No state equivalent.
222	40 CFR 144.32(c) (See also 145.11(a)(11))	*Changes to authorization*. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.	§605.F	F. Signature Reauthorization. If an authorization under §605.E is no longer accurate because a different individual or position has responsibility for the overall operation of a sequestration well, a new authorization satisfying the signature requirements must be submitted to the Office of Conservation before or concurrent with any reports, information, or applications required to be signed by an authorized representative.		Text is similar, with no impact on stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
223	40 CFR 144.32(d) (See also 145.11(a)(11))	*Certification*. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	§605.G	G. Certification. Any person signing a document under §605.E shall make the following certification on the application: ~~"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment."~~ "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."	While the language at §605.G is not verbatim to 40 144.32(d), the intent of the federal rule is preserved: that being, the signatory has done their due diligence to ensure that, to their belief, all attached information is true, accurate, and complete.	Reviewed; no issues found. State certification does not reference "a system designed to assure that qualified personnel properly gather and evaluate the information submitted." August 2020 review: certification statement is now identical to CFR.
40 CFR 144.33 Area permits.						
224	40 CFR 144.33(a) (See also 145.11(a)(12))	The Director may issue a permit on an area basis, rather than for each well individually, provided that the permit is for injection wells:	§605.B	B. The commissioner cannot issue a permit on an area basis for a Class VI well or permit.	Note that area permits are not allowed for Class VI wells; area permit provisions are included in this crosswalk only to show that they are banned for Class VI.	Reviewed; no issues found.
40 CFR 144.35 Effect of a permit.						

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
225	40 CFR 144.35(a) (See also 145.11(a)(14))	Except for Class II and III wells, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Part C of the SDWA. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in §§ 144.39 and 144.40.	§609.J and §613	J. Compliance. Compliance with a permit during its term constitutes compliance, for purposes of enforcement, with the act and these regulations. ----- §613. Permit Modification, Revocation and Reissuance, Termination, Transfer or Renewal	While the language at §609.J and §613 is not verbatim to 40 CFR 144.35(a), the intent of the federal rule is preserved; that being, effect of compliance with a permit and the potential for permit modification, revocation, reissuance, termination, transfer, or renewal for the causes set out in §613.	Reviewed; no issues found.
226	40 CFR 144.35(b) (See also 145.11(a)(14))	The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.	§609.K	K. Property Rights. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege or servitude.	In addition to the text at 40 CFR 144.35(b) the following language has been added at §609.K: servitude.	Reviewed; no issues found.
227	40 CFR 144.35(c) (See also 145.11(a)(14))	The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.	§609.Q	Q. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.		Text is identical.
40 CFR 144.36 Duration of permits.						
228	40 CFR 144.36(a) (See also 145.11(a)(15))	Permits for Class I and V wells shall be effective for a fixed term not to exceed 10 years. UIC permits for Class II and III wells shall be issued for a period up to the operating life of the facility. UIC permits for Class VI wells shall be issued for the operating life of the facility and the post-injection site care period. The Director shall review each issued Class II, III, and VI well UIC permit at least once every 5 years to determine whether it should be modified, revoked and reissued, terminated or a minor modification made as provided in §§144.39, 144.40, or 144.41.	§609.M.1	1. UIC permits for Class VI wells shall be issued for the operating life of the facility and the post-injection site care period. The commissioner shall review each issued Class VI well permit at least once every five years to determine whether it should be modified, revoked and reissued, terminated, or a minor modification made.	The language at §609.M.1 is specific to Class VI well and conveys the Class VI-specific aspects of 40 CFR 144.36(a).	Text is specific to Class VI wells and conveys the Class VI-specific aspects of the CFR. August 2020 review: no concerns for stringency.
229	40 CFR 144.36(b) (See also 145.11(a)(15))	Except as provided in § 144.37, the term of a permit shall not be extended by modification beyond the maximum duration specified in this section.	§609.M.2	2. The term of a permit shall not be extended by modification beyond the maximum duration specified in this Section, except as provided in §609.M.4 below.		Text is similar, with no impact on stringency.
230	40 CFR 144.36(c) (See also 145.11(a)(15))	The Director may issue any permit for a duration that is less than the full allowable term under this section.	§609.M.3	3. The commissioner may issue, for cause, any permit for a duration that is less than the full allowable term under this Section.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
40 CFR 144.37 Continuation of expiring permits.						
231	40 CFR 144.37 (a)(1)	*EPA permits*. When EPA is the permit-issuing authority, the conditions of an expired permit continue in force under 5 U.S.C. 558(c) until the effective date of a new permit if: (1) The permittee has submitted a timely application which is a complete application for a new permit; and	§609.M.4	4. The conditions of an expired permit may continue in force until the effective date of a new permit if the permittee has submitted a timely and a complete application for a new permit, and the commissioner, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit (e.g., when issuance is impracticable due to time or resource constraints).		Text is similar, with no impact on stringency.
232	40 CFR 144.37 (a)(2)	The Regional Administrator, through no fault of the permittee does not issue a new permit with an effective date on or before the expiration date of the previous permit (for example, when issuance is impracticable due to time or resource constraints).				Text is similar, with no impact on stringency. (see above)
233	40 CFR 144.37 (b)	*Effect.* Permits continued under this section remain fully effective and enforceable.	§609.M.4.a	a. Permits continued under this Section remain fully effective and enforceable.		Text is identical.
234	40 CFR 144.37 (c)(1)	*Enforcement.* When the permittee is not in compliance with the conditions of the expiring or expired permit the Regional Administrator may choose to do any or all of the following: (1) Initiate enforcement action based upon the permit which has been continued;	§609.M.4.b through 609.M.4.b.i	b. When the permittee is not in compliance with the conditions of the expiring or expired permit, the commissioner may choose to do any or all of the following: i. initiate enforcement action based upon the permit which has been continued;		Text is similar, with no impact on stringency.
235	40 CFR 144.37 (c)(2)	Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;	§609.M.4.b.ii	ii. issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;		Text is identical.
236	40 CFR 144.37 (c)(3)	Issue a new permit under part 124 with appropriate conditions; or	§609.M.4.b.iii	iii. issue a new permit under the requirements of these rules for issuing a new permit with appropriate conditions; or		Text is similar, with no impact on stringency.
237	40 CFR 144.37 (c)(4)	Take other actions authorized by these regulations.	§609.M.4.b.iv	iv. take other actions authorized by these regulations.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
238	40 CFR 144.37 (d)	*State continuation*. An EPA issued permit does not continue in force beyond its time expiration date under Federal law if at that time a State is the permitting authority. A State authorized to administer the UIC program may continue either EPA or State-issued permits until the effective date of the new permits, if State law allows. Otherwise, the facility or activity is operating without a permit from the time of expiration of the old permit to the effective date of the State-issued new permit.	N/A			N/A. This provision is not required for state programs.
40 CFR 144.38 Transfer of permits.						
239	40 CFR 144.38(a) (See also 145.11(a)(16))	Transfers by modification. Except as provided in paragraph (b) of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under § 144.39(b)(2)), or a minor modification made (under § 144.41(d)), to identify the new permittee and ~~incorporate such other requirements as may be necessary under the Safe Drinking Water Act.~~	§613.C.2 and 613.C.2.b	2. Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit: ------- b. the commissioner has received notification of a proposed transfer of the permit and the transfer is determined not to be a minor modification (see §613.D.4). A permit may be modified to reflect a transfer after the effective date (§613.F.2.b) but will not be revoked and reissued after the effective date except upon the request of the new permittee.	While the language at §613.C.2 and 613.C.2.b is not verbatim to 40 144.38(a), the intent of the federal rule is preserved: that being, the procedure for permit transfer is outlined. ~~The struck-out language will not be adopted.~~	Text omits "incorporate such requirements as may be necessary under the SDWA." August 2020 review: EPA legal staff input requested. EPA: LA did not adopt the above language. Clarification needed. Jay Przyborski: (R6, ORC) Why omit references to the SDWA here and in Line #311.
240	40 CFR 144.38(b) (See also 145.11(a)(16))	Automatic transfers. As an alternative to transfers under paragraph (a) of this section, any UIC permit for a well not injecting hazardous waste or injecting carbon dioxide for geologic sequestration may be automatically transferred to a new permittee if:	N/A		Automatic transfer of permits for Class VI wells will be prohibited.	Reviewed; no issues found. (§609.L.4 allows transfers only upon approval by the commissioner.)
241	40 CFR 144.38(b)(1) (See also 145.11(a)(16))	The current permittee notifies the Director at least 30 days in advance of the proposed transfer date referred to in paragraph (b)(2) of this section;	N/A		See above.	Reviewed; no issues found.
242	40 CFR 144.38(b)(2) (See also 145.11(a)(16))	The notice includes a written agreement between the existing and new permittees containing a specific date for transfer or permit responsibility, coverage, and liability between them, and the notice demonstrates that the financial responsibility requirements of § 144.52(a)(7) will be met by the new permittee; and	N/A		See above.	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
243	40 CFR 144.38(b)(3) (See also 145.11(a)(16))	The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this paragraph may also be a minor modification under § 144.41. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph (b)(2) of this section.	N/A		See above.	Reviewed; no issues found.
40 CFR 144.39 Modification or revocation and *reissuance* of permits.						

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
244	40 CFR 144.39 (See also 145.11(a)(17))	When the Director receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit (see § 144.51 of this chapter), receives a request for modification or revocation and reissuance under § 124.5, or conducts a review of the permit file) he or she may determine whether or not one or more of the causes listed in paragraphs (a) and (b) of this section for modification or revocation and reissuance or both exist. If cause exists, the Director may modify or revoke and reissue the permit accordingly, subject to the limitations of paragraph (c) of this section, and may request an updated application if necessary. ~~When a permit is modified, only the conditions subject to modification are reopened~~. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. See § 124.5(c)(2) of this chapter. If cause does not exist under this section or § 144.41 of this chapter, the Director shall not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in § 144.41 for ''minor modifications'' the permit may be modified without a draft permit or public review. Otherwise, a draft permit must be prepared and other procedures in part 124 must be followed.	§613.B through 613.B.5	B. Permit Actions 1. The permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition. 2. The permittee shall furnish to the commissioner, within 30 days, any information which the commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating a permit, or to determine compliance with the permit. The permittee shall also furnish to the commissioner, upon request, copies of records required to be kept by the permit. 3. The commissioner may, upon his own initiative or at the request of any interested person, review any permit to determine if cause exists to modify, revoke and reissue, or terminate the permit for the reasons specified in §§613.C, D, and E. All requests shall be in writing and shall contain facts or reasons supporting the request. 4. If the commissioner decides the request is not justified, he shall send the person making the request a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings. 5. If the commissioner decides to modify or revoke and reissue a permit under §§613.C, D, and E, he shall prepare a draft permit under §611.C incorporating the proposed changes. *When a permit is modified, the entire permit is reopened and is subject to revision.* The commissioner may request additional information and, in the case of a modified permit, may require the submission of an updated permit application. In the case of revoked and reissued permits, the commissioner shall require, if necessary, the submission of a new application.	While the language at §613.B through 613.B.5 is not verbatim to 40 CFR 144.39, the intent of the federal rule is preserved: that being, permits may be reviewed for the purpose of modification, revocation, reissuance, or termination, and the commissioner may modify, revoke, reissue, or terminate accordingly if cause exists. The struck-out text of 40 CFR 144.39 will not be adopted. When a permit is modified, the entire permit ~~will~~ may be reopened and subject to revision. The following emphasized language has been added at §613.B.5: *When a permit is modified, the entire permit is reopened and is subject to revision.*	Text does not specify that the entire permit is reopened and subject to revision (this is struck out, and reopening the entire permit would not limit stringency), and that the permit is reissued for a new term (which is not an issue, as Class VI permits are for the life of the facility and subject to 5 year review/AoR reevaluation). Note that 613.B.1 also includes the following text: "The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition." (No impact on stringency.) August 2020 review: no concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
245	40 CFR 144.39(a) (See also 145.11(a)(17))	Causes for modification. The following are causes for modification. ~~For Class I hazardous waste injection wells, Class II, Class III or Class VI wells the following may be causes for revocation and reissuance as well as modification; and for all other wells the following~~ may be cause for revocation or reissuance ~~as well as modification when the permittee requests or agrees~~.	§613.C.1	1. The following are causes for modification and may be causes for revocation and reissuance of permits.	The struck-out text of 40 CFR 144.39(a) will not be adopted.	Reviewed; no issues found.
246	40 CFR 144.39(a)(1) (See also 145.11(a)(17))	*Alterations*. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.	§613.C.1.a	a. Alterations. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.		Text is identical.
247	40 CFR 144.39(a)(2) (See also 145.11(a)(17))	*Information.* The Director has received information. Permits other than for Class II and III wells may be modified during their terms for ~~this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods)~~ and would have justified the application of different permit conditions at the time of issuance. ~~For UIC area permits (§ 144.33), this cause shall include any information indicating that cumulative effects on the environment are unacceptable.~~	§613.C.1.b	b. Information. The commissioner has received information pertinent to the permit that would have justified the application of different permit conditions at the time of issuance.	While the language at §613.C.1.b is not verbatim to 40 CFR 144.39(a)(2), the intent of the federal rule is preserved: that being, that information not available at the time of permit issuance is a valid cause for modification and may be a valid cause for revocation and reissuance. ~~The struck-out text of 40 CFR 144.39(a)(2) will not be adopted.~~	Text does not specify that this applies only if the information was not available at the time of issuance. ~~EPA While the text is not verbatim, stringency should not be impacted because the Director retains the ability to modify permits based on any available information, such as information that was not available at the time of permit issuance.~~
248	40 CFR 144.39(a)(3) (See also 145.11(a)(17))	*New regulations*. The standards or regulations on which the permit was based have been changed by promulgation of new or amended standards or regulations or by judicial decision after the permit was issued. Permits other than for Class I hazardous waste injection wells, Class II, Class III or Class VI wells may be modified during their permit terms for this cause only as follows:	§613.C.1.c.i	i. The standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued. ~~and conformance with the changed standards or regulations is necessary for the protection of the health or safety of the public or the environment.~~ Permits for Class VI wells may be modified during their terms when:	While the language at §613.C.1.c.i is not verbatim to 40 CFR 144.39(a)(3), the intent of the federal rule is preserved: that being, that changes in standards or regulations due to amended regulations or judicial decision after the permit was issued are cause for permit modification.	Text as written appears to require permit modification only if conformance is necessary for the protection of the health or safety of the public or the environment; suggest clarification to better reflect the intent as described. August 2020 review: first sentence is now similar to CFR. No concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
249	40 CFR 144.39(a)(3)(i)(A) (See also 145.11(a)(17))	For promulgation of amended standards or regulations, when: (A) The permit condition requested to be modified was based on a promulgated part 146 regulation; and	§613.C.1.c.i.a	(a). the permit condition requested to be modified was based on a promulgated regulation or guideline;		Text is similar, with no impact on stringency.
250	40 CFR 144.39(a)(3)(i)(B) (See also 145.11(a)(17))	EPA has revised, withdrawn, or modified that portion of the regulation on which the permit condition was based, and	§613.C.1.c.i.b	(b). there has been a revision, withdrawal, or modification of that portion of the regulation or guideline on which the permit condition was based; and		Text is similar, with no impact on stringency.
251	40 CFR 144.39(a)(3)(i)(C) (See also 145.11(a)(17))	A permittee requests modification in accordance with § 124.5 within ninety (90) days after Federal Register notice of the action on which the request is based.	§613.C.1.c.i.c	(c). a permittee requests modification within 90 days after Louisiana Register notice of the action on which the request is based.		Text is similar, with no impact on stringency.
252	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§613.C.1.c.ii	ii. When standards or regulations on which the permit was based have been changed by withdrawal of standards or regulations or by promulgation of amended standards or regulations which impose less stringent requirements on the permitted activity or facility and the permittee requests to have permit conditions based on the withdrawn or revised standards or regulations deleted from his permit ~~the permit may be modified as a minor modification without providing for public comment.~~		EPA review is requested to ensure that the public would be made aware of any changes that wouldn't be otherwise publicly known (this provision probably would only apply if the Class VI regs changed). August 2020 review: revision poses no concerns for stringency (minor permit mods do not require public comment).
253	40 CFR 144.39(a)(3)(ii) (See also 145.11(a)(17))	For judicial decisions, a court of competent jurisdiction has remanded and stayed EPA promulgated regulations if the remand and stay concern that portion of the regulations on which the permit condition was based and a request is filed by the permittee in accordance with § 124.5 ~~within ninety (90) days of judicial remand.~~	§613.C.1.c.iii	iii. For judicial decisions, a court of competent jurisdiction has remanded and stayed Office of Conservation regulations or guidelines *and all appeals have been exhausted,* if the remand and stay concern that portion of the regulations or guidelines on which the permit condition was based and a request is filed by the permittee to have permit conditions based on the remanded or stayed standards or regulations deleted from his permit.	In addition to the text at 40 CFR 144.39(a)(3)(ii), the following emphasized language has been added at §613.C.1.c.iii: *where appropriate*. The requirement for ninety (90) days of judicial remand has been omitted.	Text adds "all appeals have been exhausted," and omits the 90 day requirement. August 2020 review: no change.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
254	40 CFR 144.39(a)(4) (See also 145.11(a)(17))	*Compliance schedules.* The Director determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy. See also § 144.41(c) (minor modifications).	§613.C.1.d	d. Compliance Schedules. The commissioner determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonable available remedy.		Text is similar, with no impact on stringency.
255	40 CFR 144.39(a)(5) (See also 145.11(a)(17))	*Basis for modification of Class VI permits.* Additionally, for Class VI wells, whenever the Director determines that permit changes are necessary based on:	§613.C.1.e	e. Additional Modification of Class VI Permits. For Class VI wells, whenever the commissioner determines that permit changes are necessary based on:		Text is similar, with no impact on stringency.
256	40 CFR 144.39(a)(5)(i) (See also 145.11(a)(17))	Area of review reevaluations under §146.84(e)(1) of this chapter;	§613.C.1.e.i	i. area of review reevaluations under §615.C.2;		Text is similar, with no impact on stringency.
257	40 CFR 144.39(a)(5)(ii) (See also 145.11(a)(17))	Any amendments to the testing and monitoring plan under §146.90(j) of this chapter;	§613.C.1.e.ii	ii. any amendments to the testing and monitoring plan under §625.A.10;		Text is similar, with no impact on stringency.
258	40 CFR 144.39(a)(5)(iii) (See also 145.11(a)(17))	Any amendments to the injection well plugging plan under §146.92(c) of this chapter;	§613.C.1.e.iii	iii. any amendments to the injection well plugging plan under §631.A.3;		Text is similar, with no impact on stringency.
259	40 CFR 144.39(a)(5)(iv) (See also 145.11(a)(17))	Any amendments to the post-injection site care and site closure plan under §146.93(a)(3) of this chapter;	§613.C.1.e.iv	iv. any amendments to the post-injection site care and site closure plan under §633.A.1.c;		Text is similar, with no impact on stringency.
260	40 CFR 144.39(a)(5)(v) (See also 145.11(a)(17))	Any amendments to the emergency and remedial response plan under §146.94(d) of this chapter; or	§613.C.1.e.v	v. any amendments to the emergency and remedial response plan under §625.A.4; or		Text is similar, with no impact on stringency.
261	40 CFR 144.39(a)(5)(vi) (See also 145.11(a)(17))	A review of monitoring and/or testing results conducted in accordance with permit requirements.	§613.C.1.e.vi	vi. a review of monitoring and testing results conducted in accordance with permit requirements.		Text changes "and/or" to "and."
262	40 CFR 144.39(b) (See also 145.11(a)(17))	Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit:	§613.C.2	2. Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit:		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
263	40 CFR 144.39(b)(1) (See also 145.11(a)(17))	Cause exists for termination under § 144.40, and the Director determines that modification or revocation and reissuance is appropriate.	§613.C.2.a	a. cause exists for termination under §613.E, and the commissioner determines that modification or revocation and reissuance is appropriate; ~~or~~		Text is similar, with no impact on stringency. August 2020 review: revision has no impact on stringency.
264	40 CFR 144.39(b)(2) (See also 145.11(a)(17))	The Director has received notification (as required in the permit, see § 144.41(d)) of a proposed transfer of the permit. A permit also may be modified to reflect a transfer after the effective date of an automatic transfer (§ 144.38(b)) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.	§613.C.2.b	b. the commissioner has received notification of a proposed transfer of the permit *and the transfer is determined not to be a minor modification (see §613.D.4).* A permit may be modified to reflect a transfer after the effective date (§613.F.2.b) but will not be revoked and reissued after the effective date except upon the request of the new permittee; ~~or~~	In addition to the text at 40 CFR 144.39(b)(2), the following emphasized language has been added at §613.C.2.b. *and the transfer is determined not to be a minor modification (see §613.D.4).*	Text adds "determined not to be a minor modification." August 2020 review: revision has no impact on stringency.
265	40 CFR 144.39(b)(3) (See also 145.11(a)(17))	A determination that the waste being injected is a hazardous waste as defined in § 261.3 either because the definition has been revised, or because a previous determination has been changed.	§613.C.2.c~~N/A~~	c. a determination that the waste being injected is a hazardous waste as defined in §601 either because the definition has been revised, or because a previous determination has been changed.		Clarification is needed regarding whether the permit would need to be modified if the waste was determined to be hazardous. August 2020 review: revision addresses the above comment; state provision is similar to CFR. No concerns for stringency. EPA: Cannot find this on the LDNR draft Rule (page 18) LA's July Rule text should be edited to include the added crosswalk text under "LA Rule Text" column "c. a determination that…"
266	40 CFR 144.39(c) (See also 145.11(a)(17))	Facility siting. Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.	§613.C.3	3. Facility Siting. Suitability of an existing facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that continued operations at the site pose a threat to the health or safety of persons or the environment which was unknown at the time of permit issuance. A change of injection site or facility location may require modification or revocation and issuance as determined to be appropriate by the commissioner.	In addition to the text at 40 CFR 144.39(c), the following language has been added at §613.C.3: a change of injection site or facility location may require modification or revocation and issuance as determined to be appropriate by the commissioner.	Reviewed; no issues found.
267	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§613.C.4	4. If a permit modification satisfies the criteria of this Section, a draft permit must be prepared and other applicable procedures must be followed.		Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
40 CFR 144.40 Termination of permits.						
268	40 CFR 144.40(a) (See also 145.11(a)(18))	The Director may terminate a permit during its term, ~~or deny a permit renewal application~~ for the following causes:	§613.E.1	1. The commissioner may terminate a permit during its term for the following causes:	The struck-out text of 40 CFR 144.40(a) will not be adopted.	Reviewed; no issues found. Text omits "deny a permit renewal application;" this would not apply to a Class VI permit. August 2020 review: no concerns for stringency.
269	40 CFR 144.40(a)(1) (See also 145.11(a)(18))	Noncompliance by the permittee with any condition of the permit;	§613.E.1.a	a. noncompliance by the permittee with any condition of the permit;		Text is identical.
270	40 CFR 144.40(a)(2) (See also 145.11(a)(18))	The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or	§613.E.1.b	b. the permittee's ~~intentional~~ failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or	~~In addition to the text at 40 CFR 144.40(a)(2), the following emphasized language has been added at §613.E.1.b: the permittee's *intentional* failure.~~	Clarification is needed regarding whether the permit would be terminated if relevant facts were *unintentionally* not disclosed. August 2020 review: revision addresses the above comment; state provision is similar to CFR. No concerns for stringency.
271	40 CFR 144.40(a)(3) (See also 145.11(a)(18))	A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit ~~modification or termination;~~	§613.E.1.c	c. a determination that the permitted activity endangers the health or safety of persons or the environment which activity cannot be regulated to acceptable levels by permit modification and can only be regulated to acceptable levels by permit termination.	The struck-out text of 40 CFR 144.40(a)(3) will not be adopted.	Text is limited to termination and specifically excludes modification. August 2020 review: no concerns for stringency. EPA: Omitted text is included in draft rule and while not verbatim it appears to be more stringent since permits will only allow termination in certain cases.
272	40 CFR 144.40(b) (See also 145.11(a)(18))	The Director shall follow the applicable procedures in part 124 in terminating any permit under this section.	§613.E.2 through 613.E.3	2. If the commissioner decides to terminate a permit, he shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under §611.C. 3. The commissioner may alternatively decide to modify or revoke and reissue a permit for the causes in §613.E.1 (see §613.C.2.a).	While the language from §613.E.2 and 613.E.3 is not verbatim to 40 CFR 144.40(b), the intent of the federal rule is preserved, that being, the commissioner shall follow the reference applicable procedures for permit termination. This includes issuing a form of draft permit that must follow the procedures referenced in §611.C.	Text is not equivalent, but appears to reference the applicable procedures. August 2020 review: no concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
40 CFR 144.41 Minor modifications of permits.						
273	40 CFR 144.41	Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of part 124. Any permit modification not processed as a minor modification under this section must be made for cause and with part 124 draft permit and public notice as required in §144.39. Minor modifications may only:	§613.D	D. Minor Modifications of Permits. Upon the consent of the permittee, the commissioner may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this Section without issuing a draft permit and providing for public comment. Minor modifications may only:		Reviewed; no issues found.
274	40 CFR 144.41(a)	Correct typographical errors;	§613.D.1	1. correct typographical errors;		Text is identical.
275	40 CFR 144.41(b)	Require more frequent monitoring or reporting by the permittee;	§613.D.2	2. require more frequent monitoring or reporting by the permittee;		Text is identical.
276	40 CFR 144.41(c)	Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement; or	§613.D.3	3. change an interim compliance date in a schedule of compliance, provided the new date ~~is not more than 120 days after the date specified in the existing permit and~~ does not interfere with attainment of the final compliance date requirement;	~~The struck-out text of 40 CFR 144.41(c) will not be adopted.~~	Text drops the 120 day timeframe. August 2020 review: state provision is now identical to CFR (the note in the "difference" column is now incorrect).
277	40 CFR 144.41(d)	Allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Director.	§613.D.4	4. allow for a change in ownership or operational control of a facility where the commissioner determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the commissioner (see §613.F);		Text is identical.
278	40 CFR 144.41(e)	Change quantities or types of fluids injected which are within the capacity of the facility as permitted and, in the judgment of the Director, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification.	§613.D.5	5. change quantities or types of fluids injected which are within the capacity of the facility as permitted and, in the judgment of the commissioner, would not interfere with the operation of the facility or its ability to meet conditions prescribed in the permit, and would not change its classification;		Text is identical.
279	40 CFR 144.41(f)	Change construction requirements approved by the Director pursuant to § 144.52(a)(1) (establishing UIC permit conditions), provided that any such alteration shall comply with the requirements of this part and part 146.	§613.D.6	6. change construction requirements or plans approved by the commissioner provided that any such alteration shall comply with the requirements of this Section and §617. No such changes may be physically incorporated into construction of the well prior to approval.	In addition to the text at 40 CFR 144.41(f), the following language has been added at §613.D.6: No such changes may be physically incorporated into construction of the well prior to approval; or.	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
280	40 CFR 144.41(h)	Amend a Class VI injection well testing and monitoring plan, plugging plan, post-injection site care and site closure plan, or emergency and remedial response plan where the modifications merely clarify or correct the plan, as determined by the Director.	§613.D.7	7. amend a Class VI injection well testing and monitoring plan, plugging plan, post-injection site care and site closure plan, or emergency and remedial response plan where the modifications merely clarify or correct the plan, as determined by the commissioner.		Text is identical.
Subpart E - Permit Conditions						
281	40 CFR 144.51 (See also 145.11(a)(19))40 CFR 144.51 Conditions applicable to all permits.	~~The following conditions apply to all UIC permits.~~ All conditions applicable to all permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations (or the corresponding approved State regulations) must be given in the permit.	§609.A	A. Applicability. The rules and regulations of this Section set forth legal conditions for Class VI well permits. Permits for owners or operators of Class VI injection wells shall include conditions meeting applicable requirements of §§609, 615, 617, 619, 621, 623, 625, 627, 629, and 631~~§106~~. All conditions applicable to all permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit.	In addition to the text at 40 CFR 144.51, the following language has been added at §609.A: Applicability. The rules and regulations of this Section set forth legal conditions for Class VI well permits. Permits for owners or operators of Class VI injection wells shall include conditions meeting applicable requirements of §§609, 615, 617, 619, 621, 623, 625, 627, 629, and 631 The struck-out text of 40 CFR 144.51 will not be adopted.	Text does not address incorporating conditions by reference. Note that instead of §106, the draft rule text lists "§609, §615, §617, §619, §621, §623, §625, §627, §629, and §631." (No impact on stringency.) August 2020 review: last 2 sentences have no concerns for stringency.
282	40 CFR 144.51(a) (See also 145.11(a)(19))	Duty to comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; ~~except that the permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit under §144.34.~~	§609.D	D. Duty to Comply. The permittee must comply with all conditions of a permit. Any permit noncompliance constitutes a violation of the act and is grounds for enforcement action or permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application if the commissioner determines that such noncompliance endangers underground sources of drinking water.	The struck-out text of 40 CFR 144.51(a) will not be adopted. Authorization by rule for Class VI wells will be prohibited. Emergency permits will not be granted for Class VI wells.	Reviewed; no issues found.
283	40 CFR 144.51(b) (See also 145.11(a)(19))	Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.	§609.E	E. Duty to Reapply. If the permittee wishes to continue an activity regulated by a permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
284	40 CFR 144.51(c) (See also 145.11(a)(19))	Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.	§609.F	F. Duty to Halt or Reduce Activity. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.		Text is identical.
285	40 CFR 144.51(d) (See also 145.11(a)(19))	Duty to mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.	§609.G	G. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment such as the contamination of underground sources of drinking water resulting from noncompliance with this permit.	In addition to the text at 40 CFR 144.51(d), the following emphasized language has been added at §609.G: on the environment *such as the contamination of underground sources of drinking water* resulting…	Reviewed; no issues found.
286	40 CFR 144.51(e) (See also 145.11(a)(19))	Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.	§609.H	H. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of his permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operation staffing and training, and adequate laboratory process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.		Text is identical.
287	40 CFR 144.51(f) (See also 145.11(a)(19))	Permit actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.	§613.B.1	1. The permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.		Text is identical.
288	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§609.J	J. Compliance. Compliance with a permit during its term constitutes compliance, for purposes of enforcement, with the act and these regulations.		Reviewed; no issues found.
289	40 CFR 144.51(g) (See also 145.11(a)(19))	Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.	§609.K	K. Property Rights. The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege or servitude.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
290	40 CFR 144.51(h) (See also 145.11(a)(19))	Duty to provide information. The permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.	§613.B.2	2. The permittee shall furnish to the commissioner, within 30 days, any information which the commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating a permit, or to determine compliance with the permit. The permittee shall also furnish to the commissioner, upon request, copies of records required to be kept by the permit.		Text is similar, with no impact on stringency.
291	40 CFR 144.51(i) (See also 145.11(a)(19))	Inspection and entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:	§609.I	I. Inspection and Entry. Inspection and entry shall be allowed as prescribed in R.S. of 1950, Title 30, Section 4.	While the language at §609.I is not verbatim to 40 CFR 144.51(i), the intent of the federal rule is preserved. Per R.S. of 1950, Title 30, Section 4, "The commissioner has jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas." Inspection and entry by the commissioner or an authorized representative is allowed as prescribed by the commissioner's "jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas."	Text does not include the designation of an authorized representative. August 2020 review: clarification is noted; no concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
292	40 CFR 144.51(i)(1) (See also 145.11(a)(19))	Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;	R.S. of 1950, Title 30, Section 4, A through B	A. The commissioner has jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas. B. The commissioner shall make such inquiries as he thinks proper to determine whether or not waste, over which he has jurisdiction, exists or is imminent. In the exercise of this power the commissioner has the authority to collect data; to make investigations and inspections; to examine properties, leases, papers, books, and records; to examine, survey, check, test, and gauge oil and gas wells, tanks, refineries, and modes of transportation; to hold hearings; to provide for the keeping of records and the making of reports; to require the submission of an emergency phone number by which the operator may be contacted in case of an emergency; and to take any action as reasonably appears to him to be necessary to enforce this Chapter.	While the language at R.S. of 1950, Title 30, Section 4 is not verbatim to 40 CFR 144.51(i)(1), the intent of the federal rule is preserved; that being, the commissioner holds authority to inspect and enter relevant premises to make the inquiries and data collections detailed in 40 CFR 144.519(i)(1) through 144.519(i)(4.)	Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
293	40 CFR 144.51(i)(2) (See also 145.11(a)(19))	Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;	R.S. of 1950, Title 30, Section 4	See above.	While the language at §609.I is not verbatim to 40 CFR 144.51(i), the intent of the federal rule is preserved. Per R.S. of 1950, Title 30, Section 4, "The commissioner has jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas." Access to relevant records by the commissioner or an authorized representative is allowed as prescribed by the commissioner's "jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas." ~~See above.~~	Text does not include copying records. August 2020 review: clarification is noted; no concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
294	40 CFR 144.51(i)(3) (See also 145.11(a)(19))	Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and	R.S. of 1950, Title 30, Section 4	See above.	While the language at §609.I is not verbatim to 40 CFR 144.51(i), the intent of the federal rule is preserved. Per R.S. of 1950, Title 30, Section 4, "The commissioner has jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas." Access by the commissioner or an authorized representative to inspect facilities, equipment (including monitoring and control equipment), practices, or operations is allowed as prescribed by the commissioner's "jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas."~~See above.~~	Text does not include "monitoring and control equipment." August 2020 review: clarification is noted; no concerns for stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
295	40 CFR 144.51(i)(4) (See also 145.11(a)(19))	Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.	R.S. of 1950, Title 30, Section 4	See above.	While the language at §609.I is not verbatim to 40 CFR 144.51(i), the intent of the federal rule is preserved. Per R.S. of 1950, Title 30, Section 4, "The commissioner has jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas." Inspection and entry by the commissioner or an authorized representative is allowed as prescribed by the commissioner's "jurisdiction and authority over all persons and property necessary to enforce effectively the provisions of this Chapter and all other laws relating to the conservation of oil or gas." ~~See above~~.	Likely covered by "collect data" in text. August 2020 review: clarification is noted; no concerns for stringency.
296	40 CFR 144.51(j)(1) (See also 145.11(a)(19))	Monitoring and records. (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.	§625.B and 625.B.1	B. Monitoring and records. 1. samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.		Text is identical.
297	40 CFR 144.51(j)(2) (See also 145.11(a)(19))	The permittee shall retain records of all monitoring information, including the following:	§625.B.2	2. The permittee shall retain records of all monitoring information, including the following:		Text is identical.
298	40 CFR 144.51(j)(2)(i) (See also 145.11(a)(19))	Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time; and	§625.B.2.a	a. calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the commissioner at any time; and		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
299	40 CFR 144.51(j)(2)(ii) (See also 145.11(a)(19))	The nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures specified under §144.52(a)(6), or under part 146 subpart G as appropriate. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period.	§625.B.2.b	b. the nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures specified under §629. The commissioner may require the owner or operator to deliver the records to the commissioner at the conclusion of the retention period.		Text is similar, with no impact on stringency.
300	40 CFR 144.51(j)(3) (See also 145.11(a)(19))	Records of monitoring information shall include:	§625.B.3	3. Records of monitoring information shall include:		Text is identical.
301	40 CFR 144.51(j)(3)(i) (See also 145.11(a)(19))	The date, exact place, and time of sampling or measurements;	§625.B.3.a	a. the date, exact place, and time of sampling or measurements;		Text is identical.
302	40 CFR 144.51(j)(3)(ii) (See also 145.11(a)(19))	The individual(s) who performed the sampling or measurements;	§625.B.3.b	b. the individual(s) who performed the sampling or measurements;		Text is identical.
303	40 CFR 144.51(j)(3)(iii) (See also 145.11(a)(19))	The date(s) analyses were performed;	§625.B.3.c	c. the date(s) analyses were performed;		Text is identical.
304	40 CFR 144.51(j)(3)(iv) (See also 145.11(a)(19))	The individual(s) who performed the analyses;	§625.B.3.d	d. the individual(s) who performed the analyses;		Text is identical.
305	40 CFR 144.51(j)(3)(v) (See also 145.11(a)(19))	The analytical techniques or methods used; and	§625.B.3.e	e. the analytical techniques or methods used; and		Text is identical.
306	40 CFR 144.51(j)(3)(vi) (See also 145.11(a)(19))	The results of such analyses.	§625.B.3.f	f. the results of such analyses.		Text is identical.
307	40 CFR 144.51(j)(4) (See also 145.11(a)(19))	Owners or operators of Class VI wells shall retain records as specified in subpart H of part 146, including §§146.84(g), 146.91(f), 146.92(d), 146.93(f), and 146.93(h) of this chapter.	§625.B.4	4. Owners or operators of Class VI wells shall retain records as specified in §§615.C.4, 629.A.6, 631.A.5, 633.A.6, and 633.A.8 of this chapter.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
308	40 CFR 144.51(k) (See also 145.11(a)(19))	Signatory requirement. All applications, reports, or information submitted to the Administrator shall be signed and certified. (See §144.32.)	§609.B ------ §603.H.2 and 603.H.3	B. Signatories. All reports required by permits and other information requested by the commissioner shall be signed as in applications by a person described in §605.D. ------- 2. All applications, reports, plans, requests, maps, cross-sections, drawings, opinions, recommendations, calculations, evaluations, or other submittals including or comprising geoscientific work as defined by La. R.S. 37:711.1 et seq. must be prepared, sealed, signed, and dated by a licensed Professional Geoscientist (P.G.) authorized to practice by and in good standing with the Louisiana Board of Professional Geoscientists. 3. All applications, reports, plans, requests, specifications, details, calculations, drawings, opinions, recommendations, evaluations or other submittals including or comprising the practice of engineering as defined by La. R.S. 37:.681 et seq. must be prepared, sealed, signed, and dated by a licensed Professional Engineer (P.E.) authorized to practice by and in good standing with the Louisiana Professional Engineering and Land Surveying Board.	While the language at §609.B is not verbatim to 40 CFR 144.51(k), the intent of the federal rule is preserved; that being, all documents and information submitted to the commissioner shall be signed. ----- The language at §603.H.2 and 603.H.3 has been added to detail requirements for technical certification by a P.E. or P.G., which is more stringent than federal requirements.	Reviewed; no issues found.
309	40 CFR 144.51(l)(1) (See also 145.11(a)(19))	Reporting requirements. (1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.	§609.L.1	1. Planned Changes. The permittee shall give notice to the commissioner as soon as possible of any planned physical alterations or additions to the permitted facility~~, which may constitute a major modification of the permit.~~		Text adds, "which may constitute a major modification of the permit." The state rule should require reporting of any changes, regardless of whether they may require a modification. August 2020 review: revision addresses the above comment; state provision is similar to CFR. No concerns for stringency.
310	40 CFR 144.51(l)(2) (See also 145.11(a)(19))	Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.	§609.L.3	3. Anticipated Noncompliance. The permittee shall give advance notice to the commissioner of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.		Text is identical.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
311	40 CFR 144.51(l)(3) (See also 145.11(a)(19))	Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act. (See §144.38; in some cases, modification or revocation and reissuance is mandatory.)	§609.L.4	4. Transfers. A permit is not transferable to any person except after notice to the commissioner. The commissioner may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary. (See §613.)		Text is similar, with no impact on stringency. EPA: Jay Przyborski (R6. ORC): Clarification needed on why they omit references to the SDWA in this line # and in Line 239.
312	40 CFR 144.51(l)(4) (See also 145.11(a)(19))	Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.	N/A		The language at 40 CFR 144.51(l)(4) will not be adopted since reporting requirements are detailed in full at §629.	Reviewed; no issues found. See §629/146.91.
313	40 CFR 144.51(l)(5) (See also 145.11(a)(19))	Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date.	§609.L.5	5. Compliance Schedules. Report of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule in these regulations shall be submitted to the commissioner no later than 14 days following each schedule date.	§609.L.5 includes more stringent requirements compared to the federal rule, specifically implementing at 14 day period in lieu of the 30 day period in 40 CFR 144.51(l)(5).	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
314	40 CFR 144.51(l)(6) (See also 145.11(a)(19))	Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment, including:	§609.L.6.a through 609.L.6.b	a. The permittee shall report to the commissioner any noncompliance which may endanger health or the environment. Any information pertinent to the noncompliance shall be reported by telephone at (225) 342-5515 within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances and shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. b. The following additional information must be reported within the 24-hour period provided above:	Parts of the language from 40 CFR 144.51(l)(6)(ii) have been added to the text from 40 CFR 144.51(l)(6) at §609.L.6.a: any information pertinent to the noncompliance shall be reported by telephone at (225) 342-5515 within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances and shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance.	Reviewed; no issues found.
315	40 CFR 144.51(l)(6)(i) (See also 145.11(a)(19))	Any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW; or	§609.L.6.b.i	i. any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW;		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
316	40 CFR 144.51(l)(6)(ii) (See also 145.11(a)(19))	Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.	§609.L.6.b.ii And 609.L.6.a	ii. any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs. ------- a. The permittee shall report to the commissioner any noncompliance which may endanger health or the environment. Any information pertinent to the noncompliance shall be reported by telephone at (225) 342-5515 within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances and shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance.	Parts of the language from 40 CFR 144.51(l)(6)(ii) has been added to the text from 40 CFR 144.51(l)(6) at §609.L.6.a.	Reviewed; no issues found.
317	40 CFR 144.51(l)(7) (See also 145.11(a)(19))	Other noncompliance. The permittee shall report all instances of noncompliance not reported under paragraphs (l) (4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section.	§609.L.8	8. Other Noncompliance. The permittee shall report all instances of noncompliance not reported under §§609.L.5 and 609.L.6, at the time quarterly reports are submitted. The reports shall contain the information listed in §609.L.6.		Text is similar, with no impact on stringency.
318	40 CFR 144.51(l)(8) (See also 145.11(a)(19))	Other information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.	§609.L.9	9. Other Information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the commissioner, it shall promptly submit such facts or information.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
319	40 CFR 144.51(m) (See also 145.11(a)(19))	Requirements prior to commencing injection. Except for all new wells authorized by an area permit under §144.33(c), a new injection well may not commence injection until construction is complete, and	§609.L.2	2. Notice of Well Completion. A new injection well injection well may not commence injection until construction is complete, a notice of completion has been submitted to the commissioner, the commissioner has inspected or otherwise reviewed the injection well and finds it is in compliance with the conditions of the permit, and the commissioner has given approval to begin injection.	Language from 40 CFR 144.51(m)(1) and 40 CFR 144.51(m)(2)(i) has been added to the text from 40 CFR 144.51(m) at §609.L.2.a.	Reviewed; no issues found.
320	40 CFR 144.51(m)(1) (See also 145.11(a)(19))	The permittee has submitted notice of completion of construction to the Director; and	§609.L.2	See above.	See above.	Reviewed; no issues found.
321	40 CFR 144.51(m)(2)(i) (See also 145.11(a)(19))	The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or	§609.L.2	See above.	See above.	Reviewed; no issues found.
322	40 CFR 144.51(m)(2)(ii) (See also 145.11(a)(19))	The permittee has not received notice *from* the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in paragraph (m)(1) of this section, in which case prior inspection or review is waived and the permittee may commence injection. The Director shall include in his notice a reasonable time period in which he shall inspect the well.	§609.L.2	See above.	The language at 144.51(m)(2)(ii) will not be adopted since §609.L.2.c includes more stringent requirements compared to the federal rule, specifically that inspection or review of the injection well will not be waived and that injection may not commence until the inspection or review has taken place.	Reviewed; no issues found.
323	40 CFR 144.51(n) (See also 145.11(a)(19))	The permittee shall notify the Director at such times as the permit requires before conversion or abandonment of the well or in the case of area permits before closure of the project.	§609.L.7	7. The permittee shall notify the commissioner at such times as the permit requires before conversion or abandonment of the well or before closure of the project.		Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
324	40 CFR 144.51(o) (See also 145.11(a)(19))	~~A Class I, II or III permit shall include and a Class V permit may include conditions which meet the applicable requirements of §146.10 of this chapter to ensure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. Where the plan meets the requirements of §146.10 of this chapter, the Director shall incorporate the plan into the permit as a permit condition. Where the Director's review of an application indicates that the permittee's plan is inadequate, the Director may require the applicant to revise the plan, prescribe conditions meeting the requirements of this paragraph, or deny the permit.~~ A Class VI permit shall include conditions which meet the requirements set forth in §146.92 of this chapter. Where the plan meets the requirements of §146.92 of this chapter, the Director shall incorporate it into the permit as a permit condition. For purposes of this paragraph, temporary or intermittent cessation of injection operations is not abandonment.	§631.A.1	1. A Class VI permit shall include conditions that meet the requirements set forth in this subsection and shall be incorporated into the permit as a permit condition. For purposes of this subsection, temporary or intermittent cessation of injection operations is not abandonment.	The struck-out text of 40 CFR 144.51(o) will not be adopted.	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
325	40 CFR 144.51(q)(1) (See also 145.11(a)(19))	*Duty to establish and maintain mechanical integrity.* The owner or operator of a Class I, II, III or VI well permitted under this part shall establish mechanical integrity prior to commencing injection or on a schedule determined by the Director. Thereafter the owner or operator of Class I, II, and III wells must maintain mechanical integrity as defined in §146.8 of this chapter and the owner or operator of Class VI wells must maintain mechanical integrity as defined in §146.89 of this chapter.	§609.P	P. Duty to Establish and Maintain Mechanical Integrity. The permittee of a Class VI injection well shall establish mechanical integrity prior to commencing injection and on a schedule determined by these rules or the commissioner. Thereafter, ~~the owner or operator of~~ Class VI injection wells must maintain mechanical integrity as defined in §627. The Class VI injection well owner or operator ~~commissioner~~ shall give ~~written~~ notice to the commissioner ~~Class VI injection well owner or operator~~ when it is determined the injection well is lacking mechanical integrity. Upon receiving such notice, the operator shall immediately cease injection into the well. The well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner. The owner or operator may resume injection upon written notification from the commissioner that the owner or operator has demonstrated mechanical integrity pursuant to §627.	In addition to the text at 40 CFR 144.51(q)(1), the following language from 40 CFR 144.51(q)(2) has been added to §609.P: the commissioner shall give written notice to the Class VI injection well owner or operator when it is determined the injection well is lacking mechanical integrity. Upon receiving such notice, the operator shall immediately cease injection into the well. The well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner. The owner or operator may resume injection upon written notification from the commissioner that the owner or operator has demonstrated mechanical integrity pursuant to §627. …… ~~In addition to the text at 40 CFR 144.51(q)(2), the following language has been added at §609.P: upon receiving such notice, the operator shall immediately cease injection into the well. The well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner.~~	The rule text as written appears to imply that the commissioner, not the operator, would determine the well lacks MI, therefore not providing for discovery of a loss of MI by the operator (i.e., via a MIT) and potentially delaying follow up actions. Clarification is requested. August 2020 review: revision addresses the above comment; state provision is similar to CFR. No concerns for stringency. Note: Cadmus edited the "Rule text" column to reflect the actual rule change.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
326	40 CFR 144.51(q)(2) (See also 145.11(a)(19))	When the Director determines that a Class I, II, III or VI well lacks mechanical integrity pursuant to §§146.8 or 146.89 of this chapter for Class VI of this chapter, he/she shall give written notice of his/her determination to the owner or operator. ~~Unless the Director requires immediate cessation, the owner or operator shall cease injection into the well within 48 hours of receipt of the Director's determination. The Director may allow plugging of the well pursuant to the requirements of §146.10 of this chapter or require the permittee to perform such additional construction, operation, monitoring, reporting and corrective action as is necessary to prevent the movement of fluid into or between USDWs caused by the lack of mechanical integrity.~~ The owner or operator may resume injection upon written notification from the Director that the owner or operator has demonstrated mechanical integrity pursuant to §146.8 of this chapter.	§609.P	P. Duty to Establish and Maintain Mechanical Integrity. The permittee of a Class VI injection well shall establish mechanical integrity prior to commencing injection and on a schedule determined by these rules or the commissioner. Thereafter, the owner or operator of Class VI injection wells must maintain mechanical integrity as defined in §627. The Class VI injection well owner or operator shall give notice to the commissioner ~~The commissioner shall give written notice to the Class VI injection well owner or operator~~ when it is determined the injection well is lacking mechanical integrity. Upon receiving such notice, the operator shall immediately cease injection into the well. The well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner. The owner or operator may resume injection upon written notification from the commissioner that the owner or operator has demonstrated mechanical integrity pursuant to §627.	As noted above, the language at §609.P is taken from text in 40 CFR 144.51(q)(1) and 144.51(q)(1). The struck-out language at 40 CFR 144.51(q)(2) will not be adopted. §609.P includes more stringent requirements the operator shall immediately cease injection into the well upon receipt of written notice from the commissioner. The well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner. While the potential courses of action in the federal language are not explicitly enumerated in §609.P, the commissioner has authority to require whatever remedial actions are deemed necessary until mechanical integrity is restored to the satisfaction of the commissioner.	See above. Clarification is requested. August 2020 review: see above. Note: Cadmus edited the "Rule text" column to reflect the actual rule change.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
327	40 CFR 144.51(q)(3) (See also 145.11(a)(19))	The Director may allow the owner or operator of a well which lacks mechanical integrity pursuant to § 146.8(a)(1) of this chapter to continue or resume injection, if the owner or operator has made a satisfactory demonstration that there is no movement of fluid into or between USDWs.	~~§609.P~~N/A	~~P. Duty to Establish and Maintain Mechanical Integrity. The permittee of a Class VI injection well shall establish mechanical integrity prior to commencing injection and on a schedule determined by these rules or the commissioner. Thereafter, Class VI injection wells must maintain mechanical integrity as defined in §627. The commissioner shall give written notice to the Class VI injection well owner or operator when it is determined the injection well is lacking mechanical integrity. Upon receiving such notice, the operator shall immediately cease injection into the well. The well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner.~~	The language at 40 CFR 144.51(q)(3) will not be adopted. §609.P includes more stringent requirements the well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner. ~~See above.~~	See above. Clarification is requested. August 2020 review: see above.
40 CFR 144.52 Establishing permit conditions.						
328	40 CFR 144.52(a) (See also 145.11(a)(20))	(a) In addition to conditions required in § 144.51, the Director shall establish conditions, as required on a case-by-case basis under § 144.36 (duration of permits), § 144.53(a) (schedules of compliance), § 144.54 (monitoring), ~~and for EPA permits only § 144.53(b) (alternate schedules of compliance), and § 144.4 (considerations under Federal law). Permits for owners or operators of hazardous waste injection wells shall include conditions meeting the requirements of § 144.14 (requirements for wells injecting hazardous waste), paragraphs (a)(7) and (a)(9) of this section, and subpart G of part 146.~~ Permits for owners or operators of Class VI injection wells shall include conditions meeting the requirements of subpart H of part 146. Permits for other wells shall contain the following requirements, when applicable.	§609.A	A. Applicability. The rules and regulations of this Section set forth legal conditions for Class VI well permits. Permits for owners or operators of Class VI injection wells shall include conditions meeting applicable requirements of §609, §615, §617, §619, §621, §623, §625, §627, §629, and §631.	The struck through language at 40 CFR 144.52 will not be adopted.	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
329	40 CFR 144.52(a)(1) (See also 145.11(a)(20))	Construction requirements as set forth in part 146. Existing wells shall achieve compliance with such requirements according to a compliance schedule established as a permit condition. The owner or operator of a proposed new injection well shall submit plans for testing, drilling, and construction as part of the permit application. Except as authorized by an area permit, no *construction* may commence until a permit has been issued containing construction requirements (see §144.11). New wells shall be in compliance with these requirements prior to commencing injection operations. Changes in construction plans during construction may be approved by the Administrator as minor modifications (§144.41). No such changes may be physically incorporated into construction of the well prior to approval of the modification by the Director.	§609.A ------ §603.B	See above. -------- B. Prohibition of Unauthorized Injection. Any underground injection, except as authorized by a permit or rule, is prohibited after the effective date of these regulations. Construction or operation of any well required to have a permit under these regulations is prohibited until the permit has been issued.	While the language at 40 CFR 144.52(a)(1) is not adopted verbatim, §609.A stipulates that construction activities required by §617 be incorporated into Class VI permits. Prohibition of construction before issuance of a permit under these regulations is already accounted for under §603.B.	Reviewed; no issues found.
330	40 CFR 144.52(a)(2) (See also 145.11(a)(20))	Corrective action as set forth in §§144.55, 146.7, and 146.84 of this chapter.	§609.A	See above.	While the language at 40 CFR 144.52(a)(2) is not adopted verbatim, §609.A stipulates that corrective actions required by §615.C be incorporated into Class VI permits.	Reviewed; no issues found.
331	40 CFR 144.52(a)(3) (See also 145.11(a)(20))	Operation requirements as set forth in 40 CFR part 146; the permit shall establish any maximum injection volumes and/or pressures necessary to assure that fractures are not initiated in the confining zone, that injected fluids do not migrate into any underground source of drinking water, that formation fluids are not displaced into any underground source of drinking water, and to assure compliance with the part 146 operating requirements.	§609.A	See above.	While the language at 40 CFR 144.52(a)(3) is not adopted verbatim, §609.A stipulates that operation activities required by §621 be incorporated into Class VI permits.	Reviewed; no issues found.
332	40 CFR 144.52(a)(5) (See also 145.11(a)(20))	Monitoring and reporting requirements as set forth in 40 CFR part 146. The permittee shall be required to identify types of tests and methods used to generate the monitoring data.	§609.A	See above.	While the language at 40 CFR 144.52(a)(5) is not adopted verbatim, §609.A stipulates that monitoring and reporting activities required by §625 be incorporated into Class VI permits.	Reviewed; no issues found.

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333	40 CFR 144.52(a)(7)(i) (See also 145.11(a)(20))	Financial responsibility. (i) The permittee, including the transferor of a permit, is required to demonstrate and maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director until:	§609.C.5	5. The permit shall require the permittee to maintain financial responsibility as specified at §609.C.1 until:	While the language at 40 CFR 144.52(a)(5) is not adopted verbatim, the description of the scope of financial responsibility is captured at §609.C.1.	Reviewed; no issues found. Note that the draft rule text cites §609.C, rather than C.1. August 2020 review: suggested edit was made to the rule; no concerns for stringency.
334	40 CFR 144.52(a)(7)(i)(A) (See also 145.11(a)(20))	The well has been plugged and abandoned in accordance with an approved plugging and abandonment plan pursuant to §§144.51(o), 146.10, and 146.92 of this chapter, and submitted a plugging and abandonment report pursuant to §144.51(p); or	§609.C.5.a	a. the well has been plugged and abandoned in accordance with an approved plugging and abandonment plan pursuant to §631 and submitted a plugging and abandonment report pursuant to §631.A.5; or		Text is similar, with no impact on stringency.
335	40 CFR 144.52(a)(7)(i)(B) (See also 145.11(a)(20))	The well has been converted in compliance with the requirements of §144.51(n); or	§609.C.5.b	b. The well has been converted in compliance with the requirements of §609.L.7; or		Text is similar, with no impact on stringency. (Citation added in review.) August 2020 review: No concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
336	40 CFR 144.52(a)(7)(i)(C) (See also 145.11(a)(20))	The transferor of a permit has received notice from the Director that the owner or operator receiving transfer of the permit, the new permittee, has demonstrated financial responsibility for the well.	~~La. R.S. 30:1110.A.1 through 1110.B.6~~§609.C.5.c	c. the transferor of a permit has received notice from the commissioner that the owner or operator receiving transfer of the permit, the new permittee, has demonstrated financial responsibility for the well. ~~A.(1) There is hereby established a fund in the custody of the state treasurer to be known as the Carbon Dioxide Geologic Storage Trust Fund, hereinafter referred to as the "fund", which shall constitute a special custodial trust fund which shall be administered by the commissioner, who shall make disbursements from the fund solely in accordance with the purposes and uses authorized by this Chapter. Et seq.~~ ~~B. The following monies shall be placed into the fund.~~ ~~(1) The fees, penalties, and bond forfeitures collected pursuant to this Chapter. All fees and self-generated revenue remaining on deposit for the office of conservation at the end of any fiscal year shall be deposited into the fund.~~ ~~(2) Private contributions.~~ ~~(3) Interest earned on the funds deposited in the fund.~~ ~~(4) Civil penalties for violation of any rules or permit conditions imposed under this Chapter, or costs recovered from responsible parties for geologic storage facility closure or remediation pursuant to this Section and R.S. 30:1104, 1105, and 1106.~~ ~~(5) Any grants, donations, and sums allocated from any source, public or private, for the purposes of this Chapter.~~ ~~(6) Site-specific trust accounts; however, the monies of such accounts shall not be used for any geologic storage facility other than that specified for each respective account.~~	~~The language at 40 CFR 144.52(a)(7)(i)(C) is not adopted because La. R.S. 30:1110 provides for site-specific trust accounts held in the custody of the state treasurer.~~	EPA input requested: is there evidence that the state's trust fund would be adequately funded to cover all financial responsibility needs of all active Class VI permits? Is this to be addressed in the primacy application? August 2020 review: state provision is similar to CFR. No concerns for stringency. EPA: Crosswalk LA Citation §609.C.5.c instead of LA R.S. 30 1110 A.1 through B.6 Otherwise ok

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
337	40 CFR 144.52(a)(7)(ii) (See also 145.11(a)(20))	The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance, such as a financial statement or other materials acceptable to the Director. The owner or operator of a well injecting hazardous waste must comply with the financial responsibility requirements of subpart F of this part. For Class VI wells, the permittee shall show evidence of such financial responsibility to the Director by the submission of a qualifying instrument (see §146.85(a) of this chapter), such as a financial statement or other materials acceptable to the Director. The owner or operator of a Class VI well must comply with the financial responsibility requirements set forth in §146.85 of this chapter.	§609.A	See above.	While the language at 40 CFR 144.52(a)(7)(ii) is not adopted verbatim, §609.A stipulates that the obligation to show evidence of financial responsibility to the commissioner by the submission of a qualifying instrument as required by §609.C be incorporated into Class VI permits.	See above. EPA: Should the LA Crosswalk cite §609.C instead of A?

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
338	40 CFR 144.52(a)(8) (See also 145.11(a)(20))	*Mechanical integrity*. A permit for any Class I, II, III or VI well or injection project which lacks mechanical integrity shall include, and for any Class V well may include, a condition prohibiting injection operations until the permittee shows to the satisfaction of the Director under §§146.8, or 146.89 for Class VI, that the well has mechanical integrity.	§609.P	P. Duty to Establish and Maintain Mechanical Integrity. The permittee of a Class VI injection well shall establish mechanical integrity prior to commencing injection and on a schedule determined by these rules or the commissioner. Thereafter, Class VI injection wells must maintain mechanical integrity as defined in §627. The ~~commissioner shall give written notice to the~~ Class VI injection well owner or operator shall give notice to the commissioner when it is determined the injection well is lacking mechanical integrity. Upon receiving such notice, the operator shall immediately cease injection into the well. The well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner. The owner or operator may resume injection upon written notification from the Director that the owner or operator has demonstrated mechanical integrity pursuant to §627.~~Mechanical integrity. A permit for any Class VI well may include, a condition prohibiting injection operations until the permittee shows to the satisfaction of the commissioner under §627 that the well has mechanical integrity.~~		Note that the draft rule text at 609.P reads as follows: "Duty to Establish and Maintain Mechanical Integrity. The permittee of a Class VI injection well shall establish mechanical integrity prior to commencing injection and on a schedule determined by these rules or the commissioner. Thereafter, Class VI injection wells must maintain mechanical integrity as defined in §627. The commissioner shall give written notice to the Class VI injection well owner or operator when it is determined the injection well is lacking mechanical integrity. Upon receiving such notice, the operator shall immediately cease injection into the well. The well shall remain out of injection service until such time as well mechanical integrity is restored to the satisfaction of the commissioner." This has a similar intent as the CFR and there is no concern for stringency. August 2020 review: state provision is similar to CFR. No concerns for stringency. Note edits made in "Rule Text" column to match the state rule.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
339	40 CFR 144.52(a)(9) (See also 145.11(a)(20))	*Additional conditions*. The Director shall impose on a case-by-case basis such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water.	§609.O	O. Additional Conditions. The commissioner shall impose on a case-by-case basis such additional conditions as are necessary to protect underground sources of drinking water.	While the language at §609.O is not verbatim to 40 CFR 144.52(a)(9), the intent of the federal rule is preserved; that being, the commissioner shall impose conditions to prevent risk to underground sources of drinking water.	"To prevent the migration of fluids into USDWs" changed to "to protect USDWs." August 2020 review: no concerns for stringency.
340	40 CFR 144.52(b)(1) (See also 145.11(a)(20))	In addition to conditions required in all permits the Director shall establish conditions in permits as required on a case-by-case basis, to provide for and assure compliance with all applicable requirements of the SDWA and parts 144, 145, 146 and 124.	§609.R	R. In addition to conditions required in all permits the Director shall establish conditions in permits as required on a case-by-case basis, to provide for and assure compliance with all applicable requirements of the SDWA and 40 CFR Parts 144, 145, 146 and 124.		Text is similar, with no impact on stringency. EPA: should LA Rule use "commissioner" instead of "Director" at 609.R?.
341	40 CFR 144.52(b)(2) (See also 145.11(a)(20))	For a State issued permit, an applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of the permit. For State and EPA administered programs, an applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in §144.39.	§609.S	S. New permits, and to the extent allowed under §613 modified or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in this section. An applicable requirement is a State statutory or regulatory requirement that takes effect prior to final administrative disposition of the permit. An applicable requirement is also any requirement that takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in §613.		Text is similar, with no impact on stringency.
342	40 CFR 144.52(b)(3) (See also 145.11(a)(20))	New or reissued permits, and to the extent allowed under §144.39 modified or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in §144.52.	§609.S	See above.		Text is similar, with no impact on stringency.
343	40 CFR 144.52(c) (See also 145.11(a)(20))	Incorporation. All permit conditions shall be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit.	§609.T	T. Incorporation. All permit conditions shall be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit.		Text is identical.
40 CFR 144.53 Schedule of compliance.						
344	40 CFR 144.53(a) (See also 145.11(a)(21))	General. The permit may, when appropriate, specify a schedule of compliance leading to compliance with the SDWA and parts 144, 145, 146, and 124.	§609.N	N. Schedules of Compliance. The permit may, when appropriate, specify a schedule of compliance leading to compliance with the act and these regulations.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
345	40 CFR 144.53(a)(1) (See also 145.11(a)(21))	Time for compliance. Any schedules of compliance shall require compliance as soon as possible, and in no case later than 3 years after the effective date of the permit.	§609.N.1	1. Time for Compliance. Any schedules of compliance under this Section shall require compliance as soon as possible but not later than three years after the effective date of the permit.		Text is similar, with no impact on stringency.
346	40 CFR 144.53(a)(2) (See also 145.11(a)(21))	Interim dates. Except as provided in paragraph (b)(1)(ii) of this section, if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.	§609.N.2	2. Interim Dates. Except as provided in §609N.2.b, if a permit establishes a schedule of compliance which exceeds one year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.		Text is similar, with no impact on stringency.
347	40 CFR 144.53(a)(2)(i) (See also 145.11(a)(21))	The time between interim dates shall not exceed 1 year.	§609.N.2.a	a. The time between interim dates shall not exceed one year.		Text is identical.
348	40 CFR 144.53(a)(2)(ii) (See also 145.11(a)(21))	If the time necessary for completion of any interim requirement is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.	§609.N.2.b	b. If the time necessary for completion of any interim requirements (such as the construction of a control facility) is more than one year and is not readily divisible into stages for completion, the permit shall specify interim dates for submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.	In addition to the text at 40 CFR 144.53(a)(2)(ii), the following language has been added at §609.N.2.b: (such as the construction of a control facility).	Reviewed; no issues found.
349	40 CFR 144.53(a)(3) (See also 145.11(a)(21))	Reporting. The permit shall be written to require that if paragraph (a)(1) of this section is applicable, progress reports be submitted no later than 30 days following each interim date and the final date of compliance.	§609.N.3	3. Reporting. The permit shall be written to require that progress reports be submitted no later than 30 days following each interim date and the final date of compliance.		Text is similar, with no impact on stringency. Corrected citation in review.
40 CFR 144.54 Requirements for recording and reporting of monitoring results.						
350	40 CFR 144.54(a) (See also 145.11(a)(22))	All permits shall specify: Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);	§609.A	A. Applicability. The rules and regulations of this Section set forth legal conditions for Class VI well permits. Permits for owners or operators of Class VI injection wells shall include conditions meeting applicable requirements of §609, §615, §617, §619, §621, §623, §625, §627, §629, and §631.	While the language at 40 CFR 144.54(a) is not adopted verbatim, §609.A stipulates that all monitoring and reporting requirements stipulated by §625 and §629 be incorporated into Class VI permits.	Reviewed; no issues found.
351	40 CFR 144.54(b) (See also 145.11(a)(22))	Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including when appropriate, continuous monitoring;	§609.A	See above.	See above.	Reviewed; no issues found.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
352	40 CFR 144.54(c) (See also 145.11(a)(22))	Applicable reporting requirements based upon the impact of the regulated activity and as specified in part 146. Reporting shall be no less frequent than specified in the above regulations.	§609.A	See above.	See above.	Reviewed; no issues found.
PART 146--UNDERGROUND INJECTION CONTROL PROGRAM: CRITERIA AND STANDARDS						
40 CFR 146.3 Definitions						
353	40 CFR 146.3	*Abandoned well* means a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose or for observation purposes.	§601.A	*Abandoned Well*—a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose or for observation purposes.		Text is identical.
354		*Casing* means a pipe or tubing of appropriate material, of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus prevent the walls from caving, to prevent loss of drilling mud into porous ground, or to prevent water, gas, or other fluid from entering or leaving the hole.	§601.A	*Casing*—a metallic or nonmetallic tubing or pipe of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus prevent the walls form caving, to prevent loss of drilling mud into porous ground, or to prevent water, gas or other fluid from entering or leaving the hole.		Text omits "leaving" the hole. August 2020 review: revised definition is similar to the CFR.
355		*Catastrophic collapse* means the sudden and utter failure of overlying "strata" caused by removal of underlying materials.	N/A	*Catastrophic Collapse*—the sudden and utter failure of overlying *strata* caused by removal of underlying materials.		Note that the draft rule text at 601.A reads "Catastrophic Collapse—the sudden and utter failure of overlying strata caused by removal of underlying materials." Text is similar, with no impact on stringency. August 2020 review: no concerns for stringency.
356		*Cementing* means the operation whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing.	§601.A	*Cementing*—the operation whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
357		*Confining bed* means a body of impermeable or distinctly less permeable material stratigraphically adjacent to one or more aquifers.	§601.A~~N/A~~	*Confining Bed*—a body of impermeable or distinctly less permeable material stratigraphically adjacent to one or more aquifers.		Note that the draft rule text reads "Confining Bed—a body of impermeable or distinctly less permeable material stratigraphically adjacent to one or more aquifers." Text is similar, with no impact on stringency. August 2020 review: no concerns for stringency.
358		*Confining zone* means a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection zone.	§601.A~~N/A~~	*Confining Zone*—a geological formation, group of formations, or part of a formation stratigraphically overlying the *injection zone* that acts as a barrier to fluid movement above an *injection zone*.		No state equivalent. Confining zone is defined at §601.A. August 2020 review: no concerns for stringency.
359		*Conventional mine* means an open pit or underground excavation for the production of minerals.	N/A			No state equivalent.
360		*Disposal well* means a well used for the disposal of waste into a subsurface stratum.	§601.A~~N/A~~	*Disposal Well*—a well used for the disposal of waste into a subsurface stratum.		Note that the draft rule text at 601.A reads Disposal Well—a well used for the disposal of waste into a subsurface stratum." Text is identical to CFR. August 2020 review: no concerns for stringency.
361		*Effective date* of a UIC program means the date that a State UIC program is approved or established by the Administrator.	N/A			N/A. This is not required of state programs.
362		*Experimental technology* means a technology which has not been proven feasible under the conditions in which it is being tested.	§601.A	Experimental Technology—a technology which has not been proven feasible under the conditions in which it is being tested		Text is identical.
363		*Fault* means a surface or zone of rock fracture along which there has been displacement.	§601.A	Fault—a surface or zone of rock fracture along which there has been displacement.		Text is identical.
364		*Flow rate* means the volume per time unit given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel.	§601.A	Flow Rate—the volume per time unit given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel.		Text omits "gases." August 2020 review: revised definition is similar to the CFR.
365		*Lithology* means the description of rocks on the basis of their physical and chemical characteristics.	§601.A	Lithology—the description of rocks on the basis of their physical and chemical characteristics.		Text is identical.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
366		*Owner or operator* means the owner or operator of any facility or activity subject to regulation under the RCRA, UIC, NPDES, or 404 programs.	§601.A	Operator—the person recognized as being responsible to the Office of Conservation for the well, site, facility, or activity subject to regulatory authority under these rules and regulations. The operator can, but need not be, the owner of the well, site, facility, or activity. Owner—the person that owns any well, site, facility, or activity subject to regulation under the UIC program. The owner can, but need not be, the operator of the well, site, facility, or activity.		Text is similar, with no impact on stringency.
367		*Packer* means a device lowered into a well to produce a fluid-tight seal.	§601.A	Packer—a device lowered into a well to produce a fluid tight seal within the casing.	The following language has been added: within the casing.	Text adds "within the casing." August 2020 review: no impact on stringency.
368		*Permit* means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of this part and parts 124, 144, and 145. Permit does not include RCRA interim status (§122.23), UIC authorization by rule (§§144.21 to 144.26 and 144.15), or any permit which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."	§601.A	Permit—an authorization, license, or equivalent control document issued by the commissioner to implement the requirements of these regulations. Permit includes, but it is not limited to, area permits and emergency permits. Permit does not include UIC authorization by rule or any permit which has not yet been the subject of final agency action, such as a draft permit.		Text is similar, with no impact on stringency. Note: this row was omitted from the template provided to the state. Note that the state noted elsewhere that emergency permits will not be issued for Class VI wells. August 2020 review: added citation noted.
369		*Plugging* means the act or process of stopping the flow of water, oil or gas into or out of a formation through a borehole or well penetrating that formation.	§601.A	Plugging—the act or process of stopping the flow of water, oil or gas into or out of a formation through a borehole or well penetrating that formation.		Text is identical.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
370		*Plugging record* means a systematic listing of permanent or temporary abandonment of water, oil, gas, test, exploration and waste injection wells, and may contain a well log, description of amounts and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging structures.	§601.A	*Plugging Record*— a systematic listing of permanent or temporary abandonment of water, oil, gas, test, exploration and waste injection wells, and may contain a well log, description of amounts and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging structures. ~~Plugging Record—a systematic listing of permanent or temporary abandonment of water, oil, gas, test, exploration, and waste injection wells.~~		Text omits "and may contain a well log, description of amounts and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging structures." However, Class VI plugging report requirements are similar to CFR; see 40 CFR 146.92(d)/§631.A.5. August 2020 review: revised definition is similar to the CFR.
371		*Pressure* means the total load or force per unit area acting on a surface.	§601.A	Pressure—the total load or force per unit area acting on a surface.		Text is identical.
372		*Sole or principal source aquifer* means an aquifer which has been designated by the Administrator pursuant to section 1424 (a) or (e) of the SDWA.	§601.A	Sole or Principal Source Aquifer—an aquifer which is the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.		Text is similar, with no impact on stringency.
373		*Subsidence* means the lowering of the natural land surface in response to: Earth movements; lowering of fluid pressure; removal of underlying supporting material by mining or solution of solids, either artificially or from natural causes; compaction due to wetting (Hydrocompaction); oxidation of organic matter in soils; or added load on the land surface.	N/A			No state equivalent.
374		*Surface casing* means the first string of well casing to be installed in the well.	§601.A	Surface Casing—the first string of casing to be installed in the well, excluding conductor casing.		Text excludes conductor casing.
375		*Well plug* means a watertight and gastight seal installed in a borehole or well to prevent movement of fluids.	§601.A	Well Plug—a fluid-tight seal installed in a borehole or well to prevent movement of fluids.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
376		*Well stimulation* means several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for wastewater to move more readily into the formation, and includes (1) surging, (2) jetting, (3) blasting, (4) acidizing, (5) hydraulic fracturing.	§601.A	Well Stimulation—several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected thus making it possible for fluids to move more readily into the formation, and includes, but may not be limited to: a. surging; b. jetting; c. blasting; d. acidizing; or e. hydraulic fracturing.	~~The struck-out text of the federal definition will not be adopted and will be substituted with "fluids." The following language has been also added: but may not be limited to.~~	LA did not indicate which part of the text was struck out. Text appears similar. August 2020 revision: clarification noted. No concerns for stringency.
377		*Well monitoring* means the measurement by on-site instruments or laboratory methods, of the quality of water in a well	§601.A	Well monitoring—the measurement by on-site instruments or laboratory methods, of the quality of water in a well.		Text is identical.
40 CFR 146.4 Criteria for exempted aquifers						
378	40 CFR 146.4	An aquifer or a portion thereof which meets the criteria for an "underground source of drinking water" in §146.3 may be determined under §144.7 of this chapter to be an "exempted aquifer" for Class I–V wells if it meets the criteria in paragraphs (a) through (c) of this section. Class VI wells must meet the criteria under paragraph (d) of this section:	§603.F.2	After notice and opportunity for a public hearing the commissioner may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the commissioner proposes to designate as exempted aquifers if they meet the following criteria	~~While the language at §603.F.2 is not verbatim to 40 CFR 146.4, the intent of the federal rule is preserved; that being, introducing the necessary criteria for designation of exempted aquifers.~~	Text is similar, with no impact on stringency. LA rule text added to table in review. August 2020 review: no concerns for stringency.
379	40 CFR 146.4(a)	It does not currently serve as a source of drinking water; and	§603.F.2.a	a. the aquifer does not currently serve as a source of drinking water; and		Text is similar, with no impact on stringency.
380	40 CFR 146.4(b)	It cannot now and will not in the future serve as a source of drinking water because:	§603.F.2.b	b. the aquifer cannot now and will not in the future serve as a source of drinking water because:		Text is identical.
381	40 CFR 146.4(b)(1)	It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a ~~Class II or~~ III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible.	§603.F.2.b.i	i. it is mineral, hydrocarbon or geothermal energy producing or can be demonstrated by a permit applicant as part of a permit application for a Class III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible;	The struck-out text of 40 CFR 146.4(b)(1) will not be adopted as Louisiana does not permit solution mining wells as Class II operations.	Reviewed; no issues found.
382	40 CFR 146.4(b)(2)	It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;	§603.F.2.b.ii	ii. it is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;		Text is identical.
383	40 CFR 146.4(b)(3)	It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or	§603.F.2.b.iii	iii. it is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or		Text is identical.
384	40 CFR 146.4(b)(4)	It is located over a Class III well mining area subject to subsidence or catastrophic collapse; or	§603.F.2.b.iv	iv. it is located over a Class III well mining area subject to subsidence or catastrophic collapse; or		Text is identical.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
385	40 CFR 146.4(c)	The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.	§603.F.2.c	c. the total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.		Text is identical.
386	40 CFR 146.4(d)	The areal extent of an aquifer exemption for a Class II enhanced oil recovery or enhanced gas recovery well may be expanded for the exclusive purpose of Class VI injection for geologic sequestration under §144.7(d) of this chapter if it meets the following criteria:	§603.F.2.d	d. the areal extent of an aquifer exemption for a Class II enhanced oil recovery or enhanced gas recovery well may be expanded for the exclusive purpose of Class VI injection for geologic sequestration under §~~103~~603.F.4 if it meets the following criteria:		Text is similar, with no impact on stringency. Should the reference to §103.F.4. refer to §603? August 2020 review: citation revised; no concerns for stringency.
387	40 CFR 146.4(d)(1)	It does not currently serve as a source of drinking water; and	§603.F.2.d.i	i. it does not currently serve as a source of drinking water; and		Text is identical.
388	40 CFR 146.4(d)(2)	The total dissolved solids content of the ground water is more than 3,000 mg/l and less than 10,000 mg/l; and	§603.F.2.d.ii	ii. the total dissolved solids content of the ground water is more than 3,000 mg/l and less than 10,000 mg/l; and		Text is identical.
389	40 CFR 146.4(d)(3)	It is not reasonably expected to supply a public water system.	§603.F.2.d.iii	iii. it is not reasonably expected to supply a public water system.		Text is identical.
Subpart H - Criteria and Standards Applicable to Class VI Wells						
40 CFR 146.81 Applicability.						
390	40 CFR 146.81(a)	This subpart establishes criteria and standards for underground injection control programs to regulate any Class VI carbon dioxide geologic sequestration injection wells.	§603.A through 603.A.1	A. Applicability. These rules and regulations apply to all owners and operators of proposed and existing Class VI injection wells and projects in the state of Louisiana. 1. The commissioner shall administer the provisions of Act 517 and these regulations promulgated thereunder for geologic sequestration of carbon dioxide.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
391	40 CFR 146.81(b)	This subpart applies to any wells used to inject carbon dioxide specifically for the purpose of geologic sequestration, i.e., the long-term containment of a gaseous, liquid, or supercritical carbon dioxide stream in subsurface geologic formations.	§603.A.2	2. The provisions of this Chapter only apply to geologic sequestration of carbon dioxide in underground reservoirs as defined in §601 above. The geologic sequestration of carbon dioxide is not permitted in solution-mined salt caverns under these provisions.	While the language at §603.A.2 is not verbatim to 40 CFR 146.81(b), the intent of the federal rule is preserved; that being, the introduction of provisions pertaining to injection of carbon dioxide for the purposes of long term containment. The language at §603.A.2 does not specify the phase of the carbon dioxide stream, however, all phases are referenced in the definition in §601. The following language has been added at §603.A.2: the geologic sequestration of carbon dioxide is not permitted in solution-mined salt caverns under these provisions.	Text does not specify the phase of the carbon dioxide stream (although all phases are referenced in definition in §601). Adds stipulation about salt caverns. August 2020 review: clarification is noted; no concerns for stringency.
392	40 CFR 146.81(c)	This subpart also applies to owners or operators of permit- or rule-authorized Class I, Class II, or Class V experimental carbon dioxide injection projects who seek to apply for a Class VI geologic sequestration permit for their well or wells. Owners or operators seeking to convert existing Class I, Class II, or Class V experimental wells to Class VI geologic sequestration wells must demonstrate to the Director that the wells were engineered and constructed to meet the requirements at 40 CFR 146.86(a) and ensure protection of USDWs, in lieu of requirements at 40 CFR 146.86(b) and 146.87(a). By December 10, 2011, owners or operators of either Class I wells previously permitted for the purpose of geologic sequestration or Class V experimental technology wells no longer being used for experimental purposes that will continue injection of carbon dioxide for the purpose of GS must apply for a Class VI permit. A converted well must still meet all other requirements under part 146.	§603.A.3	3. This provisions of this Chapter also apply to owners or operators of permit- or rule-authorized Class I, Class II, or Class V experimental carbon dioxide injection projects who seek to apply for a Class VI geologic sequestration permit for their well or wells. Owners or operators seeking to convert existing Class I, Class II, or Class V experimental wells to Class VI geologic sequestration wells must demonstrate to the Director that the wells were engineered and constructed to meet the requirements at §617.A.1 and ensure protection of USDWs, in lieu of requirements at §§617.A.2 and §617.B.1 By December 10, 2011, owners or operators of either Class I wells previously permitted for the purpose of geologic sequestration or Class V experimental technology wells no longer being used for experimental purposes that will continue injection of carbon dioxide for the purpose of GS must apply for a Class VI permit. A converted well must still meet all other requirements under this Chapter.		Text is similar, with no impact on stringency. EPA: Should Reg text at 603.A.3 say Commissioner instead of Director?

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
393	40 CFR 146.81(d)	*Definitions*. The following definitions apply to this subpart. To the extent that these definitions conflict with those in 40 CFR 144.3 or 146.3, these definitions govern for Class VI wells:	§601.A	A. The following definitions apply to all regulations in this Chapter. Terms not defined in this Section for Class VI wells have the meaning given by R.S. (1950) Title 30, Section 1103.	While the language at §601.A is not verbatim to 40 CFR 146.81(d), the intent of the federal rule is preserved; that being, the introduction of definitions. The language regarding potential conflicting definitions will not be adopted since §601.A is the only section of definitions in the state rule and pertain to Class VI wells.	Text does not cover conflicting definitions. August 2020 review: clarification is noted; no concerns for stringency.
394		Area of review means the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity. The area of review is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon dioxide stream and displaced fluids, and is based on available site characterization, monitoring, and operational data as set forth in § 146.84.	§601.A	Area of Review—the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity, and is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon dioxide stream and displaced fluids, and is based on available site characterization, monitoring, and operational data as set forth in §§615.B. and §615.C.		Text is similar, with no impact on stringency.
395		Carbon dioxide plume means the extent underground, in three dimensions, of an injected carbon dioxide stream.	§601.A	Carbon Dioxide Plume—the extent underground, in three dimensions, of an injected carbon dioxide stream.		Text is identical.
396		Carbon dioxide stream means carbon dioxide that has been captured from an emission source (e.g., a power plant), plus incidental associated substances derived from the source materials and the capture process, and any substances added to the stream to enable or improve the injection process. This subpart does not apply to any carbon dioxide stream that meets the definition of a hazardous waste under 40 CFR part 261.	§601.A	Carbon Dioxide Stream—the carbon dioxide that has been captured from an emission source (e.g., a power plant), plus incidental associated substances derived from the source materials and the capture process, and any substances added to the stream to enable or improve the injection process. This meaning does not apply to any carbon dioxide stream meeting the definition of a hazardous waste under Title 40, Code of Federal Regulations, Part 261.		Text is similar, with no impact on stringency.
397		Confining zone means a geologic formation, group of formations, or part of a formation stratigraphically overlying the injection zone(s) that acts as barrier to fluid movement. ~~For Class VI wells operating under an injection depth waiver, confining zone means a geologic formation, group of formations, or part of a formation stratigraphically overlying and underlying the injection zone(s).~~	§601.A	Confining Zone—a geological formation, group of formations, or part of a formation stratigraphically overlying the injection zone that acts as a barrier to fluid movement above an injection zone.	The struck-out text of the federal definition will not be adopted. Waivers of the injection depth requirements for Class VI wells will not be granted.	Reviewed; no issues found.

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Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
398		Corrective action means the use of Director-approved methods to ensure that wells within the area of review do not serve as conduits for the movement of fluids into underground sources of drinking water (USDW).	§601.A	Corrective Action—the use of UIC program-approved methods to ensure that wells within the area of review do not serve as conduits for the movement of fluids into USDWs.		Text is similar, with no impact on stringency.
399		Geologic sequestration means the long-term containment of a gaseous, liquid, or supercritical carbon dioxide stream in subsurface geologic formations. This term does not apply to carbon dioxide capture or transport.	§601.A	Geologic Sequestration—the long-term containment of a gaseous, liquid, or supercritical carbon dioxide stream in subsurface geologic formations. This term does not apply to carbon dioxide capture or transport.		Text is identical.
400		Geologic sequestration project means an injection well or wells used to emplace a carbon dioxide stream beneath the lowermost formation containing a USDW; or, wells used for geologic sequestration of carbon dioxide that have been granted a waiver of the injection depth requirements pursuant to requirements at § 146.95; or, wells used for geologic sequestration of carbon dioxide that have received an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption pursuant to §§ 146.4 and 144.7(d) of this chapter. It includes the subsurface three-dimensional extent of the carbon dioxide plume, associated area of elevated pressure, and displaced fluids, as well as the surface area above that delineated region.	§601.A	Geologic Sequestration Project—an injection well or wells used to emplace a carbon dioxide stream beneath the lowermost formation containing a USDW; or wells used for geologic sequestration of carbon dioxide that have received an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption pursuant to §603.F of this chapter. It includes the subsurface three-dimensional extent of the carbon dioxide plume, associated area of elevated pressure, and displaced fluids, as well as the surface area above that delineated region.		Text is similar, with no impact on stringency.
401		Injection zone means a geologic formation, group of formations, or part of a formation that is of sufficient areal extent, thickness, porosity, and permeability to receive carbon dioxide through a well or wells associated with a geologic sequestration project.	§601.A	Injection Zone—a geological formation, group of formations or part of a formation receiving fluids through a well. For Class VI projects, it must also be of sufficient areal extent, thickness, porosity, and permeability to receive carbon dioxide through a well or wells associated with a geologic sequestration project.		Text is similar, with no impact on stringency.
402		Post-injection site care means appropriate monitoring and other actions (including corrective action) needed following cessation of injection to ensure that USDWs are not endangered, as required under § 146.93.	§601.A	Post-Injection Site Care—the appropriate monitoring and other actions (including corrective action) needed following cessation of geologic sequestration injection to ensure that USDWs are not endangered, as required under §633.		Text is similar, with no impact on stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
403		Pressure front means the zone of elevated pressure that is created by the injection of carbon dioxide into the subsurface. For the purposes of this subpart, the pressure front of a carbon dioxide plume refers to a zone where there is a pressure differential sufficient to cause the movement of injected fluids or formation fluids into a USDW.	§601.A	Pressure Front—the zone of elevated pressure in the subsurface created by injection where there is a pressure differential sufficient to cause the movement of injected fluids or formation fluids into a USDW.		Text is similar, with no impact on stringency.
404		Site closure means the point/time, as determined by the Director following the requirements under § 146.93, at which the owner or operator of a geologic sequestration site is released from post-injection site care responsibilities.	§601.A	Site Closure—the point or time, as determined by the UIC program following the requirements under §633, at which the owner or operator of a geologic sequestration site is released from post-injection site care responsibilities.		Text is similar, with no impact on stringency.
405		Transmissive fault or fracture means a fault or fracture that has sufficient permeability and vertical extent to allow fluids to move between formations.	§601.A	Transmissive Fault or Fracture—a fault or fracture that has sufficient permeability and vertical extent to allow fluids to move between formations.		Text is identical.
40 CFR 146.82 Required Class VI permit information.						
406	40 CFR 146.82	This section sets forth the information which must be considered by the Director in authorizing Class VI wells. For converted Class I, Class II, or Class V experimental wells, certain maps, cross-sections, tabulations of wells within the area of review and other data may be included in the application by reference provided they are current, readily available to the Director, and sufficiently identified to be retrieved.	§607.A	A. The following minimum information required in §607 shall be submitted with a permit application to construct a new Class VI well or convert any existing well for Class VI service. The applicant shall also refer to the appropriate application form for any additional information that may be required. For information already on file with the office of conservation, the commissioner may accept the required information by reference provided they are current, readily available to the commissioner, and sufficiently identified to be retrieved .		Text is similar, with no impact on stringency. Suggest clarifying that referenced information be current, readily available to the Director, and sufficiently identified to be retrieved. August 2020 review: revision addresses the above comment. No concerns for stringency.
407	40 CFR 146.82(a)	Prior to the issuance of a permit for the construction of a new Class VI well or the conversion of an existing Class I, Class II, or Class V well to a Class VI well, the owner or operator shall submit, pursuant to 40 CFR 146.91(e), and the Director shall consider the following:	§607.A	See above.		Text is similar, with no impact on stringency.

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408	40 CFR 146.82(a)(1)	Information required in 40 CFR 144.31 (e)(1) through (6);	§607.B through 607.B.12	B. Administrative information: 1. all required state application form(s); 2. the nonrefundable application fee(s) as per LAC 43:XIX.Chapter 7 or successor document; 3. the name and mailing address of the applicant and the physical address of the sequestration well facility; 4. the operator's name, address, telephone number, and e-mail address; 5. ownership status as federal, state, private, public, or other entity; 6. a brief description of the nature of the business associated with the activity; 7. the activity or activities conducted by the applicant which require the applicant to obtain a permit under these regulations; 8. up to four SIC Codes which best reflect the principal products or services provided by the facility; 9. a listing of all permits or construction approvals that the applicant has received or applied for under any of the following programs and which specifically affect the legal or technical ability of the applicant to undertake the activity or activities to be conducted by the applicant under the permit being sought: a. the Louisiana Hazardous Waste Management; b. this or any other Underground Injection Control Program; c. NPDES Program under the Clean Water Act; d. Prevention of Significant Deterioration (PSD) Program under the Clean Air Act; e. Nonattainment Program under the Clean Air Act; f. National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act; g. Ocean Dumping Permit under the Marine Protection Research and Sanctuaries Act; h. dredge or fill permits under Section 404 of the Clean Water Act; and i. other relevant environmental permits including, but not limited to any state permits issued		Reviewed; no issues found. See also 144.31(e)/§607.B.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
				under the Louisiana Coastal Resources Program, the Louisiana Surface Mining Program or the Louisiana Natural and Scenic Streams System; 10. acknowledgment as to whether the facility is located on Indian lands or other lands under the jurisdiction or protection of the federal government, or whether the facility is located on state water bottoms or other lands owned by or under the jurisdiction or protection of the state of Louisiana; 11. documentation of financial responsibility or documentation of the method by which proof of financial responsibility will be provided as required in §609.C. Before making a final permit decision, final (official) documentation of financial responsibility must be submitted to and approved by the Office of Conservation; 12. names and addresses of all property owners within the area of review of the Class VI well or project.		

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409	40 CFR 146.82(a)(2)	A map showing the injection well for which a permit is sought and the applicable area of review consistent with 40 CFR 146.84. 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;	§607.C.1.a.i through 607.C.1.v	1. Maps and Related Information a. map(s) showing property boundaries of the facility, the location of the proposed Class VI well, and the applicable area of review consistent with §§615.B and 615.C . USGS topographic maps with a scale of 1:24,000 may be used. The map boundaries must extend at least two miles beyond the area of review and include as applicable: i. the section, township and range of the area where the activity is located and any parish, city, municipality, state, and tribal boundaries. ii. within the area of review, the map(s) must identify all injection wells, producing wells, abandoned wells, plugged wells or dry holes, deep stratigraphic boreholes, State- or USEPA-approved subsurface cleanup sites, surface bodies of water, springs, surface and subsurface mines, quarries, water wells, other pertinent surface features including structures intended for human occupancy, and roads. iii. only information of public record is required to be included on the map(s), however, the applicant is required to make a diligent search to locate all wells not listed in the public record. iv. for water wells on the facility property and adjacent property, submit a tabulation of well depth, water level, owner, chemical analysis, and other pertinent data. If these wells do not exist, submit this information for a minimum of three other wells in the area of review or a statement why this information was not included. v. the protocol followed to identify, locate, and ascertain the condition of all wells within the area of review that penetrate the injection or confining zone.	While the language at §607.C.1.a.i through 607.C.1.v is not verbatim to 40 CFR 146.82(a)(2), the intent of the federal rule is preserved; that being, maps of the well and the applicable area of review should include all pertinent information legal boundaries, wells, boreholes, cleanup sites, bodies of water, quarries, surface and subsurface mines, and other pertinent surface features including structures intended for human occupancy, and roads. The struck out text will not be adopted in this section because faults will be accounted for in §607.C.1.b.iii as a component of the information on the geologic structure and hydrogeologic properties of the proposed storage site required by §607.C.1.b. In addition to the text at 40 CFR 146.82(a)(2), the following language has been added at §607.C.1.iv through 607.C.1.v: for water wells on the facility property and adjacent property, submit a tabulation of well depth, water level, owner, chemical analysis, and other pertinent data. If these wells do not exist, submit this information for a minimum of three other wells in the area of review or a statement why this information was not included; the protocol followed to identify, locate, and ascertain the condition of all wells within the area of review that penetrate the injection or confining zone.	Reviewed; no issues found.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
410	40 CFR 146.82(a)(3)	Information on the geologic structure and hydrogeologic properties of the proposed storage site and overlying formations, including:	§607.C.1.b	b. information on the geologic structure and hydrogeologic properties of the proposed sequestration site and overlying formations, to include:		Text is similar, with no impact on stringency.
411	40 CFR 146.82(a)(3)(i)	Maps and cross sections of the area of review;	N/A		The text at 40 CFR 146.82(a)(3)(i) will not be adopted in this section because maps and cross sections of the area of review will be accounted for in §607.C.1.b.i through 607.C.1.b.ii as the geologic and topographic maps and cross-sections required by 40 CFR 146.82(a)(3)(vi). These maps will provide equivalent information to the requirements of 40 CFR 146.82(a)(3)(i).	No state equivalent. The referenced maps should provide equivalent information. August 2020 review: clarification is noted; no concerns for stringency.
412	40 CFR 146.82(a)(3)(ii)	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;	§607.C.1.b.iii	iii. 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;		Text is identical.
413	40 CFR 146.82(a)(3)(iii)	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;	§607.C.2.a	a. 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;		Text is identical.
414	40 CFR 146.82(a)(3)(iv)	Geomechanical information on fractures, stress, ductility, rock strength, and in situ fluid pressures within the confining zone(s);	§607.C.2.b	b. geomechanical information on fractures, stress, ductility, rock strength, and in situ fluid pressures within the confining zone(s);		Text is identical.
415	40 CFR 146.82(a)(3)(v)	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	§607.C.2.c	c. information on the region's seismic history including the presence and depth of seismic sources and a determination that the seismicity would not interfere with containment; and		Text is similar, with no impact on stringency.

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416	40 CFR 146.82(a)(3)(vi)	Geologic and topographic maps and cross sections illustrating regional geology, hydrogeology, and the geologic structure of the local area.	§607.C.1.b.i through 607.C.1.b.ii	i. geologic and topographic maps and cross-sections illustrating regional geology, geologic structure, and hydrology. ii. maps and cross-sections to a scale needed to detail the local geology, geologic structure, and hydrology. The maps and cross-sections must extend at least two miles beyond the area of review	§607.C.1.b.ii includes more stringent requirements that maps and cross-sections must be drawn to a scale needed to detail the local geology and hydrology and that the maps and cross-sections must extend two miles beyond the area of review.	State rule does not require maps show geologic structure; this may be acceptable with the requirement at §607.C.1.b. August 2020 review: revision addresses the above comment. No concerns for stringency.
417	40 CFR 146.82(a)(4)	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 Director may require;	§607.C.2.d	d. a tabulation of all wells within the area of review that penetrate *the base of the USDW*. Such data must include a description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion, and any other information the commissioner may require;	The struck-out text of 40 CFR 146.82(a)(4) will not be adopted. The following emphasized language has been added instead: the base of the USDW.	Text changes "injection or confining zones" to "base of the USDW." No impact on stringency. August 2020 review: no concerns for stringency.
418	40 CFR 146.82(a)(5)	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;	§607.C.1.b.iv	iv. maps and stratigraphic cross-sections showing the general vertical and lateral limits of all USDWs, water wells and springs within the area of review, their position relative to the injection zone(s) and the direction of water movement, if known.		Text is similar, with no impact on stringency.
419	40 CFR 146.82(a)(6)	Baseline geochemical data on subsurface formations, including all USDWs in the area of review;	§607.C.2.e	e. baseline geochemical data on subsurface formations, including injection zones, confining zones and all USDWs in the area of review;		Text is similar, with no impact on stringency.
420	40 CFR 146.82(a)(7)	Proposed operating data for the proposed geologic sequestration site:	§607.C.2.f	f. proposed operating data		Text is similar, with no impact on stringency.
421	40 CFR 146.82(a)(7)(i)	Average and maximum daily rate and volume and/or mass and total anticipated volume and/or mass of the carbon dioxide stream;	§607.C.2.f.i	i. average and maximum daily rate and volume and/or mass and total anticipated volume and/or mass of the carbon dioxide stream;		Text is identical.
422	40 CFR 146.82(a)(7)(ii)	Average and maximum injection pressure;	§607.C.2.f.ii	ii. average and maximum injection pressure;		Text is identical.
423	40 CFR 146.82(a)(7)(iii)	The source(s) of the carbon dioxide stream; and	§607.C.2.f.iii	iii. source(s) of the carbon dioxide stream; and		Text is identical.
424	40 CFR 146.82(a)(7)(iv)	An analysis of the chemical and physical characteristics of the carbon dioxide stream.	§607.C.2.f.iv	iv. analysis of the chemical and physical characteristics of the carbon dioxide stream.		Text is identical.
425	40 CFR 146.82(a)(8)	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 40 CFR 146.87;	§607.C.2.g	g. 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 §617.B;		Text is similar, with no impact on stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
426	40 CFR 146.82(a)(9)	Proposed stimulation program, a description of stimulation fluids to be used and a determination that stimulation will not interfere with containment;	§607.C.2.h	h. proposed stimulation program, a description of stimulation fluids to be used and a determination that stimulation will not interfere with containment;		Text is identical.
427	40 CFR 146.82(a)(10)	Proposed procedure to outline steps necessary to conduct injection operation;	§607.C.2.i	i. proposed injection operation procedures;		Text is similar, with no impact on stringency.
428	40 CFR 146.82(a)(11)	Schematics or other appropriate drawings of the surface and subsurface construction details of the well;	§607.C.2.j	j. schematics or other appropriate drawings of the surface (wellhead and related appurtenances) and subsurface construction details of the well;		Text is similar, with no impact on stringency.
429	40 CFR 146.82(a)(12)	Injection well construction procedures that meet the requirements of 40 CFR 146.86;	§607.C.2.k	k. injection well construction procedures that meet the requirements of §617.A;		Text is similar, with no impact on stringency.
430	40 CFR 146.82(a)(13)	Proposed area of review and corrective action plan that meets the requirements under 40 CFR 146.84;	§607.C.2.l	l. proposed area of review and corrective action plan that meets the requirements under §§615.B and §615.C;		Text is similar, with no impact on stringency.
431	40 CFR 146.82(a)(14)	A demonstration, satisfactory to the Director, that the applicant has met the financial responsibility requirements under 40 CFR 146.85;	§607.C.2.m	m. ~~the applicant's satisfactory demonstration of the financial responsibility requirements under~~a demonstration, satisfactory to the commissioner, that the applicant has met the financial responsibility requirements under §609.C.;		Text omits "to the Director." See also 146.85/§609.C. August 2020 review: revised state provision is now similar to CFR. No concerns for stringency.
432	40 CFR 146.82(a)(15)	Proposed testing and monitoring plan required by 40 CFR 146.90;	§607.C.2.n	n. proposed testing and monitoring plan required by §625;		Text is similar, with no impact on stringency.
433	40 CFR 146.82(a)(16)	Proposed injection well plugging plan required by 40 CFR 146.92(b);	§607.C.2.o	o. proposed injection well plugging plan required by §631;		Text is similar, with no impact on stringency.
434	40 CFR 146.82(a)(17)	Proposed post-injection site care and site closure plan required by 40 CFR 146.93(a);	§607.C.2.p	p. proposed post-injection site care and site closure plan required by §633.A.3;		Text is similar, with no impact on stringency.
435	40 CFR 146.82(a)(18)	At the Director's discretion, a demonstration of an alternative post-injection site care timeframe required by 40 CFR 146.93(c);	§607.C.2.q	q. at the commissioner's discretion, a demonstration of an alternative post-injection site care timeframe required by §633.A.3;		Text is similar, with no impact on stringency.
436	40 CFR 146.82(a)(19)	Proposed emergency and remedial response plan required by 40 CFR 146.94(a);	§607.C.2.r	r. proposed emergency and remedial response plan required (contingency plans for well failures or breaches) by §623;		Text is similar, with no impact on stringency. (Note that the Class VI E&RR plan addresses more than well failures or breaches; see 146.95.)
437	40 CFR 146.82(a)(20)	A list of contacts, submitted to the Director, 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 (a)(2) of this section; and	§607.C.2.s	s. a list of contacts, submitted to the commissioner for those states and tribes identified to be within the area of review based on information provided in §607.C.1.a.i; and		Text is similar, with no impact on stringency.
438	40 CFR 146.82(a)(21)	Any other information requested by the Director.	§607.C.2.t	t. any additional information required by the commissioner to evaluate the proposed project.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
439	40 CFR 146.82(b)	The Director 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 (a)(2) and (a)(20) of this section of the permit application and pursuant to the requirements at 40 CFR 145.23(f)(13).	§607.C.3	3. The commissioner shall notify in writing, any states or tribes within the area of review based on information provided by the applicant in §§607.C.1.a.i and §607.C.2.s.	The struck out text of 40 CFR 146.82(b) will not be adopted since there are no Territories located in or adjacent to Louisiana.	Reviewed; no issues found. August 2020 review: no concerns for stringency.
440	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§607.C.4	4. The commissioner may grant a variance to application requirements upon proof that the exception does not present a danger to the USDW or to the health and safety of the public or the environment. Any requested variance or alternatives to required standards shall be included in the fact sheet in accordance with §609.D.2.d	While the federal rule does not explicitly account for granting variances, reference to the consideration of variances is made at 40 CFR 124.8(b)(5).	August 2020 review: EPA legal review requested regarding whether any such variances may render the state's permit application requirements less stringent than the CFR. Note: a period is missing at the end of this sentence in the rule. EPA (HQ & Jay Przyborski): Needs clarification could be perceived as less stringent. While the federal rules contemplate a fact sheet that may include justification of "variances or alternatives to required standards[,]" the federal rules do not contemplate exceptions to application requirements. This would render the LA rules less stringent. We may need to discuss further, as LA's current UIC rules contain a very broad provision for variances and exceptions: "Except where noted in specific provisions of these rules and regulations, the Office of Conservation may allow, on a case-by-case basis, exceptions or variances to these rules and regulations." (§3103.F) The state provisions allowing such broad variances and exceptions may only pertain to rules issued under section 1425 of the SDWA.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
441	40 CFR 146.82(c)	Prior to granting approval for the operation of a Class VI well, the Director shall consider the following information:	§619.A	A. Pre-Operating Requirements. The owner or operator of the well shall submit the following information to the commissioner. The commissioner shall consider the information before granting final approval for the operation of a Class VI well:		Text is similar, with no impact on stringency.
442	40 CFR 146.82(c)(1)	The final area of review based on modeling, using data obtained during logging and testing of the well and the formation as required by paragraphs (c)(2), (3), (4), (6), (7), and (10) of this section;	§619.A.1	1. the final area of review based on modeling, using data obtained during logging and testing of the well and subsurface formations as required by §619.A.2., 3., 4., 6., 7., and 10;		Text is similar, with no impact on stringency.
443	40 CFR 146.82(c)(2)	Any relevant updates, based on data obtained during logging and testing of the well and the formation as required by paragraphs (c)(3), (4), (6), (7), and (10) of this section, 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 (a)(3) of this section;	§619.A.2	2. any relevant updates—based on data obtained during logging and testing of the well and subsurface formations as required by §619.A.3., 4., 6., 7., and 10—to the information on the geologic structure and hydrogeologic properties of the proposed storage site and overlying formations, submitted to satisfy the requirements of §607.C.1.b;		Text is similar, with no impact on stringency.
444	40 CFR 146.82(c)(3)	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;	§619.A.3 through 619.A.3.c	3. information on the compatibility of the carbon dioxide stream: a. with fluids in the injection zone(s); b. with minerals in both the injection and the confining zone(s), based on the results of the formation testing program; and c. with the materials used to construct the well;		Text is similar, with no impact on stringency.
445	40 CFR 146.82(c)(4)	The results of the formation testing program required at paragraph (a)(8) of this section;	§619.A.4	4. the results of the formation testing program required at §607.C.2.g;		Text is similar, with no impact on stringency.
446	40 CFR 146.82(c)(5)	Final injection well construction procedures that meet the requirements of 40 CFR 146.86;	§619.A.5	5. final injection well construction procedures that meet the requirements of §617.A;		Text is similar, with no impact on stringency.
447	40 CFR 146.82(c)(6)	The status of corrective action on wells in the area of review;	§619.A.6	6. the status of corrective action on wells in the area of review;		Text is identical.
448	40 CFR 146.82(c)(7)	All available logging and testing program data on the well required by 40 CFR 146.87;	§619.A.7	7. all available logging and testing program data on the well required by §617.B;		Text is similar, with no impact on stringency.
449	40 CFR 146.82(c)(8)	A demonstration of mechanical integrity pursuant to 40 CFR 146.89;	§619.A.8	8. a demonstration of mechanical integrity pursuant to §627;		Text is similar, with no impact on stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
450	40 CFR 146.82(c)(9)	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 (a) of this section, 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 section, and any updates to the alternative post-injection site care timeframe demonstration submitted under paragraph (a) of this section, 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 section; and	§619.A.9	9. 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 §623, that are necessary to address new information collected during logging and testing of the well and the formation as required by §617.B, and any updates to the alternative post-injection site care timeframe demonstration submitted under §633, that are necessary to address new information collected during the logging and testing of the well and the formation as required by; and		Text is similar, with no impact on stringency.
451	40 CFR 146.82(c)(10)	Any other information requested by the Director.	§619.A.10	10. Any additional information requested by the commissioner.		Text is similar, with no impact on stringency.
452	40 CFR 146.82(d)	Owners or operators seeking a waiver of the requirement to inject below the lowermost USDW must also refer to 40 CFR 146.95 and submit a supplemental report, as required at 40 CFR 146.95(a). The supplemental report is not part of the permit application.	N/A		The text at 40 CFR 146.82(d) will not be adopted. Waivers of the requirement to inject below the lowermost USDW will not be granted.	Reviewed; no issues found.
40 CFR 146.83 Minimum criteria for siting.						
453	40 CFR 146.83(a)	Owners or operators of Class VI wells must demonstrate to the satisfaction of the Director that the wells will be sited in areas with a suitable geologic system. The owners or operators must demonstrate that the geologic system comprises:	§615	A. Minimum Criteria for Siting. Applicants, owners, or operators of Class VI wells must demonstrate to the satisfaction of the commissioner that the wells will be sited in areas with a suitable geologic system. The demonstration must show that the geologic system comprises:		Text is similar, with no impact on stringency.
454	40 CFR 146.83(a)(1)	An injection zone(s) of sufficient areal extent, thickness, porosity, and permeability to receive the total anticipated volume of the carbon dioxide stream;	§615.A.1	1. an injection zone of sufficient areal extent, thickness, porosity, and permeability to receive the total anticipated volume of the carbon dioxide stream;		Text is identical.
455	40 CFR 146.83(a)(2)	Confining zone(s) free of transmissive faults or fractures and of sufficient areal extent and integrity to contain the injected carbon dioxide stream and displaced formation fluids and allow injection at proposed maximum pressures and volumes without initiating or propagating fractures in the confining zone(s).	§615.A.2	2. confining zone(s) free of transmissive faults or fractures and of sufficient areal extent and integrity to contain the injected carbon dioxide stream and displaced formation fluids, and allow injection at proposed maximum pressures and volumes without initiating or propagating fractures in the confining zone(s).		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
456	40 CFR 146.83(b)	The Director may require owners or operators of Class VI wells to identify and characterize additional zones that will impede vertical fluid movement, are free of faults and fractures that may interfere with containment, allow for pressure dissipation, and provide additional opportunities for monitoring, mitigation, and remediation.	§615.A.2.a	a. The commissioner may require owners or operators of Class VI wells to identify and characterize additional zones that will impede vertical fluid movement, are free of faults and fractures that may interfere with containment, allow for pressure dissipation, and provide additional opportunities for monitoring, mitigation, and remediation.		Text is identical.
40 CFR 146.84 Area of review and corrective action.						
457	40 CFR 146.84(a)	The area of review is the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity. The area of review is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon dioxide stream and is based on available site characterization, monitoring, and operational data.	§615.B.1	1. The area of review is the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity. The area of review is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon dioxide stream and is based on available site characterization, monitoring, and operational data.		Text is identical.
458	40 CFR 146.84(b)	The owner or operator of a Class VI well must prepare, maintain, and comply with a plan to delineate the area of review for a proposed geologic sequestration project, periodically reevaluate the delineation, and perform corrective action that meets the requirements of this section and is acceptable to the Director. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit. As a part of the permit application for approval by the Director, the owner or operator must submit an area of review and corrective action plan that includes the following information:	§615.B.2	2. The owner or operator of a Class VI well must prepare, maintain, and comply with a plan to delineate the area of review for the proposed geologic sequestration project, periodically reevaluate the delineation, and perform corrective action that meets the requirements of these regulations and is acceptable to the commissioner. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit. As a part of the permit application, the owner or operator must submit an area of review and corrective action plan that includes the following information:		Text is similar, with no impact on stringency.
459	40 CFR 146.84(b)(1)	The method for delineating the area of review that meets the requirements of paragraph (c) of this section, including the model to be used, assumptions that will be made, and the site characterization data on which the model will be based;	§615.B.2.a	a. the method for delineating the area of review that meets the requirements of §615.B.3, including the model to be used, assumptions that will be made, and the site characterization data on which the model will be based;		Text is similar, with no impact on stringency.
460	40 CFR 146.84(b)(2)	A description of:	§615.B.2.b	b. a description of:		Text is identical.
461	40 CFR 146.84(b)(2)(i)	The minimum fixed frequency, not to exceed five years, at which the owner or operator proposes to reevaluate the area of review;	§615.B.2.b.i	i. the minimum fixed frequency—not to exceed five years—at which the owner or operator proposes to reevaluate the area of review;		Text is identical.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
462	40 CFR 146.84(b)(2)(ii)	The monitoring and operational conditions that would warrant a reevaluation of the area of review prior to the next scheduled reevaluation as determined by the minimum fixed frequency established in paragraph (b)(2)(i) of this section.	§615.B.2.b.ii	ii. the monitoring and operational conditions that would warrant a reevaluation of the area of review prior to the next scheduled reevaluation as determined by the minimum fixed frequency established in §615.B.2.b.i.		Text is similar, with no impact on stringency.
463	40 CFR 146.84(b)(2)(iii)	How monitoring and operational data (e.g., injection rate and pressure) will be used to inform an area of review reevaluation; and	§615.B.2.b.iii	iii. how monitoring and operational data (e.g., injection rate and pressure) will be used to inform an area of review reevaluation; and		Text is identical.
464	40 CFR 146.84(b)(2)(iv)	How corrective action will be conducted to meet the requirements of paragraph (d) of this section, including what corrective action will be performed prior to injection and what, if any, portions of the area of review ~~will~~ have corrective action addressed on a phased basis and how the phasing will be determined; how corrective action will be adjusted if there are changes in the area of review; and how site access will be guaranteed for future corrective action.	§615.B.2.b.iv	iv. how corrective action will be conducted to meet the requirements of §615.C, including what corrective action will be performed prior to injection and what, if any, portions of the area of review *the operator proposes to* have corrective action addressed on a phased basis and how the phasing will be determined; how corrective action will be adjusted if there are changes in the area of review; and how site access will be guaranteed for future corrective action.	The struck-out text of 40 CFR 146.84(b)(2)(iv) will not be adopted. Instead the following emphasized language has been added: *the operator proposes to*. As such, §615.B.2.b.iv includes more stringent requirements compared to the federal rule, namely that a phased approach will be considered on a case-by-case basis.	Reviewed; no issues found.
465	40 CFR 146.84(c)	Owners or operators of Class VI wells must perform the following actions to delineate the area of review and identify all wells that require corrective action:	§615.B.3	3. Area of Review Boundary Delineation. Owners or operators of Class VI wells must perform the following actions to delineate the area of review and identify all wells that require corrective action:		Text is identical.
466	40 CFR 146.84(c)(1)	Predict, using existing site characterization, monitoring and operational data, and computational modeling, the projected lateral and vertical migration of the carbon dioxide plume and formation fluids in the subsurface from the commencement of injection activities until the plume movement ceases, until pressure differentials sufficient to cause the movement of injected fluids or formation fluids into a USDW are no longer present, or until the end of a fixed time period as determined by the Director. The model must:	§615.B.3.a	a. predict, using existing site characterization, monitoring and operational data, and computational modeling, the projected lateral and vertical migration of the carbon dioxide plume and formation fluids in the subsurface from the commencement of injection activities until the plume movement ceases, until pressure differentials sufficient to cause the movement of injected fluids or formation fluids into a USDW are no longer present, or until the end of a fixed time period as determined by the commissioner. The model must:		Text is identical.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
467	40 CFR 146.84(c)(1)(i)	Be based on detailed geologic data collected to characterize the injection zone(s), confining zone(s) and any additional zones; and anticipated operating data, including injection pressures, rates, and total volumes over the proposed life of the geologic sequestration project;	§615.B.3.a.i	i. be based on detailed geologic data collected to characterize the injection zone(s), confining zone(s) and any additional zones; and anticipated operating data, including injection pressures, rates, and total volumes over the proposed life of the geologic sequestration project;		Text is identical.
468	40 CFR 146.84(c)(1)(ii)	Take into account any geologic heterogeneities, other discontinuities, data quality, and their possible impact on model predictions; and	§615.B.3.a.ii	ii. take into account any geologic heterogeneities, other discontinuities, data quality, and their possible impact on model predictions; and		Text is identical.
469	40 CFR 146.84(c)(1)(iii)	Consider potential migration through faults, fractures, and artificial penetrations.	§615.B.3.a.iii	iii. consider potential migration through faults, fractures, and artificial penetrations.		Text is identical.
470	40 CFR 146.84(c)(2)	Using methods approved by the Director, identify all penetrations, including active and abandoned wells and underground mines, in the area of review that may penetrate the confining zone(s). Provide a description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the Director may require; and	§615.B.3.b	b. using methods approved by the commissioner, *the owner or operator shall at a minimum*, identify all penetrations, including active and abandoned wells and underground mines, in the area of review that penetrate the confining and injection zone(s). (See §603.H.4.) Provide a description of each well's type, construction, date drilled, location, depth, record of plugging and/or completion, and any additional information the commissioner may require; and	In addition to the text at 40 CFR 146.84(c)(2), the following emphasized language has been added at §615.B.3.b: *the owner or operator shall at a minimum*.	Reviewed; no issues found.
471	40 CFR 146.84(c)(3)	Determine which abandoned wells in the area of review have been plugged in a manner that prevents the movement of carbon dioxide or other fluids that may endanger USDWs, including use of materials compatible with the carbon dioxide stream.	§615.B.3.c	c. determine which abandoned wells in the area of review have been plugged in a manner that prevents the movement of carbon dioxide or other fluids that may endanger USDWs, including use of materials compatible with the carbon dioxide stream.		Text is identical.
472	40 CFR 146.84(d)	Owners or operators of Class VI wells must perform corrective action on all wells in the area of review that are determined to need corrective action, using methods designed to prevent the movement of fluid into or between USDWs, including use of materials compatible with the carbon dioxide stream, where appropriate.	§615.C.1	1. Owners or operators of Class VI wells must perform corrective action on all wells in the area of review that are determined to need corrective action, using methods designed to prevent the movement of fluid into or between USDWs, including use of materials compatible with the carbon dioxide stream, where appropriate.		Text is identical.
473	40 CFR 146.84(e)	At the minimum fixed frequency, not to exceed five years, as specified in the area of review and corrective action plan, or when monitoring and operational conditions warrant, owners or operators must:	§615.C.2	2. At the minimum fixed frequency—not to exceed five years—as specified in the area of review and corrective action plan, or when monitoring and operational conditions warrant, owners or operators must:		Text is identical.
474	40 CFR 146.84(e)(1)	Reevaluate the area of review in the same manner specified in paragraph (c)(1) of this section;	§615.C.2.a	a. reevaluate the area of review in the same manner specified in §615.B.3.a;		Text is similar, with no impact on stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
475	40 CFR 146.84(e)(2)	Identify all wells in the reevaluated area of review that require corrective action in the same manner specified in paragraph (c) of this section;	§615.C.2.b	b. identify all wells in the reevaluated area of review that require corrective action in the same manner specified in §615.B.3;		Text is similar, with no impact on stringency.
476	40 CFR 146.84(e)(3)	Perform corrective action on wells requiring corrective action in the reevaluated area of review in the same manner specified in paragraph (d) of this section; and	§615.C.2.c	c. perform corrective action on wells requiring corrective action in the reevaluated area of review in the same manner specified in §615.C.1; and		Text is similar, with no impact on stringency.
477	40 CFR 146.84(e)(4)	Submit an amended area of review and corrective action plan or demonstrate to the Director through monitoring data and modeling results that no amendment to the area of review and corrective action plan is needed. Any amendments to the area of review and corrective action plan must be approved by the Director, must be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41, as appropriate.	§615.C.2.d	d. submit an amended area of review and corrective action plan or demonstrate to the commissioner through monitoring data and modeling results that no amendment to the area of review and corrective action plan is needed. Any amendments to the area of review and corrective action plan must be approved by the commissioner, must be incorporated into the permit, and are subject to the permit modification requirements at §613, as appropriate.		Text is similar, with no impact on stringency.
478	40 CFR 146.84(f)	The emergency and remedial response plan (as required by 40 CFR 146.94) and the demonstration of financial responsibility (as described by 40 CFR 146.85) must account for the area of review delineated as specified in paragraph (c)(1) of this section or the most recently evaluated area of review delineated under paragraph (e) of this section, regardless of whether or not corrective action in the area of review is phased.	§615.C.3	3. The emergency and remedial response plan (as required by §623) and the demonstration of financial responsibility (as described by §609.C must account for the area of review delineated as specified in §615.B.3.a or the most recently evaluated area of review delineated under §615.C.2, regardless of whether or not corrective action in the area of review is phased.		Text is similar, with no impact on stringency.
479	40 CFR 146.84(g)	All modeling inputs and data used to support area of review reevaluations under paragraph (e) of this section shall be retained for 10 years.	§615.C.4	4. All modeling inputs and data used to support area of review reevaluations under §615.C.2 shall be retained for at least 10 years.		Text is similar, with no impact on stringency.

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Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
40 CFR 146.85 Financial responsibility.						
480	40 CFR 146.85(a)	The owner or operator must demonstrate and maintain financial responsibility as determined by the Director that meets the following conditions:	§609.C.1	1. The permit shall require the permittee to maintain financial responsibility and resources to close, plug, and abandon the underground injection wells and, where necessary, related surface facility, and for post-injection site care and site closure in a manner prescribed by the commissioner. Class VI well operators must also comply with §609.C.4. The permittee must show evidence of financial responsibility to the commissioner by the submission of:	While the language at §609.C.1 is not verbatim to 40 CFR 146.85(a), the intent of the federal rule is preserved; that being, establishing the permittee's obligation to maintain and demonstrate financial resources and responsibility for the full life cycle of the well and associated facility. Note: §609.C.1 only includes "financial responsibility and resources to close, plug, and abandon the underground injection wells ... and for post-injection site care and site closure." However, corrective action and emergency and remedial response are included later in §609.C.4.a.i through 609.C.4.a.iv.	Reviewed; no issues found. §609.C.4.a.i through 609.C.4.a.iv. address financial responsibility for the same activities as the CFR.
481	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§609.C.2	2. The amount of funds available in the financial instrument shall be no less than the amount identified in the cost estimate of the closure plan and any required post-injection site care and site closure, and must be approved by the commissioner.		Reviewed; no issues found.
482	40 CFR 146.85(a)(1)	The financial responsibility instrument(s) used must be from the following list of qualifying instruments:	N/A		The language at 40 CFR 146.85(a)(1) will not be adopted since §609.C.1 introduces the list of qualifying instruments (see the following rows).	Reviewed; no issues found.
483	40 CFR 146.85(a)(1)(i)	Trust Funds	§609.C.1.d	d. site-specific trust account, or		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
484	40 CFR 146.85(a)(1)(ii)	Surety Bonds	§609.C.1.b	b. a performance bond (surety bond) in sole favor of the Office of Conservation in a form prescribed by the commissioner;	The text at 40 CFR 146.85(a)(1)(ii) has been expanded to include: a performance bond (surety bond) in sole favor of the Office of Conservation in a form prescribed by the commissioner.	Reviewed; no issues found.
485	40 CFR 146.85(a)(1)(iii)	Letter of Credit	§609.C.1.c	c. a letter-of-credit in sole favor of the Office of Conservation in a form prescribed by the commissioner;	In addition to the text at 40 CFR 146.85(a)(1)(iii), the following language at §609.C.1.c has been added: in sole favor of the Office of Conservation in a form prescribed by the commissioner.	Reviewed; no issues found.
486	40 CFR 146.85(a)(1)(iv)	Insurance	N/A		Insurance will not be accepted as a form of financial surety for the activities detailed at §609.C.1 and 609.C.2. This provision is separate from the §609.C.4.iv requirement that the owner/operator must maintain insurance to respond to any emergency or to perform any remedial action.	Clarification is needed. The state rule requires the owner/operator to maintain insurance to respond to any emergency or to perform any remedial action (§609.C.4.iv). August 2020 review: limiting the acceptable instruments is more stringent than the CFR. If additional insurance is required for E&RR on top of the requirements at §609.C.1.a, that would not affect stringency.
487	40 CFR 146.85(a)(1)(v)	Self Insurance (i.e., Financial Test and Corporate Guarantee)	N/A		The language at 40 CFR 146.85(a)(1)(v) will not be adopted. Self insurance will not be an accepted form of financial assurance for the activities detailed at §609.C.1 and 609.C.2.	Clarification is needed. The state rule requires the owner/operator to maintain insurance to respond to any emergency or to perform any remedial action (§609.C.4.iv). August 2020 review: see above.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
488	40 CFR 146.85(a)(1)(vi)	Escrow Account	~~§609.C.1.e~~N/A	~~e. any other instrument of financial assurance in a form acceptable to the commissioner.~~	The language at 40 CFR 146.85(a)(1)(v) will not be adopted. Escrow will not be an accepted form of financial assurance for the activities detailed at §609.C.1 and 609.C.2. However, the owner/operator may establish a site specific trust account as detailed at §609.C.1.d to be held in the Carbon Dioxide Geologic Storage Trust Fund as detailed at La. R.S. 30:1110.A.1 through 1110.B.6. ~~The language at 40 CFR 146.85(a)(1)(vi) will not be adopted but could be considered an acceptable instrument of financial assurance at the commissioner's discretion.~~	No state equivalent. August 2020 review: limiting the acceptable instruments is more stringent than the CFR. No concerns for stringency. See below for comments about the Carbon Dioxide Geologic Storage Trust Fund.
489	40 CFR 146.85(a)(1)(vii)	Any other instrument(s) satisfactory to the Director	§609.C.1.e	e. any other instrument of financial assurance ~~in a form~~ acceptable to the commissioner.		Text is similar, with no impact on stringency. August 2020 review: minor revision; no concerns for stringency. EPA: The LA rule text (pg. 10) has the word "acceptable" deleted in addition to "in a form".
490	40 CFR 146.85(a)(2)	The qualifying instrument(s) must be sufficient to cover the cost of:	§609.C.4.a	a. qualifying financial responsibility instruments must be sufficient to cover the cost of meeting the requirements of:	While the language at §609.C.4.a is not verbatim to 40 CFR 146.85(a)(2), the intent of the federal rule is preserved.	Reviewed; no issues found.
491	40 CFR 146.85(a)(2)(i)	Corrective action (that meets the requirements of 40 CFR 146.84);	§609.C.4.a.i	i. corrective action of §615.C;		Text is similar, with no impact on stringency.
492	40 CFR 146.85(a)(2)(ii)	Injection well plugging (that meets the requirements of 40 CFR 146.92);	§609.C.4.a.ii	ii. injection well plugging of §631;		Text is similar, with no impact on stringency.
493	40 CFR 146.85(a)(2)(iii)	Post injection site care and site closure (that meets the requirements of 40 CFR 146.93); and	§609.C.4.a.iii	iii. post-injection site care and site closure of §633; and		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
494	40 CFR 146.85(a)(2)(iv)	Emergency and remedial response (that meets the requirements of 40 CFR 146.94).	§609.C.4.a.iv	iv. emergency and remedial response of §623. The owner/operator shall maintain third party insurance at a sufficient level to respond to any emergency or to perform any remedial action that meets the requirements of §623.	In addition to the text at 40 CFR 146.85(a)(2)(iv), the following language has been added at §609.C.4.a.iv: The owner/operator shall maintain third party insurance at a sufficient level to respond to any emergency or to perform any remedial action that meets the requirements of §623. This requirement is separate from the restriction on insurance as form of financial surety as detailed in the explanation given regarding 40 CFR 146.85(a)(1)(iv).	See comment above regarding insurance not being an accepted financial responsibility instrument. August 2020 review: if additional third-party insurance is required for E&RR on top of the requirements at §609.C.1.a, that would not affect stringency.
495	40 CFR 146.85(a)(3)	The financial responsibility instrument(s) must be sufficient to address endangerment of underground sources of drinking water.	§609.C.4.b	b. financial responsibility instruments must be sufficient to address endangerment of underground sources of drinking water.		Text is identical.
496	40 CFR 146.85(a)(4)	The qualifying financial responsibility instrument(s) must comprise protective conditions of coverage.	§609.C.4.c	c. qualifying financial responsibility instruments must comprise protective conditions of coverage. Protective conditions of coverage must include at a minimum cancellation, renewal, and continuation provisions, specifications on when the provider becomes liable following a notice of cancellation if there is a failure to renew with a new qualifying financial instrument, and requirements for the provider to meet a minimum rating, minimum capitalization, and ability to pass the bond rating when applicable.	In addition to the text at 40 CFR 146.85(a)(4) the following language has been added at §609.C.4.c: Protective conditions of coverage must include at a minimum cancellation, renewal, and continuation provisions, specifications on when the provider becomes liable following a notice of cancellation if there is a failure to renew with a new qualifying financial instrument, and requirements for the provider to meet a minimum rating, minimum capitalization, and ability to pass the bond rating when applicable.	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
497	40 CFR 146.85(a)(4)(i)	Protective conditions of coverage must include at a minimum cancellation, renewal, and continuation provisions, specifications on when the provider becomes liable following a notice of cancellation if there is a failure to renew with a new qualifying financial instrument, and requirements for the provider to meet a minimum rating, minimum capitalization, and ability to pass the bond rating when applicable.	§609.C.4.c	c. qualifying financial responsibility instruments must comprise protective conditions of coverage. Protective conditions of coverage must include at a minimum cancellation, renewal, and continuation provisions, specifications on when the provider becomes liable following a notice of cancellation if there is a failure to renew with a new qualifying financial instrument, and requirements for the provider to meet a minimum rating, minimum capitalization, and ability to pass the bond rating when applicable.	The language from 40 CFR 146.85(a)(4)(i) has been added to the text from 40 CFR 146.85(a)(4).	Reviewed; no issues found.
498	40 CFR 146.85(a)(4)(i)(A)	Cancellation – for purposes of this part, an owner or operator must provide that their financial mechanism may not cancel, terminate or fail to renew except for failure to pay such financial instrument. If there is a failure to pay the financial instrument, the financial institution may elect to cancel, terminate, or fail to renew the instrument by sending notice by certified mail to the owner or operator and the Director. The cancellation must not be final for 120 days after receipt of cancellation notice. The owner or operator must provide an alternate financial responsibility demonstration within 60 days of notice of cancellation, and if an alternate financial responsibility demonstration is not acceptable (or possible), any funds from the instrument being cancelled must be released within 60 days of notification by the Director.	§609.C.4.c.i	i. Cancellation: an owner or operator must provide that their financial mechanism may not cancel, terminate or fail to renew except for failure to pay such financial instrument. If there is a failure to pay the financial instrument, the financial institution may elect to cancel, terminate, or fail to renew the instrument by sending notice by certified mail to the owner or operator and the commissioner. The cancellation must not be final for 120 days after receipt of the cancellation notice. The owner or operator must provide an alternate financial responsibility demonstration within 60 days of notice of cancellation, and if an alternate financial responsibility demonstration is not acceptable or possible, any funds from the instrument being cancelled must be released within 60 days of notification by the commissioner.		Text is similar, with no impact on stringency.
499	40 CFR 146.85(a)(4)(i)(B)	Renewal – for purposes of this part, owners or operators must renew all financial instruments, if an instrument expires, for the entire term of the geologic sequestration project. The instrument may be automatically renewed as long as the owner or operator has the option of renewal at the face amount of the expiring instrument. The automatic renewal of the instrument must, at a minimum, provide the holder with the option of renewal at the face amount of the expiring financial instrument.	§609.C.4.c.ii	ii. Renewal: owners or operators must renew all financial instruments, if an instrument expires, for the entire term of the geologic sequestration project. The instrument may be automatically renewed as long as the owner or operator has the option of renewal at the face amount of the expiring instrument. The automatic renewal of the instrument must, at a minimum, provide the holder with the option of renewal at the face amount of the expiring financial instrument.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
500	40 CFR 146.85(a)(4)(i)(C)	Cancellation, termination, or failure to renew may not occur and the financial instrument will remain in full force and effect in the event that on or before the date of expiration: the Director deems the facility abandoned; or the permit is terminated or revoked or a new permit is denied; or closure is ordered by the Director or a U.S. district court or other court of competent jurisdiction; or the owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or the amount due is paid.	§609.C.4.c.iii	iii. cancellation, termination, or failure to renew may not occur and the financial instrument will remain in full force and effect in the event that on or before the date of expiration the commissioner deems the facility abandoned; or the permit is terminated or revoked or a new permit is denied; or closure is ordered by the commissioner or a court of competent jurisdiction; or the owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or the amount due is paid.		Text is similar, with no impact on stringency.
501	40 CFR 146.85(a)(5)	The qualifying financial responsibility instrument(s) must be approved by the Director.	§609.C.4.d	d. qualifying financial responsibility instruments must be approved by the commissioner.		Text is identical.
502	40 CFR 146.85(a)(5)(i)	The Director shall consider and approve the financial responsibility demonstration for all the phases of the geologic sequestration project prior to issue a Class VI permit (40 CFR 146.82).	§609.C.4.d.i	i. the commissioner shall consider and approve the financial responsibility demonstration for all the phases of the geologic sequestration project before issuing any authorization to begin geologic sequestration of carbon dioxide in a Class VI well.		Text is similar, with no impact on stringency.
503	40 CFR 146.85(a)(5)(ii)	The owner or operator must provide any updated information related to their financial responsibility instrument(s) on an annual basis and if there are any changes, the Director must evaluate, ~~within a reasonable time~~, the financial responsibility demonstration to confirm that the instrument(s) used remain adequate for use. The owner or operator must maintain financial responsibility requirements regardless of the status of the Director's review of the financial responsibility demonstration.	§609.C.4.d.ii	ii. the owner or operator must provide any updated information related to their financial responsibility instrument(s) annually and if there are any changes, the commissioner must evaluate the financial responsibility demonstration to confirm that the instrument(s) used remain adequate. The owner or operator must maintain financial responsibility requirements regardless of the status of the commissioner's review of the financial responsibility demonstration.	The struck-out text of 40 CFR 146.85(a)(5)(ii) will not be adopted.	Text omits "within a reasonable time." No impact on stringency. August 2020 review: no concerns for stringency.
504	40 CFR 146.85(a)(5)(iii)	The Director may disapprove the use of a financial instrument if he determines that it is not sufficient to meet the requirements of this section.	§609.C.4.d.iii	iii. the commissioner may disapprove the use of a financial instrument if he determines it is not sufficient to meet the financial responsibility requirements.		Text is similar, with no impact on stringency.
505	40 CFR 146.85(a)(6)	The owner or operator may demonstrate financial responsibility by using one or multiple qualifying financial instruments for specific phases of the geologic sequestration project.	§609.C.4.e	e. The owner or operator may demonstrate financial responsibility by using one or multiple qualifying financial instruments for specific phases of the geologic sequestration project.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
506	40 CFR 146.85(a)(6)(i)	In the event that the owner or operator combines more than one instrument for a specific geologic sequestration phase (e.g., well plugging), such combination must be limited to instruments that are not based on financial strength or performance ~~(i.e., self-insurance or performance bond)~~. for example trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, ~~escrow account, and insurance.~~ In this case, it is the combination of mechanisms, rather than the single mechanism, which must provide financial responsibility for an amount at least equal to the current cost estimate.	§609.C.4.~~e~~.i	i. In the event that the owner or operator combines more than one instrument for a specific geologic sequestration phase (e.g., well plugging), such combination must be limited to instruments that are not based on financial strength or performance, for example trust funds, certificates of deposit, surety bonds guaranteeing payment into a trust fund, and letters of credit~~, escrow account~~. In this case, it is the combination of mechanisms, rather than the single mechanism, which must provide financial responsibility for an amount at least equal to the current cost estimate.	The struck-out text of 40 CFR 146.85(a)(6)(i) will not be adopted. Only trust funds, surety bonds guaranteeing payment into a trust fund, and letters of credit will be acceptable instruments to be used in combination. ~~Self insurance and third-party insurance will not be accepted forms of assurance, and performance bonds are acceptable as a form of surety bonds.~~	Above regulations do not specifically mention escrow accounts, but they are included here (see 40 CFR 146.85(a)(1)(vi) above). August 2020 review: EPA legal input requested regarding whether a CD is an acceptable financial instrument. (609C.1.a allows "a certificate of deposit issued in sole favor of the Office of Conservation in a form prescribed by the commissioner…"). Note also that the instruments mentioned under "difference" and the rule text are inconsistent. EPA: Would like LA's input on their experience with this FA instrument and whether they have found it to be extremely vulnerable in bankruptcies. EPA has found that CDs are less vulnerable when operators are required to fully fund the CD and house it within a standby trust.
507	40 CFR 146.85(a)(6)(ii)	When using a third-party instrument to demonstrate financial responsibility, the owner or operator must provide a proof that the third-party providers either have passed financial strength requirements based on credit ratings; or has met a minimum rating, minimum capitalization, and ability to pass the bond rating when applicable.	§609.C.3	3. Any financial instrument filed in satisfaction of the financial responsibility requirements shall be issued by and drawn on a bank or other financial institution authorized under state or federal law to operate in the State of Louisiana.	While the language at §609.C.3 is not verbatim to 40 CFR 146.85(a)(6)(ii)~~. However,~~ by requiring that financial instruments shall be issued by and drawn on financial institutions currently authorized under state or federal law to operate in the State of Louisiana, this ensures that the financial strength or rating, capitalization, and ability to pass a bond of the financial institution in question has already been addressed under separate federal and state laws and requirements.	LA note is incomplete. State text is not equivalent to CFR. Clarification is needed. August 2020 review: limiting the acceptable instruments is more stringent than the CFR.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
508	40 CFR 146.85(a)(6)(iii)	An owner or operator using certain types of third party instruments must establish a standby trust to enable EPA to be party to the financial responsibility agreement without EPA being the beneficiary of any funds. The standby trust fund must be used along with other financial responsibility instruments (e.g., surety bonds, letters of credit, or escrow accounts) to provide a location to place funds if needed.	La. R.S. 30:1110	A.(1) There is hereby established a fund in the custody of the state treasurer to be known as the Carbon Dioxide Geologic Storage Trust Fund, hereinafter referred to as the "fund", which shall constitute a special custodial trust fund which shall be administered by the commissioner, who shall make disbursements from the fund solely in accordance with the purposes and uses authorized by this Chapter. Et seq.	By statute, each facility will ~~have a carbon dioxide geologic storage trust fund~~be separately accounted for within the Carbon Dioxide Geologic Storage Trust Fund.~~.~~ Details regarding the Carbon Dioxide Geologic Storage Trust Fund will be included in the Program Description of the primacy application.	Clarification is needed as to how each GS project will be covered by the trust fund. August 2020 review: if the only distinction is where the money is held (but that it is earmarked for, and only for, the specific Class VI project), that would be acceptable. It is recommended that a careful review of the use of the Carbon Dioxide Geologic Storage Trust Fund in the Program Description be part of the primacy application review. EPA: Clarification is needed as to how each GS project will be covered by the Trust Fund. How much money will be in the Trust Fund? Will it be enough? Will it stay that way? References to such state funds are usually accompanied by rules establishing (and describing in detail) the funds. A brief reference to the Program Description is insufficient. A full description of this Trust Fund should be in the LA code and should specify that there will be adequate resources to offer full coverage, if needed. If the trust fund is to be treated as "any other instruments satisfactory to the Director" [see 40 CFR 146.85(a)(1)(vii)], then it should be codified.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
509	40 CFR 146.85(a)(6)(iv)	An owner or operator may deposit money to an escrow account to cover financial responsibility requirements; this account must segregate funds sufficient to cover estimated costs for Class VI (geologic sequestration) financial responsibility from other accounts and uses.	La. R.S. 30:1110 and 1111, and §609.C.1.d.	A.(1) There is hereby established a fund in the custody of the state treasurer to be known as the Carbon Dioxide Geologic Storage Trust Fund, hereinafter referred to as the "fund", which shall constitute a special custodial trust fund which shall be administered by the commissioner, who shall make disbursements from the fund solely in accordance with the purposes and uses authorized by this Chapter. Et seq. …… d. site-specific trust account, or	By statute and rule, an owner or operator may establish a Site Specific Trust Account to cover financial responsibility requirements., ~~each facility will have a carbon dioxide geologic storage trust fund.~~ Details regarding the Carbon Dioxide Geologic Storage Trust Fund will be included in the Program Description of the primacy application.	Clarification is needed as to how each GS project will be covered by the trust fund. August 2020 review: see above. EPA: see comment above
510	40 CFR 146.85(a)(6)(v)	An owner or operator or its guarantor may use self insurance to demonstrate financial responsibility for geologic sequestration projects. In order to satisfy this requirement the owner or operator must meet a Tangible Net Worth of an amount approved by the Director, have a Net working capital and tangible net worth each at least six times the sum of the current well plugging, post injection site care and site closure cost, have assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current well plugging, post injection site care and site closure cost, and must submit a report of its bond rating and financial information annually. In addition the owner or operator must either: have a bond rating test of AAA, AA, A, or BBB as issued by Standard & Poor's or Aaa, Aa, A, or Baa as issued by Moody's; or meet all of the following five financial ratio thresholds: a ratio of total liabilities to net worth less than 2.0; a ratio of current assets to current liabilities greater than 1.5; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; a ratio of current assets minus current liabilities to total assets greater than -0.1; and a net profit (revenues minus expenses) greater than 0.	N/A		The language at 40 CFR 146.85(a)(6)(v) will not be adopted. Self insurance will not be an accepted form of financial assurance.	See comment above regarding insurance not being an accepted financial responsibility instrument.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
511	40 CFR 146.85(a)(6)(vi)	An owner or operator who is not able to meet corporate financial test criteria may arrange a corporate guarantee by demonstrating that its corporate parent meets the financial test requirements on its behalf. The parent's demonstration that it meets the financial test requirement is insufficient if it has not also guaranteed to fulfill the obligations for the owner or operator.	N/A		The language at 40 CFR 146.85(a)(6)(v) will not be adopted. A corporate guarantee will not be an accepted form of financial assurance.	Clarification is needed. §609.C.4.i.ii appears to refer to a corporate guarantee: "a guarantor of a corporate guarantee must make such a notification to the commissioner if he or she is named as debtor, as required under the terms of the corporate guarantee." August 2020 review: this provision was removed from the July version of the rule (see 40 CFR 146.85(d)(2)). No concerns for stringency.
512	40 CFR 146.85(a)(6)(vii)	An owner or operator may obtain an insurance policy to cover the estimated costs of geologic sequestration activities requiring financial responsibility. This insurance policy must be obtained from a third party provider.	N/A		The language at 40 CFR 146.85(a)(6)(vii) will not be adopted. Third party insurance will not be accepted as a form of financial surety for the activities detailed at §609.C.1 and 609.C.2. This provision is separate from the §609.C.4.iv requirement that the owner/operator must maintain insurance to respond to any emergency or to perform any remedial action. ~~will not be an accepted form of financial assurance.~~	See comment above regarding insurance not being an accepted financial responsibility instrument. August 2020 review: limiting the acceptable instruments is more stringent than the CFR.
513	40 CFR 146.85(b)	The requirement to maintain adequate financial responsibility and resources is directly enforceable regardless of whether the requirement is a condition of the permit.	§609.C.4.f	f. the requirement to maintain adequate financial responsibility and resources is directly enforceable regardless of whether the requirement is a condition of the permit. The owner or operator must maintain financial responsibility and resources until:	In addition to the text at 40 CFR 146.85(b), the following language has been added at §609.C.4.f: The owner or operator must maintain financial responsibility and resources until:	Reviewed; no issues found.
514	40 CFR 146.85(b)(1)	The owner or operator must maintain financial responsibility and resources until:	§609.C.4.f	f. the requirement to maintain adequate financial responsibility and resources is directly enforceable regardless of whether the requirement is a condition of the permit. The owner or operator must maintain financial responsibility and resources until:	The language from 40 CFR 146.85(b)(1) has been added to the text from 40 CFR 146.85(b).	Reviewed; no issues found.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
515	40 CFR 146.85(b)(1)(i)	The Director receives and approves the completed post-injection site care and site closure plan; and	§609.C.4.f.i	i. the commissioner receives and approves the completed post-injection site care and site closure plan; and		Text is identical.
516	40 CFR 146.85(b)(1)(ii)	The Director approves site closure.	§609.C.4.f.ii	ii. the commissioner approves site closure.		Text is identical.
517	40 CFR 146.85(b)(2)	The owner or operator may be released from a financial instrument in the following circumstances:	§609.C.4.g	g. the owner or operator may be released from a financial instrument in the following circumstances:		Text is identical.
518	40 CFR 146.85(b)(2)(i)	The owner or operator has completed the phase of the geologic sequestration project for which the financial instrument was required and has fulfilled all its financial obligations as determined by the Director, including obtaining financial responsibility for the next phase of the GS project, if required; or	§609.C.4.g.i	i. the owner or operator has completed the phase of the geologic sequestration project for which the financial instrument was required and has fulfilled all its financial obligations as determined by the commissioner, including obtaining financial responsibility for the next phase of the geologic sequestration project, if required; or		Text is similar, with no impact on stringency.
519	40 CFR 146.85(b)(2)(ii)	The owner or operator has submitted a replacement financial instrument and received written approval from the Director accepting the new financial instrument and releasing the owner or operator from the previous financial instrument.	§609.C.4.g.ii	ii. the owner or operator has submitted a replacement financial instrument and received written approval from the commissioner accepting the new financial instrument and releasing the owner or operator from the previous financial instrument.		Text is identical.
520	40 CFR 146.85(c)	The owner or operator must have a detailed written estimate, in current dollars, of the cost of performing corrective action on wells in the area of review, plugging the injection well(s), post-injection site care and site closure, and emergency and remedial response.	§609.C.4.h	h. the owner or operator must have a detailed written estimate, in current dollars, of the cost of performing corrective action on wells in the area of review, plugging the injection well(s), post-injection site care and site closure, and emergency and remedial response.		Text is identical.
521	40 CFR 146.85(c)(1)	The cost estimate must be performed for each phase separately and must be based on the costs to the regulatory agency of hiring a third party to perform the required activities. A third party is a party who is not within the corporate structure of the owner or operator.	§609.C.4.h.i	i. the cost estimate must be performed for each phase separately and must be based on the costs to the Office of Conservation of contracting a third party to perform the required activities. A third party is a party who is not within the corporate structure of the owner or operator.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
522	40 CFR 146.85(c)(2)	During the active life of the geologic sequestration project, the owner or operator must adjust the cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with paragraph (a) of this section and provide this adjustment to the Director. The owner or operator must also provide to the Director written updates of adjustments to the cost estimate within 60 days of any amendments to the area of review and corrective action plan (40 CFR 146.84), the injection well plugging plan (146.92), the post-injection site care and site closure plan (40 CFR 146.93), and the emergency and remedial response plan (40 CFR 146.94).	§609.C.4.h.ii	ii. during the active life of the geologic sequestration project, the owner or operator must adjust the cost estimate for inflation within 60 days before the anniversary date of the establishment of the financial instrument(s) and provide this adjustment to the commissioner. The owner or operator must also provide the commissioner written updates of adjustments to the cost estimate within 60 days of any amendments to the area of review and corrective action plan, the injection well plugging plan, the post-injection site care and site closure plan, and the emergency and remedial response plan.		Text is similar, with no impact on stringency.
523	40 CFR 146.85(c)(3)	The Director must approve any decrease or increase to the initial cost estimate. During the active life of the geologic sequestration project, the owner or operator must revise the cost estimate no later than 60 days after the Director has approved the request to modify the area of review and corrective action plan (40 CFR 146.84), the injection well plugging plan (40 CFR 146.92), the post-injection site care and site closure plan (40 CFR 146.93), and the emergency and response plan (40 CFR 146.94), if the change in the plan increases the cost. If the change to the plans decreases the cost, any withdrawal of funds must be approved by the Director. Any decrease to the value of the financial assurance instrument must first be approved by the Director. The revised cost estimate must be adjusted for inflation as specified at paragraph (c)(2) of this section.	§609.C.4.h.iii	iii. the commissioner must approve any decrease or increase to the initial cost estimate. During the active life of the geologic sequestration project, the owner or operator must revise the cost estimate no later than 60 days after the commissioner has approved the request to modify the area of review and corrective action plan, the injection well plugging plan, the post-injection site care and site closure plan, and the emergency and response plan, if the change in the plan increases the cost. If the change to the plans decreases the cost, any withdrawal of funds must be approved by the commissioner. Any decrease to the value of the financial assurance instrument must first be approved by the commissioner. The revised cost estimate must be adjusted for inflation as specified at §609.C.4.h.ii. above.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
534	40 CFR 146.85(c)(4)	Whenever the current cost estimate increases to an amount greater than the face amount of a financial instrument currently in use, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Director, or obtain other financial responsibility instruments to cover the increase. Whenever the current cost estimate decreases, the face amount of the financial assurance instrument may be reduced to the amount of the current cost estimate only after the owner or operator has received written approval from the Director.	§609.C.4.h.iv	iv. whenever the current cost estimate increases to an amount greater than the face amount of a financial instrument currently in use, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the commissioner, or obtain other financial responsibility instruments to cover the increase. Whenever the current cost estimate decreases, the face amount of the financial assurance instrument may be reduced to the amount of the current cost estimate only after the owner or operator has received written approval from the commissioner.		Text is identical.
535	40 CFR 146.85(d)	The owner or operator must notify the Director by certified mail of adverse financial conditions such as bankruptcy that may affect the ability to carry out injection well plugging and post-injection site care and site closure.	§609.C.4.i	i. the owner or operator must notify the commissioner by certified mail of adverse financial conditions such as bankruptcy that may affect the ability to carry out injection well plugging and post-injection site care and site closure.		Text is identical.
536	40 CFR 146.85(d)(1)	In the event that the owner or operator or the third party provider of a financial responsibility instrument is going through a bankruptcy, the owner or operator must notify the Director by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding.	§609.C.4.i.i	i. in the event that the owner or operator or the third party provider of a financial responsibility instrument is going through a bankruptcy, the owner or operator must notify the commissioner by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding.		Text is identical.
537	40 CFR 146.85(d)(2)	A guarantor of a corporate guarantee must make such a notification to the Director if he/she is named as debtor, as required under the terms of the corporate guarantee.	~~§609.C.4.i.ii~~N/A	~~ii. a guarantor of a corporate guarantee must make such a notification to the commissioner if he or she is named as debtor, as required under the terms of the corporate guarantee.~~	The language at 40 CFR 146.85(d)(2) will not be adopted. A corporate guarantee will not be an accepted form of financial assurance.	Text is similar, with no impact on stringency. Clarification is needed; state notes above that a corporate guarantee is not an acceptable instrument. See 146.85(a)(6)(vi). August 2020 review: limiting the acceptable instruments is more stringent than the CFR.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
538	40 CFR 146.85(d)(3)	An owner or operator who fulfills the requirements of paragraph (a) of this section by obtaining a trust fund, surety bond, letter of credit, escrow account, or insurance policy will be deemed to be without the required financial assurance in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee of the institution issuing the trust fund, surety bond, letter of credit, escrow account, or insurance policy. The owner or operator must establish other financial assurance within 60 days after such an event.	§609.C.4.i.iii	iii. an owner or operator who fulfills the financial responsibility requirements by obtaining an approved instrument of financial assurance will be deemed to be without the required financial assurance in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee of the institution issuing the financial assurance instrument. The owner or operator must establish other financial assurance within 60 days after such an event.		Text is similar, with no impact on stringency.
539	40 CFR 146.85(e)	The owner or operator must provide an adjustment of the cost estimate to the Director within 60 days of notification by the Director, if the Director determines during the annual evaluation of the qualifying financial responsibility instrument(s) that the most recent demonstration is no longer adequate to cover the cost of corrective action (as required by 40 CFR 146.84), injection well plugging (as required by 40 CFR 146.92), post-injection site care and site closure (as required by 40 CFR 146.93), and emergency and remedial response (as required by 40 CFR 146.94).	§609.C.4.j	j. the owner or operator must provide the commissioner with an adjustment of the cost estimate within 60 days of notification by the commissioner, if the commissioner determines during the annual evaluation of the qualifying financial responsibility instrument(s) that the most recent demonstration is no longer adequate to cover the cost of corrective action, injection well plugging, post-injection site care and site closure, and emergency and remedial response.		Text is similar, with no impact on stringency.
540	40 CFR 146.85(f)	The Director must approve the use and length of pay-in-periods for trust funds or escrow accounts.	§609.C.4.k	k. the commissioner must approve the use and length of pay-in-periods for trust funds or escrow accounts.		Text is identical.
40 CFR 146.86 Injection well construction requirements						
541	40 CFR 146.86(a)	*General*. The owner or operator must ensure that all Class VI wells are constructed and completed to:	§617.A.1	1. General. All phases of Class VI well construction shall be supervised by a person knowledgeable and experienced in practical drilling engineering and is familiar with the special conditions and requirements of injection well construction. All materials and equipment used in the construction of the well and related appurtenances shall be designed and manufactured to exceed the operating requirements of the specific project, including flow induced vibrations. The owner or operator must ensure that all wells are constructed and completed to:	§617.A.1 includes more stringent requirements compared to the federal rule regarding required work experience for the construction supervisor and design requirements for construction materials.	Reviewed; no issues found.
542	40 CFR 146.86(a)(1)	Prevent the movement of fluids into or between USDWs or into any unauthorized zones;	§617.A.1.a	a. prevent the movement of fluids into or between USDWs or into any unauthorized zones;		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
543	40 CFR 146.86(a)(2)	Permit the use of appropriate testing devices and workover tools; and	§617.A.1.b	b. allow the use of appropriate testing devices and workover tools; and		Text is similar, with no impact on stringency.
544	40 CFR 146.86(a)(3)	Permit continuous monitoring of the annulus space between the injection tubing and long string casing.	§617.A.1.c	c. allow for continuous monitoring of the annulus space between the injection tubing and long string casing.		Text is similar, with no impact on stringency.
545	40 CFR 146.86(b)	*Casing and Cementing of Class VI Wells.*	§617.A.2	2. Casing and Cementing of Class VI Wells		Text is identical.
546	40 CFR 146.86(b)(1)	Casing and cement or other materials used in the construction of each Class VI well must have sufficient structural strength and be designed for the life of the geologic sequestration project. All well materials must be compatible with fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The casing and cementing program must be designed to prevent the movement of fluids into or between USDWs. In order to allow the Director to determine and specify casing and cementing requirements, the owner or operator must provide the following information:	§617.A.2.a	a. Casing and cement or other materials used in the construction of each Class VI well must have sufficient structural strength and be designed for the life of the geologic sequestration project. All well materials must be compatible with fluids that the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the commissioner. The casing and cementing program must be designed to prevent the movement of fluids into or between USDWs. In order to allow the commissioner to evaluate casing and cementing requirements, the owner or operator must provide the following information:		Text is similar, with no impact on stringency.
547	40 CFR 146.86(b)(1)(i)	Depth to the injection zone(s);	§617.A.2.a.i	i. depth to the injection zone(s);		Text is identical.
548	40 CFR 146.86(b)(1)(ii)	Injection pressure, external pressure, internal pressure, and axial loading;	§617.A.2.a.ii	ii. injection pressure, external pressure, internal pressure, and axial loading;		Text is identical.
549	40 CFR 146.86(b)(1)(iii)	Hole size;	§617.A.2.a.iii	iii. hole size;		Text is identical.
550	40 CFR 146.86(b)(1)(iv)	Size and grade of all casing strings (wall thickness, external diameter, nominal weight, length, joint specification, and construction material);	§617.A.2.a.iv	iv. size and grade of all casing strings (wall thickness, external diameter, nominal weight, length, joint specification, and construction material);		Text is identical.
551	40 CFR 146.86(b)(1)(v)	Corrosiveness of the carbon dioxide stream and formation fluids;	§617.A.2.a.v	v. corrosiveness of the carbon dioxide stream and formation fluids;		Text is identical.
552	40 CFR 146.86(b)(1)(vi)	Down-hole temperatures;	§617.A.2.a.vi	vi. down-hole temperatures;		Text is identical.
553	40 CFR 146.86(b)(1)(vii)	Lithology of injection and confining zone(s);	§617.A.2.a.vii	vii. lithology of injection and confining zone(s);		Text is identical.
554	40 CFR 146.86(b)(1)(viii)	Type or grade of cement and cement additives; and	§617.A.2.a.viii	viii. type or grade of cement and cement additives including slurry weight (lb/gal) and yield (cu. ft./sack); and		Text is similar, with no impact on stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
555	40 CFR 146.86(b)(1)(ix)	Quantity, chemical composition, and temperature of the carbon dioxide stream.	§617.A.2.a.ix	ix. quantity, chemical composition, and temperature of the carbon dioxide stream.		Text is identical.
556	40 CFR 146.86(b)(2)	Surface casing must extend through the base of the lowermost USDW and be cemented to the surface ~~through the use of a single or multiple strings of casing and cement.~~	§617.A.2.b	b. The surface casing of any Class VI well must extend into a confining bed—such as a shale—below the base of the deepest formation containing a USDW. The casing shall be cemented with a sufficient volume of cement to circulate cement from the casing shoe to the surface. The commissioner will not grant an exception or variance to the surface casing setting depth.	The struck-out text of 40 CFR 146.86(b)(2) will not be adopted. From a regulatory perspective, the number of surface casing strings needed to set below the base of the USDW is irrelevant; the key is making sure the surface casing is set below the USDW. §617.A.2.b adds text requiring the surface casing shoe be set below the USDW into a confining bed. This improves the prospects for a good casing seat and casing shoe test. Additional text added barring variances to this requirement.	Reviewed; no issues found.
557	40 CFR 146.86(b)(3)	At least one long string casing, using a sufficient number of centralizers, must extend to the injection zone and must be cemented by circulating cement to the surface in one or more stages.	§617.A.2.c	c. At least one long string casing, using a sufficient number of centralizers, shall be utilized in the well. If the casing is to be perforated for injection, then the approved casing shall extend through the base of the injection zone. If an approved alternate construction method is used, such as the setting of a screen, the casing shall be set to the top of the injection interval. Regardless of the construction method utilized, the casings shall be cemented by circulating cement from the casing shoe to the surface in one or more stages.	§617.A.2.c includes additional specific requirements compared to the federal rule.	Reviewed; no issues found.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
558	40 CFR 146.86(b)(4)	Circulation of cement may be accomplished by staging. The Director may approve an alternative method of cementing in cases where the cement cannot be recirculated to the surface, provided the owner or operator can demonstrate by using logs that the cement does not allow fluid movement behind the well bore.	§617.A.2.d through 617.A.2.d.ii	d. Circulation of cement may be accomplished by staging. Circulated to the surface shall mean that actual cement returns to the surface were observed during the primary cementing operation. A copy of the cementing company's job summary or cementing tickets indicating returns to the surface shall be submitted as part of the pre-operating requirements. i. The commissioner may approve an alternative method of cementing in cases where the cement cannot be circulated to the surface. If cement returns are lost during cementing, the owner or operator shall have the burden of showing—using wireline logs—that sufficient cement isolation is present to prevent the movement of fluid behind the well casing. ii. Remedial cementing shall be done before proceeding with further well construction, completion, or conversion if adequate cement isolation of the USDW or the injection zone within the casing-formation annulus cannot be demonstrated.	§617.A.2.d through 617.A.2.d.i includes additional specific requirements compared to the federal rule.	Reviewed; no issues found.
559	40 CFR 146.86(b)(5)	Cement and cement additives must be compatible with the carbon dioxide stream and formation fluids and of sufficient quality and quantity to maintain integrity over the design life of the geologic sequestration project. The integrity and location of the cement shall be verified using technology capable of evaluating cement quality radially and identifying the location of channels to ensure that USDWs are not endangered.	§617.A.2.e	e. Cement and cement additives must be compatible with the carbon dioxide stream and formation fluids and of sufficient quality and quantity to maintain integrity over the design life of the geologic sequestration project. The integrity and location of the cement shall be verified using technology capable of evaluating cement quality radially and identifying the location of channels to ensure that USDWs are not endangered.		Text is identical.

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560	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§617.A.3 through 617.A.3.b.i	3. Casing and Casing Seat Tests. The owner or operator shall monitor and record the tests using a surface readout pressure gauge and a chart or a digital recorder. All instruments shall be calibrated properly and in good working order. If there is a failure of the required tests, the owner or operator shall take necessary corrective action to obtain a passing test. a. Casing. After cementing each casing, but before drilling out the respective casing shoe, all casings shall be hydrostatically pressure tested to verify casing integrity and the absence of leaks. For surface casing, the stabilized test pressure applied at the surface shall be a minimum of 500 pounds per square inch gauge (PSIG). The stabilized test pressure applied at the surface for all other casings shall be a minimum of 1,000 PSIG. All casing test pressures shall be maintained for one hour after stabilization. Allowable pressure loss is limited to five percent of the test pressure over the stabilized test duration. i. Casing test pressures shall never exceed the rated burst or collapse pressures of the respective casings. b. Casing Seat. The casing seat and cement of any intermediate and injection casings shall be hydrostatically pressure tested after drilling out the casing shoe. At least 10 feet of formation below the respective casing shoes shall be drilled before the test. The test pressure applied at the surface shall be a minimum of 1,000 PSIG. The test pressure shall be maintained for one hour after pressure stabilization. Allowable pressure loss is limited to five percent of the test pressure over the stabilized test duration. i. Casing seat test pressures shall never exceed the known or calculated fracture gradient of the appropriate subsurface formation.	3. Casing and Casing Seat Tests. The owner or operator shall monitor and record the tests using a surface readout pressure gauge and a chart or a digital recorder. All instruments shall be calibrated properly and in good working order. If there is a failure of the required tests, the owner or operator shall take necessary corrective action to obtain a passing test. a. Casing. After cementing each casing, but before drilling out the respective casing shoe, all casings shall be hydrostatically pressure tested to verify casing integrity and the absence of leaks. For surface casing, the stabilized test pressure applied at the surface shall be a minimum of 500 pounds per square inch gauge (PSIG). The stabilized test pressure applied at the surface for all other casings shall be a minimum of 1,000 PSIG. All casing test pressures shall be maintained for one hour after stabilization. Allowable pressure loss is limited to five percent of the test pressure over the stabilized test duration. i. Casing test pressures shall never exceed the rated burst or collapse pressures of the respective casings. b. Casing Seat. The casing seat and cement of any intermediate and injection casings shall be hydrostatically pressure tested after drilling out the casing shoe. At least 10 feet of formation below the respective casing shoes shall be drilled before the test. The test pressure applied at the	Reviewed; no issues found.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
					surface shall be a minimum of 1,000 PSIG. The test pressure shall be maintained for one hour after pressure stabilization. Allowable pressure loss is limited to five percent of the test pressure over the stabilized test duration. i. Casing seat test pressures shall never exceed the known or calculated fracture gradient of the appropriate subsurface formation.	
561	40 CFR 146.86(c)	*Tubing and packer.*	§617.A.4	4. Tubing and Packer		Text is identical.
562	40 CFR 146.86(c)(1)	Tubing and packer materials used in the construction of each Class VI well must be compatible with fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director.	§617.A.4.a	a. Tubing and packer materials used in the construction of each Class VI well must be compatible with fluids that the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the commissioner.		Text is similar, with no impact on stringency.
563	40 CFR 146.86(c)(2)	All owners or operators of Class VI wells must inject fluids through tubing with a packer set at a depth opposite a cemented interval at the location approved by the Director.	§617.A.4.b	b. Injection into a Class VI well must be through tubing with a packer set at a depth opposite an interval of cemented casing at a location approved by the commissioner.		Text is similar, with no impact on stringency.
564	40 CFR 146.86(c)(3)	In order for the Director to determine and specify requirements for tubing and packer, the owner or operator must submit the following information:	§617.A.4.c	c. In order for the commissioner to determine and specify requirements for tubing and packer, the owner or operator must submit the following information:		Text is identical.
565	40 CFR 146.86(c)(3)(i)	Depth of setting;	§617.A.4.c.i	i. depth of setting;		Text is identical.
566	40 CFR 146.86(c)(3)(ii)	Characteristics of the carbon dioxide stream (chemical content, corrosiveness, temperature, and density) and formation fluids;	§617.A.4.c.ii	ii. characteristics of the carbon dioxide stream (chemical content, corrosiveness, temperature, and density) and formation fluids;		Text is identical.
567	40 CFR 146.86(c)(3)(iii)	Maximum proposed injection pressure;	§617.A.4.c.iii	iii. maximum proposed injection pressure;		Text is identical.
568	40 CFR 146.86(c)(3)(iv)	Maximum proposed annular pressure;	§617.A.4.c.iv	iv. maximum proposed annular pressure;		Text is identical.
569	40 CFR 146.86(c)(3)(v)	Proposed injection rate (intermittent or continuous) and volume and/or mass of the carbon dioxide stream;	§617.A.4.c.v	v. proposed injection rate (intermittent or continuous) and volume and/or mass of the carbon dioxide stream;		Text is identical.

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570	40 CFR 146.86(c)(3)(vi)	Size of tubing and casing; and	§617.A.4.c.vi	vi. size of tubing and casing; and		Text is identical.
571	40 CFR 146.86(c)(3)(vii)	Tubing tensile, burst, and collapse strengths.	§617.A.4.c.vii	vii. tubing tensile, burst, and collapse strengths.		Text is identical.
40 CFR 146.87 Logging, sampling, and testing prior to injection well operation.						
572	40 CFR 146.87(a)	During the drilling and construction of a Class VI injection well, the owner or operator must run appropriate logs, surveys and tests to determine or verify the depth, thickness, porosity, permeability, and lithology of, and the salinity of any formation fluids in all relevant geologic formations to ensure conformance with the injection well construction requirements under 40 CFR 146.86 and to establish accurate baseline data against which future measurements may be compared. The owner or operator must submit to the Director a descriptive report prepared by a knowledgeable log analyst that includes an interpretation of the results of such logs and tests. At a minimum, such logs and tests must include:	§617.B.1	1. During the drilling and construction of a Class VI well, appropriate logs, surveys and tests must be run to determine or verify the depth, thickness, porosity, permeability, and lithology of, and the salinity of formation fluids in all relevant geologic formations to ensure conformance with the injection well construction requirements of §617 and to establish accurate baseline data against which future measurements may be compared. The well operator must submit to the commissioner a descriptive report prepared by a knowledgeable log analyst that includes an interpretation of the results of such logs and tests. At a minimum, such logs and tests must include:		Reviewed; no issues found.
573	40 CFR 146.87(a)(1)	Deviation checks during drilling on all holes constructed by drilling a pilot hole which is enlarged by reaming or another method. Such checks must be at sufficiently frequent intervals to determine the location of the borehole and to ensure that vertical avenues for fluid movement in the form of diverging holes are not created during drilling; and	§617.B.1.a	a. deviation checks during drilling of all boreholes constructed by drilling a pilot hole, which is enlarged by reaming or another method. Such checks must be at sufficiently frequent intervals to determine the location of the borehole and to ensure that vertical avenues for fluid movement in the form of diverging holes are not created during drilling;		Text is similar, with no impact on stringency.
574	40 CFR 146.87(a)(2)	Before and upon installation of the surface casing:	§617.B.1.b	b. before and upon installation of surface casing:		Text is similar, with no impact on stringency.
575	40 CFR 146.87(a)(2)(i)	Resistivity, spontaneous potential, and caliper logs before the casing is installed; and	§617.B.1.b.i	i. resistivity, gamma-ray, spontaneous potential, and caliper logs before the casing is installed; and	The following language has been added at §617.B.1.b.i: gamma-ray,	State also requires a gamma-ray log; no concerns for stringency. August 2020 review: no concerns for stringency.
576	40 CFR 146.87(a)(2)(ii)	A cement bond and variable density log to evaluate cement quality radially, and a temperature log after the casing is set and cemented.	§617.B.1.b.ii	ii. a cement bond and variable density log to evaluate cement quality radially, and a temperature log after the casing is set and cemented.		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
577	40 CFR 146.87(a)(3)	Before and upon installation of the long string casing:	§617.B.1.c	c. before and upon installation *intermediate and* long string casing:	The following emphasized language has been added at §617.B.1.c: *intermediate and.*	State also requires testing when installing intermediate casing; no concerns for stringency. August 2020 review: no concerns for stringency.
578	40 CFR 146.87(a)(3)(i)	Resistivity, spontaneous potential, porosity, caliper, gamma ray, fracture finder logs, and any other logs the Director requires for the given geology before the casing is installed; and	§617.B.1.c.i	i. resistivity, gamma-ray, spontaneous potential, porosity, caliper, fracture finder logs, and any other logs the commissioner requires for the given geology before the casing is installed; and	The following language has been added at §617.B.1.c.i: gamma-ray.	State also requires a gamma-ray log; no concerns for stringency. August 2020 review: no concerns for stringency.
579	40 CFR 146.87(a)(3)(ii)	A cement bond and variable density log, and a temperature log after the casing is set and cemented.	§617.B.1.c.ii	ii. a cement bond and variable density log, and a temperature log after the casing is set and cemented.		Text is identical.
580	40 CFR 146.87(a)(4)	A series of tests designed to demonstrate the internal and external mechanical integrity of injection wells, which may include:	§617.B.1.d	d. a series of tests designed to demonstrate the internal and external mechanical integrity of injection wells, which may include:		Text is identical.
581	40 CFR 146.87(a)(4)(i)	A pressure test with liquid or gas;	§617.B.1.d.i	i. a pressure test with liquid or gas;		Text is identical.
582	40 CFR 146.87(a)(4)(ii)	A tracer survey such as oxygen-activation logging;	§617.B.1.d.ii	ii. a tracer-type survey to detect fluid movement behind casing such as a radioactive tracer or oxygen-activation logging, or similar tool;	§617.B.1.d.ii includes examples of alternative tracer type surveys that provide equivalent information to oxygen-activation logging.	Reviewed; no issues found.
583	40 CFR 146.87(a)(4)(iii)	A temperature or noise log;	§617.B.1.d.iii	iii. a temperature or noise log;		Text is identical.
584	40 CFR 146.87(a)(4)(iv)	A casing inspection log; and	§617.B.1.d.iv	iv. a casing inspection log.		Text is identical.
585	40 CFR 146.87(a)(5)	Any alternative methods that provide equivalent or better information and that are required by and/or approved of by the Director.	§617.B.1.e	e. any alternative methods that provide equivalent or better information and that are required by and approved by the commissioner.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
586	40 CFR 146.87(b)	The owner or operator must take whole cores or sidewall cores of the injection zone and confining system and formation fluid samples from the injection zone(s), and must submit to the Director a detailed report prepared by a log analyst that includes: well log analyses (including well logs), core analyses, and formation fluid sample information. The Director may accept information on cores from nearby wells if the owner or operator can demonstrate that core retrieval is not possible and that such cores are representative of conditions at the well. The Director may require the owner or operator to core other formations in the borehole.	§617.B.2	2. The owner or operator must take whole cores or sidewall cores of the injection zone and confining system and formation fluid samples from the injection zone(s), and must submit to the commissioner a detailed report prepared by a log analyst that includes: well log analyses (including well logs), core analyses, and formation fluid sample information. The commissioner may accept information on cores from nearby wells if the owner or operator can demonstrate that core retrieval is not possible and that such cores are representative of conditions at the well. The commissioner may require the owner or operator to core other formations in the borehole.		Text is identical.
587	40 CFR 146.87(c)	The owner or operator must record the fluid temperature, pH, conductivity, reservoir pressure, and static fluid level of the injection zone(s).	§617.B.3	3. The owner or operator must record the fluid temperature, pH, conductivity, reservoir pressure, and static fluid level of the injection zone(s).		Text is identical.
588	40 CFR 146.87(d)	At a minimum, the owner or operator must determine or calculate the following information concerning the injection and confining zone(s):	§617.B.4	4. At a minimum, the owner or operator must determine or calculate the following information concerning the injection and confining zone(s):		Text is identical.
589	40 CFR 146.87(d)(1)	Fracture pressure;	§617.B.4.a	a. fracture pressure;		Text is identical.
590	40 CFR 146.87(d)(2)	Other physical and chemical characteristics of the injection and confining zone(s); and	§617.B.4.b	b. other physical and chemical characteristics of the injection and confining zone(s); and		Text is identical.
591	40 CFR 146.87(d)(3)	Physical and chemical characteristics of the formation fluids in the injection zone(s).	§617.B.4.c	c. physical and chemical characteristics of the formation fluids in the injection zone(s).		Text is identical.
592	40 CFR 146.87(e)	Upon completion, but prior to operation, the owner or operator must conduct the following tests to verify hydrogeologic characteristics of the injection zone(s):	§617.B.5	5. Upon completion, but before operating, the owner or operator must conduct the following tests to verify hydrogeologic characteristics of the injection zone(s):		Text is similar, with no impact on stringency.
593	40 CFR 146.87(e)(1)	A pressure fall-off test; and,	§617.B.5.a	a. a pressure fall-off test; and,		Text is identical.
594	40 CFR 146.87(e)(2)	A pump test; or	§617.B.5.b	b. a pump test; or		Text is identical.
595	40 CFR 146.87(e)(3)	Injectivity tests.	§617.B.5.c	c. injectivity tests.		Text is identical.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
596	40 CFR 146.87(f)	The owner or operator must provide the Director with the opportunity to witness all logging and testing by this subpart. The owner or operator must submit a schedule of such activities to the Director 30 days prior to conducting the first test and submit any changes to the schedule 30 days prior to the next scheduled test.	§617.B.6	6. The owner or operator must notify the Office of Conservation at least 72 hours before conducting any wireline logs, well tests, or reservoir tests.	While the language at §617.B.6 is not verbatim to 40 CFR 146.87(f), the intent of the federal rule is preserved: that being, prior notification by the well operator of a scheduled field action. Louisiana believes a 72-hour advance notice of a scheduled field activity is sufficient instead of a 30-day notice. §617.B.6 requires a 72 hour notice (for each test) compared to the federal rule, which requires a 30 day notice. §617.B.6 also does not include any requirements for: providing the commissioner with an opportunity to witness the testing and logging or submitting a schedule of activities or revised schedule of activities. The state's ability to address notices within this shorter time frame will be addressed in the Program Description of the primacy application. The Program Description will also include a description of the work permit request form (Form UIC-17 or successor form) that must be approved by UIC staff prior to start of work per §621.A.9	72 hour, rather than 30 day, notice may be acceptable if the state has resources to address notices within that time frame. EPA may wish to keep this in mind during the primacy application review, along with a consideration for the amount of witnessing the state plans to perform. August 2020 review: clarification is noted; no concerns for stringency (this will be addressed in the primacy review).
40 CFR 146.88 Injection well operating requirements.						

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597	40 CFR 146.88(a)	Except during stimulation, the owner or operator must ensure that injection pressure does not exceed 90 percent of the fracture pressure of the injection zone(s) so as to ensure that the injection does not initiate new fractures or propagate existing fractures in the injection zone(s). In no case may injection pressure initiate fractures in the confining zone(s) or cause the movement of injection or formation fluids that endangers a USDW. Pursuant to requirements at 40 CFR 146.82(a)(9), all stimulation programs must be approved by the Director as part of the permit application and incorporated into the permit.	§621.A.1	1. Injection Pressure. Except during stimulation, the injection well shall be operated so that the injection-induced pressure in the injection zone(s) does not exceed 90 percent of the fracture pressure of the injection zone(s). This shall ensure that the injection does not initiate new fractures or propagate existing fractures in the injection zone. In no case may injection pressure initiate fractures in the confining zone(s) or cause the movement of injection or formation fluids that endangers a USDW. Pursuant to requirements at §607.C.2.h, all stimulation programs must be approved by the commissioner as part of the permit application and incorporated into the permit.		Text is similar, with no impact on stringency. Recommend making "injection zone" potentially plural (i.e., "injection zone(s)"). August 2020 review: revision addresses the above comment. No concerns for stringency.
598	40 CFR 146.88(b)	Injection between the outermost casing protecting USDWs and the well bore is prohibited.	§621.A.2	2. Injection between the outermost casing protecting USDWs and the wellbore is prohibited.		Recommend referring to USDWs (plural) to be inclusive of all USDWs at the site. August 2020 review: revision addresses the above comment.
599	40 CFR 146.88(c)	The owner or operator must fill the annulus between the tubing and the long string casing with a non-corrosive fluid approved by the Director. The owner or operator must maintain on the annulus a pressure that exceeds the operating injection pressure, unless the Director determines that such requirement might harm the integrity of the well or endanger USDWs.	§621.A.3 through 621.A.4	3. The owner or operator must fill the annulus between the tubing and the long string casing with a non-corrosive fluid approved by the commissioner or a fluid containing a corrosion ~~inhibitor that is approved~~inhibitor approved by the commissioner. 4. Annulus Pressure. The owner or operator shall maintain a tubing-casing annulus pressure that exceeds the operating injection pressure, unless the commissioner determines that such requirement might harm the integrity of the well or endanger a USDW. A request to operate the well at a reduced annulus pressure must be in writing and approved by the commissioner.	§621.A.4 provides additional options compared to the federal rule ("a non-corrosive fluid or a fluid containing a corrosion inhibitor" compared to "a non-corrosive fluid") and does not specify that the fluid must be approved by the commissioner. Compared to the federal rule, §621.A.4 includes additional specific requirements that any request to operate the well at a reduced annulus pressure must be in writing and approved by the commissioner.	The option of a fluid containing a corrosion inhibitor is appropriate. (Note that LA notes of the difference imply that the non-corrosive fluid does not need to be approved by the commissioner; however the rule requires approval; EPA recommends this remain.) August 2020 review: revision addresses the above comment; state provision is similar to CFR. No concerns for stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
600	40 CFR 146.88(d)	Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the owner or operator must maintain mechanical integrity of the injection well at all times.	§621.A.5	5. The owner or operator must maintain mechanical integrity of the injection well at all times, except when doing well workovers, well maintenance, or well remedial work approved by the commissioner.	While the language at §621.A.5 is not verbatim to 40 CFR 146.88(d), the intent of the federal rule is preserved; that being maintaining internal well mechanical integrity at all times, except during well maintenance operations.	Reviewed; no issues found.
601	40 CFR 146.88(e)	The owner or operator must install and use:	§621.A.6	6. Continuous recording devices shall be installed, used, and maintained in proper working order for each well.	While the language at §621.A.6 is not verbatim to 40 CFR 146.88(e), the intent of the federal rule is preserved; that being, requiring the permittee to install and use the devices listed in the subsequent section.	Reviewed; no issues found.
602	40 CFR 146.88(e)(1)	Continuous recording devices to monitor: the injection pressure; the rate, volume and/or mass, and temperature of the carbon dioxide stream; and the pressure on the annulus between the tubing and the long string casing and annulus fluid volume; and	§621.A.6.a through 621.A.6.a.iv	a. continuous recording devices shall monitor: i. surface injection or bottom-hole pressure; ii. flow rate, volume and/or mass, and temperature of the carbon dioxide stream; iii. tubing-casing annulus pressure and annulus fluid volume; iv. any other data specified by the commissioner.	§621.A.6.a through 621.A.6.a.iv include additional specific requirements compared to the federal rule. §621.A.6.a.i allows monitoring of "surface injection or bottom-hole pressure" while 40 CFR 146.88(e)(1) only includes "injection pressure."	Reviewed; no issues found.
603	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§621.A.6.b	b. continuous recordings ~~may~~ shall consist of ~~mechanical charts or~~ digital recordings. ~~Mechanical charts shall not exceed a clock period of 24-hour duration. The chart shall be selected such that its scaling is of sufficient sensitivity to record all fluctuations of pressure or any other parameter being monitored. The chart shall be scaled such that the parameter being recorded is 30 percent to 70 percent of full scale.~~ Instruments shall be weatherproof or housed in weatherproof enclosures when located in areas exposed to climatic conditions.	Language has been added at §621.A.6.b to specify the state's regulations for continuous recording devices.	Reviewed; no issues found. August 2020 review: revised provision has no CFR equivalent. No concerns for stringency.
604	40 CFR 146.88(e)(2)	Alarms and automatic surface shut-off systems or, at the discretion of the Director, down-hole shut-off systems (e.g., automatic shut-off, check valves) for onshore wells or, other mechanical devices that provide equivalent protection; and	§621.A.7.a.i	i. for onshore wells, alarms and automatic surface shut-off valves or—at the discretion of the commissioner—down-hole shut-off systems (e.g., automatic shut-off, check valves) or, other mechanical devices that provide equivalent protection; and		Text is similar, with no impact on stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
605	40 CFR 146.88(e)(3)	Alarms and automatic down-hole shut-off systems for wells located offshore but within State territorial waters, designed to alert the operator and shut-in the well when operating parameters such as annulus pressure, injection rate, or other parameters diverge beyond permitted ranges and/or gradients specified in the permit.	§621.A.7.a.ii	ii. for offshore wells, alarms and automatic down-hole shut-off systems designed to alert the operator and shut-in the well when operating parameters such as annulus pressure, injection rate, or other parameters diverge beyond permitted ranges or gradients specified in the permit.		Text is similar, with no impact on stringency.
606	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§621.A.7.a.iii	iii. all alarms must be integrated with any automatic shutdown system.	The following language has been added at §621.A.7.a.iii to specify additional state regulations regarding alarms: all alarms must be integrated with any automatic shutdown system.	Reviewed; no issues found.
607	40 CFR 146.88(f)	If a shutdown (i.e., down-hole or at the surface) is triggered or a loss of mechanical integrity is discovered, the owner or operator must immediately investigate and identify as expeditiously as possible the cause of the shutoff. If, upon such investigation, ~~the well appears to be lacking mechanical integrity, or if monitoring required under paragraph (e) of this section otherwise indicates~~ that the well may be lacking mechanical integrity, the owner or operator must:	§621.A.7.b	b. If a shutdown (i.e., down-hole or at the surface) is triggered or a loss of mechanical integrity is discovered, the owner or operator must immediately investigate and identify as expeditiously as possible the cause of the shutoff. If, upon such investigation, the well is lacking mechanical integrity, or if monitored well parameters indicate that the well may be lacking mechanical integrity, the owner or operator must:	The struck-out text of 40 CFR 146.88(f) will be replaced with, "the well is lacking mechanical integrity, or if monitored well parameters indicate." This text only includes situations in which "the well is lacking mechanical integrity" instead of situations in which "the well *appears* to be lacking mechanical integrity" (emphasis added) as in the federal rule. However, the second part of that sentence ("or if monitored well parameters indicate...") accounts for scenarios of apparent loss of mechanical integrity.	Reviewed; no issues found.
608	40 CFR 146.88(f)(1)	Immediately cease injection;	§621.A.7.b.i	i. immediately cease injection;		Text is identical.
609	40 CFR 146.88(f)(2)	Take all steps reasonably necessary to determine whether there may have been a release of the injected carbon dioxide stream or formation fluids into any unauthorized zone;	§621.A.7.b.ii	ii. take all steps reasonably necessary to determine whether there may have been a release of the injected carbon dioxide stream or formation fluids into any unauthorized zone;		Text is identical.
610	40 CFR 146.88(f)(3)	Notify the Director within 24 hours;	§621.A.7.b.iii	iii. notify the commissioner within 24 hours;		Text is identical.
611	40 CFR 146.88(f)(4)	Restore and demonstrate mechanical integrity to the satisfaction of the Director prior to resuming injection; and	§621.A.7.b.iv	iv. restore and demonstrate mechanical integrity to the satisfaction of the commissioner prior to resuming injection; and		Text is identical.
612	40 CFR 146.88(f)(5)	Notify the Director when injection can be expected to resume.	§621.A.7.b.v	v. notify the commissioner when injection can be expected to resume.		Text is identical.

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Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
613	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§621.A.7.c	c. All emergency shutdown systems shall be fail-safe. The operator shall function-test all critical systems of control and safety at least once every six months. This includes testing of alarms, test tripping of emergency shutdown valves ensuring their closure times are within design specifications, and ensuring the integrity of all electrical, pneumatic, and hydraulic circuits. Test dates and results shall be documented and be available for inspection by an agent of the Office of Conservation.	Additional language has been added at §621.A.7.c to specify additional state regulations regarding testing for components of emergency shutdown systems.	Reviewed; no issues found.
614	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§621.A.8 through 621.A.8.b	8. Wellhead Identification and Protection a. A protective barrier shall be installed and maintained around the wellheads, piping, and above ground structures that may be vulnerable to physical or accidental damage by mobile equipment or trespassers. b. An identifying sign shall be placed at the wellhead of each injection well and shall include at a minimum the operator's name, well name and number, well serial number, section-township-range, and any other information required by the commissioner. The sign shall be of durable construction with all lettering kept in a legible condition.	Additional language has been added at §621.A.8 to specify additional state regulations regarding wellhead identification and protection.	Reviewed; no issues found.
615	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§621.A.9	9. Well Workovers. No well remedial work, well maintenance or repair, well or injection formation stimulation, well plug and abandonment or temporary abandonment, any other test of the injection well conducted by the permittee, or well work of any kind, shall be done without prior written authorization from the commissioner. The operator shall submit a work permit request form (Form UIC-17 or successor) to seek well work authorization.	Additional language has been added at §621.A.8 to require operators to seek well work authorization before undertaking any type of well work.	Reviewed; no issues found.
616	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§621.A.10	10. Pressure gauges that show pressure on the injection tubing and tubing-casing annulus shall be installed at each wellhead. Gauges shall be designed to read in increments of 10 PSIG. All gauges shall be properly calibrated and be maintained in good working order. The pressure valves onto which the pressure gauges are affixed shall have one-half inch female fittings.	Additional language has been added at §621.A.10 to specify requirements for pressure gauges and pressure valves.	Reviewed; no issues found.

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40 CFR 146.89 Mechanical integrity						
617	40 CFR 146.89(a)	A Class VI well has mechanical integrity if:	§627.A.1	1. A Class VI well has mechanical integrity if:		Text is identical. Citation added in review.
618	40 CFR 146.89(a)(1)	There is no significant leak in the casing, tubing, or packer; and	§627.A.1.a	a. there is no significant leak in the casing, tubing, or packer; and		Text is identical.
619	40 CFR 146.89(a)(2)	There is no significant fluid movement into a USDW through channels adjacent to the injection well bore.	§627.A.1.b	b. there is no significant fluid movement into a USDW through channels adjacent to the injection wellbore.		Text is identical.
620	40 CFR 146.89(b)	To evaluate the absence of significant leaks under paragraph (a)(1) of this section, owners or operators must, following an initial annulus pressure test, continuously monitor injection pressure, rate, injected volumes; pressure on the annulus between tubing and long-string casing; and annulus fluid volume as specified in 40 CFR 146.88 (e);	§627.A.2 through 627.A.2.b	2. To evaluate the absence of significant leaks, owners or operators must: a. perform an annulus pressure test: i. after initial well construction or conversion as part of the pre-operating requirements; ii. at least once every 12 months witnessed by an agent of the Office of Conservation; and iii. after performing any well remedial work that involves unseating the tubing or packer. b. continuously monitor injection pressure, rate, injected volumes; pressure on the annulus between tubing and long-string casing; and annulus fluid volume as specified in §621.A.6.	§627.A.2.a includes more stringent requirements regarding annulus pressure tests compared to the federal rule, specifically requiring that an annulus pressure test be conducted after initial well construction or conversion as part of the pre-operating requirements; at least once every 12 months witnessed by an agent of the Office of Conservation; and after performing any well remedial work that involves unseating the tubing or packer.	Reviewed; no issues found.
621	40 CFR 146.89(c)	At least once per year, the owner or operator must use one of the following methods to determine the absence of significant fluid movement under paragraph (a)(2) of this section:	§627.A.3	3. At least once every 12 months, use one of the following methods to determine the absence of significant fluid movement:		Text is similar, with no impact on stringency.
622	40 CFR 146.89(c)(1)	An approved tracer survey such as an oxygen-activation log; or	§627.A.3.a	a. an approved tracer-type survey such as a radioactive tracer, oxygen-activation log, or similar tool; or	§627.A.3.a includes examples of alternative tracer type surveys that provide equivalent information to oxygen-activation logging.	Reviewed; no issues found.
623	40 CFR 146.89(c)(2)	A temperature or noise log.	§627.A.3.b	b. a temperature or noise log.		Text is identical.
624	40 CFR 146.89(d)	If required by the Director, at a frequency specified in the testing and monitoring plan required at 40 CFR 146.90, the owner or operator must run a casing inspection log to determine the presence or absence of corrosion in the long-string casing.	§627.A.4	4. If required by the commissioner, run a casing inspection log at a frequency specified in the testing and monitoring plan at §625 to determine the presence or absence of corrosion in the long-string casing.		Text is similar, with no impact on stringency.

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625	40 CFR 146.89(e)	The Director may require any other test to evaluate mechanical integrity under paragraphs (a)(1) or (a)(2) of this section. Also, the Director may allow the use of a test to demonstrate mechanical integrity other than those listed above with the written approval of the Administrator. To obtain approval for a new mechanical integrity test, the Director must submit a written request to the Administrator setting forth the proposed test and all technical data supporting its use. ~~The Administrator may approve the request if he or she determines that it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. Any alternate method approved by the Administrator will be published in the *Federal Register* and may be used in all States in accordance with applicable State law unless its use is restricted at the time of approval by the Administrator.~~	§627.A.5 through 627.A.5.a	5. The commissioner may require other tests to evaluate well mechanical integrity. a. The commissioner may allow the use of a test to demonstrate mechanical integrity other than those listed above with written approval of the USEPA. To obtain approval for the use of a new mechanical integrity test, the owner or operator must submit a written request to the commissioner with details of the proposed test and all technical data supporting its use, and the commissioner will submit a written request to the USEPA.	The struck-out text of 40 CFR 146.89(e) will not be adopted as it pertains to federal actions. In addition to the text at 40 CFR 146.89(e), the following language has been added at §627.A.5.a: and the commissioner will submit a written request to the USEPA.	Reviewed; no issues found.
626	40 CFR 146.89(f)	In conducting and evaluating the tests enumerated in this section or others to be allowed by the Director, the owner or operator and the Director must apply methods and standards generally accepted in the industry. When the owner or operator reports the results of mechanical integrity tests to the Director, he/she shall include a description of the test(s) and the method(s) used. In making his/her evaluation, the Director must review monitoring and other test data submitted since the previous evaluation.	§627.A.6	6. In conducting and evaluating the tests enumerated in this section to be allowed by the commissioner, the owner or operator and the commissioner must apply methods and standards generally accepted in the industry. When the owner or operator reports the results of mechanical integrity tests to the commissioner, a description of the test(s) and the method(s) used must be included. In making the evaluation, the commissioner must review monitoring and other test data submitted since the previous evaluation.		The state rule text omits "In making his/her evaluation, the Director must review monitoring and other test data submitted since the previous evaluation." EPA may wish to ensure appropriate evaluation procedures as part of the primacy application review. August 2020 review: revision addresses the above comment; state provision is similar to CFR. No concerns for stringency.
627	40 CFR 146.89(g)	The Director may require additional or alternative tests if the results presented by the owner or operator under paragraphs (a) through (d) of this section are not satisfactory to the Director to demonstrate that there is no significant leak in the casing, tubing, or packer, or to demonstrate that there is no significant movement of fluid into a USDW resulting from the injection activity as stated in paragraphs (a)(1) and (2) of this section.	§627.A.7	7. The commissioner may require additional or alternative tests if the mechanical integrity test results presented are not satisfactory to the commissioner to demonstrate that there is no significant leak in the casing, tubing, or packer, or to demonstrate that there is no significant movement of fluid into a USDW resulting from the injection activity.		Text is similar, with no impact on stringency. Citation corrected in review.
40 CFR 146.90 Testing and monitoring requirements.						

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
628	40 CFR 146.90	The owner or operator of a Class VI well must prepare, maintain, and comply with a testing and monitoring plan to verify that the geologic sequestration project is operating as permitted and is not endangering USDWs. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit. The testing and monitoring plan must be submitted with the permit application, for Director approval, and must include a description of how the owner or operator will meet the requirements of this section, including accessing sites for all necessary monitoring and testing during the life of the project. Testing and monitoring associated with geologic sequestration projects must, at a minimum, include:	§625.A	A. Testing and Monitoring Requirements. The owner or operator of a Class VI well must prepare, maintain, and comply with a testing and monitoring plan to verify that the geologic sequestration project is operating as permitted and is not endangering USDWs. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit. The testing and monitoring plan must be included with the permit application and must include a description of how the owner or operator will meet these requirements—including accessing sites for all necessary monitoring and testing during the life of the project. Testing and monitoring associated with geologic sequestration projects must include, at a minimum:		Text is similar, with no impact on stringency.
629	40 CFR 146.90(a)	Analysis of the carbon dioxide stream with sufficient frequency to yield data representative of its chemical and physical characteristics;	§625.A.1	1. analysis of the carbon dioxide stream with sufficient frequency to yield data representative of its chemical and physical characteristics;		Text is identical.
630	40 CFR 146.90(b)	Installation and use, except during well workovers as defined in 40 CFR 146.88(d), of continuous recording devices to monitor injection pressure, rate, and volume; the pressure on the annulus between the tubing and the long string casing; and the annulus fluid volume added;	§625.A.2	2. installation and use of continuous recording devices to monitor injection pressure, rate, and volume; the pressure on the tubing-casing annulus; and the annulus fluid volume added. Continuous monitoring is not required during well workovers as defined in §621.A.5;	While the language at §625.A.2 is not verbatim to 40 CFR 146.90(b), the intent of the federal rule is preserved; that being, installation and use of continuous recording equipment will be required except during well workovers.	Reviewed; no issues found.
631	40 CFR 146.90(c)	Corrosion monitoring of the well materials for loss of mass, thickness, cracking, pitting, and other signs of corrosion, which must be performed on a quarterly basis to ensure that the well components meet the minimum standards for material strength and performance set forth in 40 CFR 146.86(b), by:	§625.A.3	3. corrosion monitoring of the well materials for loss of mass, thickness, cracking, pitting, and other signs of corrosion, which must be performed on a quarterly basis to ensure that the well components meet the minimum standards for material strength and performance set forth in §617.A.2, by:		Text is similar, with no impact on stringency.
632	40 CFR 146.90(c)(1)	Analyzing coupons of the well construction materials placed in contact with the carbon dioxide stream; or	§625.A.3.a	a. analyzing coupons of the well construction materials placed in contact with the carbon dioxide stream; or		Text is identical.
633	40 CFR 146.90(c)(2)	Routing the carbon dioxide stream through a loop constructed with the material used in the well and inspecting the materials in the loop; or	§625.A.3.b	b. routing the carbon dioxide stream through a loop constructed with the material used in the well and inspecting the materials in the loop; or		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
634	40 CFR 146.90(c)(3)	Using an alternative method approved by the Director;	§625.A.3.c	c. using an alternative method approved by the commissioner;		Text is identical.
635	40 CFR 146.90(d)	Periodic monitoring of the ground water quality and geochemical changes above the confining zone(s) that may be a result of carbon dioxide movement through the confining zone(s) or additional identified zones including:	§625.A.4	4. periodic monitoring of the ground water quality and geochemical changes above the confining zone(s) that may be a result of carbon dioxide movement through the confining zone(s) or additional identified zones including:		Text is identical.
636	40 CFR 146.90(d)(1)	The location and number of monitoring wells based on specific information about the geologic sequestration project, including injection rate and volume, geology, the presence of artificial penetrations, and other factors; and	§625.A.4.a	a. the location and number of monitoring wells based on specific information about the geologic sequestration project, including injection rate and volume, geology, the presence of artificial penetrations, and other factors; and		Text is identical.
637	40 CFR 146.90(d)(2)	The monitoring frequency and spatial distribution of monitoring wells based on baseline geochemical data that has been collected under 40 CFR 146.82(a)(6) and on any modeling results in the area of review evaluation required by 40 CFR 146.84(c).	§625.A.4.b	b. the monitoring frequency and spatial distribution of monitoring wells based on baseline geochemical data that has been collected under §607.C.2.e and on any modeling results in the area of review evaluation required by §615.B.3.		Text is similar, with no impact on stringency.
638	40 CFR 146.90(e)	A demonstration of external mechanical integrity pursuant to 40 CFR 146.89(c) at least once per year until the injection well is plugged; and, if required by the Director, a casing inspection log pursuant to requirements at 40 CFR 146.89(d) at a frequency established in the testing and monitoring plan;	§625.A.5	5. a demonstration of external mechanical integrity pursuant to §627.A.3 at least once every 12 months until the injection well is permanently plugged and abandoned; and, if required by the commissioner, a casing inspection log pursuant to requirements at §627.A.4 at a frequency established in the testing and monitoring plan;		Text is similar, with no impact on stringency.
639	40 CFR 146.90(f)	A pressure fall-off test at least once every five years unless more frequent testing is required by the Director based on site-specific information;	§625.A.6	6. a pressure fall-off test at least once every five years unless more frequent testing is required by the commissioner based on site-specific information;		Text is identical.
640	40 CFR 146.90(g)	Testing and monitoring to track the extent of the carbon dioxide plume and the presence or absence of elevated pressure (e.g., the pressure front) by using:	§625.A.7	7. testing and monitoring to track the extent of the carbon dioxide plume and the presence or absence of elevated pressure (e.g., the pressure front) by using:		Text is identical.
641	40 CFR 146.90(g)(1)	Direct methods in the injection zone(s); and,	§625.A.7.a	a. direct methods in the injection zone(s); and		Text is identical.
642	40 CFR 146.90(g)(2)	Indirect methods (e.g., seismic, electrical, gravity, or electromagnetic surveys and/or down-hole carbon dioxide detection tools), unless the Director determines, based on site-specific geology, that such methods are not appropriate;	§625.A.7.a	b. indirect methods (e.g., seismic, electrical, gravity, or electromagnetic surveys and/or down-hole carbon dioxide detection tools), unless the commissioner determines that such methods are not appropriate, based on site-specific geology;		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
643	40 CFR 146.90(h)	The Director may require surface air monitoring and/or soil gas monitoring to detect movement of carbon dioxide that could endanger a USDW.	§625.A.8	8. The commissioner may require surface air monitoring and/or soil gas monitoring to detect movement of carbon dioxide that could endanger a USDW.		Text is identical.
644	40 CFR 146.90(h)(1)	Design of Class VI surface air and/or soil gas monitoring must be based on potential risks to USDWs within the area of review;	§625.A.8.a	a. Design of Class VI surface air and/or soil gas monitoring must be based on potential risks to USDWs within the area of review;		Text is identical.
645	40 CFR 146.90(h)(2)	The monitoring frequency and spatial distribution of surface air monitoring and/or soil gas monitoring must be decided using baseline data, and the monitoring plan must describe how the proposed monitoring will yield useful information on the area of review delineation and/or compliance with standards under 40 CFR 144.12;	§625.A.8.b	b. The monitoring frequency and spatial distribution of surface air monitoring and/or soil gas monitoring must be decided using baseline data, and the monitoring plan must describe how the proposed monitoring will yield useful information on the area of review delineation and/or compliance with standards under §603 .D;		Text is similar, with no impact on stringency.
646	40 CFR 146.90(h)(3)	If an owner or operator demonstrates that monitoring employed under 40 CFR 98.440 to 98.449 of this chapter (Clean Air Act, 42 U.S.C. 7401 et seq.) accomplishes the goals of (h)(1) and (2) of this section, and meets the requirements pursuant to 40 CFR 146.91(c)(5), a Director that requires surface air/soil gas monitoring must approve the use of monitoring employed under 98.440 to 98.449 of this chapter. Compliance with 40 CFR 98.440 to 98.449 of this chapter pursuant to this provision is considered a condition of the Class VI permit;	§625.A.8.c	c. If an owner or operator demonstrates that monitoring employed under 40 CFR §§98.440 to 98.449 accomplishes the goals of §§625.A.8.a. and b., and meets the requirements pursuant to §629.A.3.e, a regulatory agency that requires surface air/soil gas monitoring must approve the use of monitoring employed under 40 CFR §§98.440 to 98.449. Compliance with 40 CFR §§98.440 to 98.449 pursuant to this provision is considered a condition of the Class VI permit;		Text is similar, with no impact on stringency. August 2020 review: minor revision presents no concerns for stringency.
647	40 CFR 146.90(i)	Any additional monitoring, as required by the Director, necessary to support, upgrade, and improve computational modeling of the area of review evaluation required under 40 CFR 146.84(c) and to determine compliance with standards under 40 CFR 144.12;	§625.A.9	9. Any additional monitoring, as required by the commissioner, necessary to support, upgrade, and improve computational modeling of the area of review evaluation required under §615.B.3 and to determine compliance with standards under §619;		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
648	40 CFR 146.90(j)	The owner or operator shall periodically review the testing and monitoring plan to incorporate monitoring data collected under this subpart, operational data collected under 40 CFR 146.88, and the most recent area of review reevaluation performed under 40 CFR 146.84(e). In no case shall the owner or operator review the testing and monitoring plan less often than once every five years. Based on this review, the owner or operator shall submit an amended testing and monitoring plan or demonstrate to the Director that no amendment to the testing and monitoring plan is needed. Any amendments to the testing and monitoring plan must be approved by the Director, must be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41, as appropriate. Amended plans or demonstrations shall be submitted to the Director as follows:	§625.A.10	10. The owner or operator shall periodically review the testing and monitoring plan to incorporate monitoring data collected under §625, operational data collected under §621, and the most recent area of review reevaluation performed under §615.C.2. In no case shall the owner or operator review the testing and monitoring plan less often than once every five years. Based on this review, the owner or operator shall submit an amended testing and monitoring plan or demonstrate to the commissioner that no amendment to the testing and monitoring plan is needed. Any amendments to the testing and monitoring plan must be approved by the commissioner, must be incorporated into the permit, and are subject to the permit modification requirements at §613, as appropriate. Amended plans or demonstrations shall be submitted to the commissioner as follows:		Text is similar, with no impact on stringency.
649	40 CFR 146.90(j)(1)	Within one year of an area of review reevaluation;	§625.A.10.a	a. within 12 months of an area of review reevaluation;		Text is similar, with no impact on stringency.
650	40 CFR 146.90(j)(2)	Following any significant changes to the facility, such as addition of monitoring wells or newly permitted injection wells within the area of review, on a schedule determined by the Director; or	§625.A.10.b	b. following any significant changes to the facility, such as addition of monitoring wells or newly permitted injection wells within the area of review, on a schedule determined by the commissioner; or		Text is identical.
651	40 CFR 146.90(j)(3)	When required by the Director.	§625.A.10.c	c. when required by the commissioner.		Text is identical.
652	40 CFR 146.90(k)	A quality assurance and surveillance plan for all testing and monitoring requirements.	§625.A.11	11. a quality assurance and surveillance plan for all testing and monitoring requirements.		Text is identical.
40 CFR 146.91 Reporting requirements.						
653	40 CFR 146.91	The owner or operator must, at a minimum, provide, as specified in paragraph (e) of this section, the following reports to the Director, for each permitted Class VI well:	§629.A	A. Reporting Requirements. The owner or operator must provide, at a minimum, the following reports to the commissioner—and the USEPA as specified in §629.A.5—for each permitted Class VI well:		Text is similar, with no impact on stringency.
654	40 CFR 146.91(a)	Semi-annual reports containing:	§629.A.1	1. Semi-annual reports containing:		Text is identical.
655	40 CFR 146.91(a)(1)	Any changes to the physical, chemical, and other relevant characteristics of the carbon dioxide stream from the proposed operating data;	§629.A.1.a	a. any changes to the physical, chemical, and other relevant characteristics of the carbon dioxide stream from the proposed operating data;		Text is identical.
656	40 CFR 146.91(a)(2)	Monthly average, maximum, and minimum values for injection pressure, flow rate and volume, and annular pressure;	§629.A.1.b	b. monthly average, maximum, and minimum values for injection pressure, flow rate and volume, and annular pressure;		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
657	40 CFR 146.91(a)(3)	A description of any event that exceeds operating parameters for annulus pressure or injection pressure specified in the permit;	§629.A.1.c	c. a description of any event that exceeds operating parameters for annulus pressure or injection pressure specified in the permit;		Text is identical.
658	40 CFR 146.91(a)(4)	A description of any event which triggers a shut-off device required pursuant to 40 CFR 146.88(e) and the response taken;	§629.A.1.d	d. a description of any event which triggers a shut-off device required by §621 and the response taken;		Text is similar, with no impact on stringency.
659	40 CFR 146.91(a)(5)	The monthly volume and/or mass of the carbon dioxide stream injected over the reporting period and the volume injected cumulatively over the life of the project;	§629.A.1.e	e. the monthly volume and/or mass of the carbon dioxide stream injected over the reporting period and the volume injected cumulatively over the life of the project;		Text is identical.
660	40 CFR 146.91(a)(6)	Monthly annulus fluid volume added; and	§629.A.1.f	f. monthly annulus fluid volume added; ~~and~~		Text is identical.
661	40 CFR 146.91(a)(7)	The results of monitoring prescribed under 40 CFR 146.90.	§629.A.1.g	g. the results of monitoring prescribed under §625, and.		Text is similar, with no impact on stringency.
662	No Federal Equivalent	No Federal Equivalent	§629.A.1.h	h. the raw operating data from the continuous recording devices prescribed by §621.A.6 submitted in digital format.		August 2020 review: added provision has no CFR equivalent, but does not affect stringency.
663	40 CFR 146.91(b)	Report, within 30 days, the results of:	§629.A.2	2. Report, within 30 days or as specified by permit, the results of:		Text is similar, with no impact on stringency.
664	40 CFR 146.91(b)(1)	Periodic tests of mechanical integrity;	§629.A.2.a	a. periodic tests of mechanical integrity;		Text is identical.
665	40 CFR 146.91(b)(2)	Any well workover; and,	§629.A.2.b	b. any well workover; and		Text is identical.
666	40 CFR 146.91(b)(3)	Any other test of the injection well conducted by the permittee if required by the Director.	§629.A.2.c	c. any other test of the injection well conducted by the permittee if required by the commissioner.		Text is identical.
667	40 CFR 146.91(c)	Report, within 24 hours:	§629.A.3	3. Report, within 24 hours:		Text is identical.
668	40 CFR 146.91(c)(1)	Any evidence that the injected carbon dioxide stream or associated pressure front may cause an endangerment to a USDW;	§629.A.3.a	a. any evidence that the injected carbon dioxide stream or associated pressure front may cause an endangerment to a USDW;		Text is identical.
669	40 CFR 146.91(c)(2)	Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs;	§629.A.3.b	b. any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs;		Text is identical.
670	40 CFR 146.91(c)(3)	Any triggering of a shut-off system (i.e., down-hole or at the surface);	§629.A.3.c	c. any triggering of a shut-off system (i.e., down-hole or at the surface);		Text is identical.
671	40 CFR 146.91(c)(4)	Any failure to maintain mechanical integrity; or.	§629.A.3.d	d. any failure to maintain mechanical integrity; or		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
672	40 CFR 146.91(c)(5)	Pursuant to compliance with the requirement at 40 CFR 146.90(h) for surface air/soil gas monitoring or other monitoring technologies, if required by the Director, any release of carbon dioxide to the atmosphere or biosphere.	§629.A.3.e	e. any release of carbon dioxide to the atmosphere or biosphere pursuant to compliance with the requirement at §625.A.8 for surface air/soil gas monitoring or other monitoring technologies, if required by the commissioner.		Text is similar, with no impact on stringency.
673	40 CFR 146.91(d)	Owners or operators must notify the Director in writing 30 days in advance of:	§629.A.4	4. Owners or operators must notify the commissioner in writing in advance of doing any well work or formation testing as required in §621.A.9.	While the language at §629.A.4 is not verbatim to 40 CFR 146.91(d), the intent of the federal rule is preserved: that being, prior notification by the well operator of a scheduled field action. §629.A.4 also includes more stringent requirements compared to the federal rules, in that advance written notice will be required for any field work or formation testing. The state's ability to address notices within this shorter time frame will be addressed in the Program Description of the primacy application. The Program Description will also include a description of the work permit request form (Form UIC-17 or successor form) that must be approved by UIC staff prior to start of work per §621.A.9~~And per §621.A.9, written notice must be submitted as a work permit request form (Form UIC-17 or successor) to seek well work authorization.~~	EPA may wish to ensure during the primacy application review that the state has sufficient time to address activities with shorter notification timeframes than the CFR. August 2020 review: clarification is noted; no concerns for stringency (this will be addressed in the primacy review).
674	40 CFR 146.91(d)(1)	Any planned well workover;	§629.A.4	4. Owners or operators must notify the commissioner in writing in advance of doing any well work or formation testing as required in §621.A.9.	A planned well workover is accounted for in language at §629.A.4 requiring advance written notice for any well work or formation testing.	Reviewed; no issues found.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
675	40 CFR 146.91(d)(2)	Any planned stimulation activities, other than stimulation for formation testing conducted under 40 CFR 146.82; and	§629.A.4	4. Owners or operators must notify the commissioner in writing in advance of doing any well work or formation testing as required in §621.A.9.	A planned well workover is accounted for in language at §629.A.4 requiring advance written notice for any well work or formation testing.	Reviewed; no issues found.
676	40 CFR 146.91(d)(3)	Any other planned test of the injection well conducted by the permittee.	§629.A.4	4. Owners or operators must notify the commissioner in writing in advance of doing any well work or formation testing as required in §621.A.9.	A planned well workover is accounted for in language at §629.A.4 requiring advance written notice for any well work or formation testing.	Reviewed; no issues found.
677	40 CFR 146.91(e)	Regardless of whether a State has primary enforcement responsibility, owners or operators must submit all required reports, submittals, and notifications under subpart H of this part to EPA in an electronic format approved by EPA.	§629.A.5	5. Regardless of whether the State of Louisiana has primary permit and enforcement authority (primacy) for Class VI wells, owners or operators of Class VI wells, or applicants for Class VI wells must submit all required submittals, reports, and notifications under §§605, §607, §615, §617, §619, §621, §623, §625, §627, §629, ~~and~~ §631, and §633§ to the USEPA in an electronic format approved by the USEPA.		Text is similar, with no impact on stringency. August 2020 review: minor revisions; no concerns for stringency.
678	40 CFR 146.91(f)	Records shall be retained by the owner or operator as follows:	§629.A.6	6. Records shall be retained by the owner or operator as follows:		Text is identical.
679	40 CFR 146.91(f)(1)	All data collected under 40 CFR 146.82 for Class VI permit applications shall be retained throughout the life of the geologic sequestration project and for 10 years following site closure.	§629.A.6.a	a. all data collected for Class VI permit applications in §§607 and §619 shall be retained throughout the life of the geologic sequestration project and at least 10 years following site closure.		Text is similar, with no impact on stringency. August 2020 review: minor revisions; no concerns for stringency.
680	40 CFR 146.91(f)(2)	Data on the nature and composition of all injected fluids collected pursuant to 40 CFR 146.90(a) shall be retained until 10 years after site closure. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period.	§629.A.6.b	b. data on the nature and composition of all injected fluids collected under §625.A.1 shall be retained at least 10 years after site closure. The commissioner may require the owner or operator to deliver the records to the commissioner at the conclusion of the retention period.	§629.A.6.b through 629.A.6.e include more stringent requirements than the federal rule, specifically with language stating that records, reports, and data shall be retained at least 10 years after site closure.	Reviewed; no issues found.
681	40 CFR 146.91(f)(3)	Monitoring data collected pursuant to 40 CFR 146.90(b) through (i) shall be retained for 10 years after it is collected.	§629.A.6.c	c. monitoring data collected under §§625.A.2 through §625.A.9 shall be retained at least 10 years after it is collected.	See above.	Reviewed; no issues found. August 2020 review: minor revisions; no concerns for stringency.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
682	40 CFR 146.91(f)(4)	Well plugging reports, post-injection site care data, including, if appropriate, data and information used to develop the demonstration of the alternative post-injection site care timeframe, and the site closure report collected pursuant to requirements at 40 CFR 146.93(f) and (h) shall be retained for 10 years following site closure.	§629.A.6.d	d. well plugging reports, post-injection site care data, including, if appropriate, data and information used to develop the demonstration of the alternative post-injection site care timeframe, and the site closure report collected pursuant to requirements at §§633.A.6 and §633.A.8 shall be retained at least 10 years following site closure.	See above.	Reviewed; no issues found. August 2020 review: minor revisions; no concerns for stringency.
683	40 CFR 146.91(f)(5)	The Director has authority to require the owner or operator to retain any records required in this subpart for longer than 10 years after site closure.	§629.A.6.e	e. The commissioner may require the owner or operator to retain any records required under these regulations for longer than 10 years after site closure.	See above.	Text is similar, with no impact on stringency.
684	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§629.B	B. Recordkeeping. Owners or operators of Class VI wells shall retain records as specified in §§615.C.4, 629.A.6, 631.A.5, 633.A.6, and 633.A.8.	Refers to the retention of records related to AOR modeling inputs and data used to support area of review reevaluations; data and reports enumerated in the previous subsection (§629.A.6); well closure; site closure; and any records gathered during the post-injection site care period for at least 10 years following site closure.	August 2020 review: added text has no CFR equivalent. No concerns for stringency.
40 CFR 146.92 Injection well plugging.						
685	40 CFR 146.92(a)	Prior to the well plugging, the owner or operator must flush each Class VI injection well with a buffer fluid, determine bottomhole reservoir pressure, and perform a final external mechanical integrity test.	§631.A.2	2. Before well plugging, the owner or operator must flush each Class VI well with a buffer fluid, determine bottomhole reservoir pressure, and perform a final external mechanical integrity test.		Text is similar, with no impact on stringency.
686	40 CFR 146.92(b)	*Well Plugging Plan.* The owner or operator of a Class VI well must prepare, maintain, and comply with a plan that is acceptable to the Director. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit. The well plugging plan must be submitted as part of the permit application and must include the following information:	§631.A.3	3. Well Plugging Plan. The owner or operator of a Class VI well must prepare, maintain, and comply with a plan acceptable to the commissioner. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit. The well plugging plan must be submitted as part of the permit application, *must be designed in a way that will prevent the movement of fluids into or between USDWs or outside the injection zone*, and must include the following minimum information:	In addition to the text at 40 CFR 146.92(b), the following emphasized language has been added at §631.A.3: *must be designed in a way that will prevent the movement of fluids into or between USDWs or outside the injection zone…*	Reviewed; no issues found.
687	40 CFR 146.92(b)(1)	Appropriate tests or measures for determining bottomhole reservoir pressure;	§631.A.3.a	a. appropriate tests or measures for determining bottomhole reservoir pressure;		Text is identical.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
688	40 CFR 146.92(b)(2)	Appropriate testing methods to ensure external mechanical integrity as specified in 40 CFR 146.89;	§631.A.3.b	b. appropriate testing methods to ensure external mechanical integrity as specified in §627;		Text is similar, with no impact on stringency.
689	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.3.c	c. a description of the size and amount of casing, tubing, or any other well construction materials to be removed from the well before well closure;		Reviewed; no issues found.
690	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.3.d	d. that prior to the placement of plugs, the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method;		Reviewed; no issues found.
691	40 CFR 146.92(b)(3)	The type and number of plugs to be used;	§631.A.3.e	e. the type and number of plugs to be used;		Text is identical.
692	40 CFR 146.92(b)(4)	The placement of each plug, including the elevation of the top and bottom of each plug;	§631.A.3.f	f. the placement of each plug, including the elevation of the top and bottom of each plug;		Text is identical.
693	40 CFR 146.92(b)(5)	The type, grade, and quantity of material to be used in plugging. The material must be compatible with the carbon dioxide stream; and	§631.A.3.g	g. the type, grade, *yield*, and quantity of material, *such as cement*, to be used in plugging. The material must be compatible with the carbon dioxide stream;	In addition to the text at 40 CFR 146.92(b)(5), the following emphasized language has been added at §631.A.3.g: *yield* and *such as cement.*	Text adds "yield" and "such as cement;" no impact on stringency. August 2020 review: no concerns for stringency.
694	40 CFR 146.92(b)(6)	The method of placement of the plugs.	§631.A.3.h	h. the method of placement of the plugs;		Text is identical.
695	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.3.i	i. pre-closure and proposed post-closure well schematics;		Reviewed; no issues found.
696	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.3.j	j. that each plug shall be appropriately tagged and tested for seal and stability;		Reviewed; no issues found.
697	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.3.k	k. that the well casings shall be cut at least five feet below ground surface for land-based wells, and at least 15 feet below the mud line for wells at a water location.		Reviewed; no issues found.
698	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.3.l	l. that upon successful completion of well closure of a land-based well, a one-half (½) inch steel plate shall be welded across all casings and inscribed with the well's state serial number and date plugged and abandoned, and		Reviewed; no issues found.
699	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.3.m	m. any addition information that the commissioner may require.		Reviewed; no issues found.

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700	40 CFR 146.92(c)	*Notice of intent to plug*. The owner or operator must notify the Director in writing pursuant to 40 CFR 146.91(e), at least 60 days before plugging of a well. At this time, if any changes have been made to the original well plugging plan, the owner or operator must also provide the revised well plugging plan. The Director may allow for a shorter notice period. Any amendments to the injection well plugging plan must be approved by the Director, must be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41, as appropriate.	§631.A.4	4. Notice of Intent to Plug. The owner or operator must submit the Form UIC-17, or successor form, to the commissioner and receive written approval from the commissioner before beginning actual well plugging operations. The form must contain information on the procedures to be used in the field to plug and abandon the well.	While the language at §631.A.4 is not verbatim to 40 CFR 146.92(c), the intent of the federal rule is preserved: that being, requiring written notification from the well operator prior to plugging of a well. As accounted for by the language, "The Director may allow for a shorter notice period," Louisiana will not require a 60 notice period. The state's ability to address notices within this shorter time frame will be addressed in the Program Description of the primacy application. The Program Description will also include a description of the work permit request form (Form UIC-17 or successor form) that must be approved by UIC staff prior to start of well plugging operations. ~~§631.A.4 also includes more stringent requirements compared to the federal rules, in that written notice must be submitted as a work permit request form (Form UIC-17 or successor) to seek well work authorization.~~ That the work permit request form must, per §631.A.4, contain information on the procedures to be used in the field to plug and abandon the well is equivalent ~~language~~ to the federal requirement that any amendments to the injection well plugging plan must be approved by the Director, must be incorporated into the permit, and are subject to the permit modification requirements at 40	EPA may wish to ensure during the primacy application review that the state has sufficient time to address activities with shorter notification timeframes than the CFR. It is also unclear how changes to the plugging plan would be reported on Form UIC-17 (i.e., there are no requirements to update Form UIC-17 or reference it in the permit). Clarification is needed. August 2020 review: clarification is noted; no concerns for stringency (this will be addressed in the primacy review).

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
					CFR 144.39 or 144.41, as appropriate..	
701	40 CFR 146.92(d)	*Plugging report.* Within 60 days after plugging, the owner or operator must submit, pursuant to 40 CFR 146.91(e), a plugging report to the Director. The report must be certified as accurate by the owner or operator and by the person who performed the plugging operation (if other than the owner or operator.) The owner or operator shall retain the well plugging report for 10 years following site closure.	§631.A.5	5. Well Closure Report. The owner or operator shall submit a closure report to the commissioner within 30 days after well plug and abandonment. The report shall be certified as accurate by the owner or operator and by the person charged with overseeing the closure operation (if other than the owner or operator). The owner or operator shall retain the well closure report at least 10 years following site closure. The report shall contain the following information:	While the language at §631.A.5 is not verbatim to 40 CFR 146.92(d), the intent of the federal rule is preserved; that being, requiring the submission of a certified report after the well is plugged. §631.A.5 describes the referenced report as a well closure report rather than a plugging report as denoted in 40 CFR 146.92(d). §631.A.5 also includes more stringent requirements compared to the federal rule, namely that a closure report must be submitted within 30 days after well plug and abandonment and must adhere to the requirements detailed in the subsequent sections.	Reviewed; no issues found.
702	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.5.a	a. detailed procedures of the closure operation. Where actual closure differed from the approved plan, the report shall include a written statement specifying the differences between the previous plan and the actual closure;		Reviewed; no issues found.
703	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.5.b	b. all state regulatory reporting forms relating to the closure activity; and		Reviewed; no issues found.
704	No Equivalent Federal Requirement	No Equivalent Federal Requirement	§631.A.5.c	c. any information pertinent to the closure activity including schematics, tests, or monitoring data.		Reviewed; no issues found.
40 CFR 146.93 Post-injection site care and site closure.						

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
705	40 CFR 146.93(a)	The owner or operator of a Class VI well must prepare, maintain, and comply with a plan for post-injection site care and site closure that meets the requirements of paragraph (a)(2) of this section and is acceptable to the Director. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.	§633.A.1	1. The owner or operator of a Class VI well must prepare, maintain, and comply with a plan for post-injection site care and site closure that meets the requirements of §~~6333~~633.A.1.b and is acceptable to the commissioner. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.		Text is similar, with no impact on stringency. August 2020 review: minor revisions; no concerns for stringency.
706	40 CFR 146.93(a)(1)	The owner or operator must submit the post-injection site care and site closure plan as a part of the permit application to be approved by the Director.	§633.A.1.a	a. The owner or operator must submit the post-injection site care and site closure plan as a part of the permit application.		Text is similar, with no impact on stringency.
707	40 CFR 146.93(a)(2)	The post-injection site care and site closure plan must include the following information:	§633.A.1.b	b. The post-injection site care and site closure plan must include the following information:		Text is identical.
708	40 CFR 146.93(a)(2)(i)	The pressure differential between pre-injection and predicted post-injection pressures in the injection zone(s);	§633.A.1.b.i	i. the pressure differential between pre-injection and predicted post-injection pressures in the injection zone(s);		Text is identical.
709	40 CFR 146.93(a)(2)(ii)	The predicted position of the carbon dioxide plume and associated pressure front at site closure as demonstrated in the area of review evaluation required under 40 CFR 146.84(c)(1);	§633.A.1.b.ii	ii. the predicted position of the carbon dioxide plume and associated pressure front at site closure as demonstrated in the area of review evaluation required under §615.B.3.a;		Text is similar, with no impact on stringency.
710	40 CFR 146.93(a)(2)(iii)	A description of post-injection monitoring location, methods, and proposed frequency;	§633.A.1.b.iii	iii. a description of post-injection monitoring location, methods, and proposed frequency;		Text is identical.
711	40 CFR 146.93(a)(2)(iv)	A proposed schedule for submitting post-injection site care monitoring results to the ~~Director~~ pursuant to 40 CFR 146.91(e); and,	§633.A.1.b.iv	iv. a proposed schedule for submitting post-injection site care monitoring results to *the commissioner and to ~~the~~ the USEPA* pursuant to §629.A.5; and,	In lieu of the struck out text, the following emphasized language has been added at §633.A.1.b.iv: *the commissioner and to the USEPA*	Text refers to submitting results to USEPA (i.e., to meet the electronic reporting requirements); LA should clarify that that the commissioner will review post-injection monitoring data. August 2020 review: submitting the post-injection monitoring data to EPA is not needed (although if it is submitted via the GSDT, it would in effect be submitted to EPA). It should be clear in the primacy application that the state will review monitoring data throughout the injection and post-injection phases.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	Federal Citation	CFR Text	LA Citation	LA Rule Text	Difference	Cadmus/EPA Review
712	40 CFR 146.93(a)(2)(v)	The duration of the post-injection site care timeframe and, if approved by the Director, the demonstration of the alternative post-injection site care timeframe that ensures non-endangerment of USDWs.	§633.A.1.b.v	v. the duration of the post-injection site care timeframe and, if approved by the commissioner, the demonstration of the alternative post-injection site care timeframe that ensures non-endangerment of USDWs.		Text is identical.
713	40 CFR 146.93(a)(3)	Upon cessation of injection, owners or operators of Class VI wells must either submit an amended post-injection site care and site closure plan or demonstrate to the Director through monitoring data and modeling results that no amendment to the plan is needed. Any amendments to the post-injection site care and site closure plan must be approved by the Director, be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41, as appropriate.	§633.A.1.c	c. Upon cessation of injection, owners or operators of Class VI wells must either submit an amended post-injection site care and site closure plan or demonstrate to the commissioner through monitoring data and modeling results that no amendment to the plan is needed. Any amendments to the post-injection site care and site closure plan must be approved by the commissioner, be incorporated into the permit, and are subject to the permit modification requirements at §613, as appropriate.		Text is similar, with no impact on stringency.
714	40 CFR 146.93(a)(4)	At any time during the life of the geologic sequestration project, the owner or operator may modify and resubmit the post-injection site care and site closure plan for the Director's approval within 30 days of such change.	§633.A.1.d	d. At any time during the life of the geologic sequestration project, the owner or operator may modify and resubmit the post-injection site care and site closure plan for the commissioner's approval within 30 days of such change.		Text is identical.
715	40 CFR 146.93(b)	The owner or operator shall monitor the site following the cessation of injection to show the position of the carbon dioxide plume and pressure front and demonstrate that USDWs are not being endangered.	§633.A.2	2. The owner or operator shall monitor the site following the cessation of injection to show the position of the carbon dioxide plume and pressure front and demonstrate that USDWs are not being endangered.		Text is identical.
716	40 CFR 146.93(b)(1)	Following the cessation of injection, the owner or operator shall continue to conduct monitoring as specified in the Director-approved post-injection site care and site closure plan for at least 50 years or for the duration of the alternative timeframe approved by the Director pursuant to requirements in paragraph (c) of this section, unless he/she makes a demonstration under (b)(2) of this section. The monitoring must continue until the geologic sequestration project no longer poses an endangerment to USDWs and the demonstration under (b)(2) of this section is submitted and approved by the Director.	§633.A.2.a	a. Following the cessation of injection, the owner or operator shall continue to conduct monitoring as specified in the commissioner-approved post-injection site care and site closure plan for at least 50 years or for the duration of the alternative timeframe approved by the commissioner pursuant to requirements in §633.A.3, unless the owner or operator makes a demonstration under §633.A.2.b. The monitoring must continue until the geologic sequestration project no longer poses an endangerment to USDWs and the demonstration under §633.A.2.b is submitted and approved by the commissioner.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
717	40 CFR 146.93(b)(2)	If the owner or operator can demonstrate to the satisfaction of the Director before 50 years or prior to the end of the approved alternative timeframe based on monitoring and other site-specific data, that the geologic sequestration project no longer poses an endangerment to USDWs, the Director may approve an amendment to the post-injection site care and site closure plan to reduce the frequency of monitoring or may authorize site closure before the end of the 50-year period or prior to the end of the approved alternative timeframe, where he or she has substantial evidence that the geologic sequestration project no longer poses a risk of endangerment to USDWs.	§633.A.2.b	b. If the owner or operator can demonstrate to the satisfaction of the commissioner before 50 years or prior to the end of the approved alternative timeframe based on monitoring and other site-specific data, that the geologic sequestration project no longer poses an endangerment to USDWs, the commissioner may approve an amendment to the post-injection site care and site closure plan to reduce the frequency of monitoring or may authorize site closure before the end of the 50-year period or prior to the end of the approved alternative timeframe, where the owner or operator has substantial evidence that the geologic sequestration project no longer poses a risk of endangerment to USDWs.		Text is identical.
718	40 CFR 146.93(b)(3)	Prior to authorization for site closure, the owner or operator must submit to the Director for review and approval a demonstration, based on monitoring and other site-specific data, that no additional monitoring is needed to ensure that the geologic sequestration project does not pose an endangerment to USDWs.	§633.A.2.c	c. Prior to authorization for site closure, the owner or operator must submit to the commissioner for review and approval a demonstration, based on monitoring and other site-specific data, that no additional monitoring is needed to ensure that the geologic sequestration project does not pose an endangerment to USDWs.		Text is identical.
719	40 CFR 146.93(b)(4)	If the demonstration in paragraph (b)(3) of this section cannot be made (i.e., additional monitoring is needed to ensure that the geologic sequestration project does not pose an endangerment to USDWs) at the end of the 50-year period or at the end of the approved alternative timeframe, or if the Director does not approve the demonstration, the owner or operator must submit to the Director a plan to continue post-injection site care until a demonstration can be made and approved by the Director.	§633.A.2.d	d. If the demonstration in §633.A.2.c cannot be made (i.e., additional monitoring is needed to ensure that the geologic sequestration project does not pose an endangerment to USDWs) at the end of the 50-year period or at the end of the approved alternative timeframe, or if the commissioner does not approve the demonstration, the owner or operator must submit to the commissioner a plan to continue post-injection site care until a demonstration can be made and approved by the commissioner.		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
720	40 CFR 146.93(c)	*Demonstration of alternative post-injection site care timeframe.* At the Director's discretion, the Director may approve, in consultation with EPA, an alternative post-injection site care timeframe other than the 50 year default, if an owner or operator can demonstrate during the permitting process that an alternative post-injection site care timeframe is appropriate and ensures non-endangerment of USDWs. The demonstration must be based on significant, site-specific data and information including all data and information collected pursuant to 40 CFR 146.82 and 146.83, and must contain substantial evidence that the geologic sequestration project will no longer pose a risk of endangerment to USDWs at the end of the alternative post-injection site care timeframe.	§633.A.3	3. Demonstration of Alternative Post-Injection Site Care Timeframe. The commissioner may approve, in consultation with the USEPA, an alternative post-injection site care timeframe other than the 50-year default, if an owner or operator can demonstrate during the permitting process that an alternative post-injection site care timeframe is appropriate and ensures non-endangerment of USDWs. The demonstration must be based on significant, site-specific data and information including all data and information collected pursuant to §607 and §615, and must contain substantial evidence that the geologic sequestration project will no longer pose a risk of endangerment to USDWs at the end of the alternative post-injection site care timeframe.		Text is similar, with no impact on stringency.
721	40 CFR 146.93(c)(1)	A demonstration of an alternative post-injection site care timeframe must include consideration and documentation of:	§633.A.3.a	a. A demonstration of an alternative post-injection site care timeframe must include consideration and documentation of:		Text is identical.
722	40 CFR 146.93(c)(1)(i)	The results of computational modeling performed pursuant to delineation of the area of review under 40 CFR 146.84;	§633.A.3.a.i	i. the results of computational modeling performed pursuant to delineation of the area of review under §615.B and §615.C;		Text is similar, with no impact on stringency.
723	40 CFR 146.93(c)(1)(ii)	The predicted timeframe for pressure decline within the injection zone, and any other zones, such that formation fluids may not be forced into any USDWs; and/or the timeframe for pressure decline to pre-injection pressures;	§633.A.3.a.ii	ii. the predicted timeframe for pressure decline within the injection zone, and any other zones, such that formation fluids may not be forced into any USDWs; and/or the timeframe for pressure decline to pre-injection pressures;		Text is identical.
724	40 CFR 146.93(c)(1)(iii)	The predicted rate of carbon dioxide plume migration within the injection zone, and the predicted timeframe for the cessation of migration;	§633.A.3.a.iii	iii. the predicted rate of carbon dioxide plume migration within the injection zone, and the predicted timeframe for the cessation of migration;		Text is identical.
725	40 CFR 146.93(c)(1)(iv)	A description of the site-specific processes that will result in carbon dioxide trapping including immobilization by capillary trapping, dissolution, and mineralization at the site;	§633.A.3.a.iv	iv. a description of the site-specific processes that will result in carbon dioxide trapping including immobilization by capillary trapping, dissolution, and mineralization at the site;		Text is identical.
726	40 CFR 146.93(c)(1)(v)	The predicted rate of carbon dioxide trapping in the immobile capillary phase, dissolved phase, and/or mineral phase;	§633.A.3.a.v	v. the predicted rate of carbon dioxide trapping in the immobile capillary phase, dissolved phase, and/or mineral phase;		Text is identical.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
727	40 CFR 146.93(c)(1)(vi)	The results of laboratory analyses, research studies, and/or field or site-specific studies to verify the information required in paragraphs (iv) and (v) of this section;	§633.A.3.a.vi	vi. the results of laboratory analyses, research studies, and/or field or site-specific studies to verify the information required in clauses iv. and v. above;		Text is similar, with no impact on stringency.
728	40 CFR 146.93(c)(1)(vii)	A characterization of the confining zone(s) including a demonstration that it is free of transmissive faults, fractures, and micro-fractures and of appropriate thickness, permeability, and integrity to impede fluid (e.g., carbon dioxide, formation fluids) movement;	§633.A.3.a.vii	vii. a characterization of the confining zone(s) including a demonstration that it is free of transmissive faults, fractures, and micro-fractures and of appropriate thickness, permeability, and integrity to impede fluid (e.g., carbon dioxide, formation fluids) movement;		Text is identical.
729	40 CFR 146.93(c)(1)(viii)	The presence of potential conduits for fluid movement including planned injection wells and project monitoring wells associated with the proposed geologic sequestration project or any other projects in proximity to the predicted/modeled, final extent of the carbon dioxide plume and area of elevated pressure;	§633.A.3.a.viii	viii. the presence of potential conduits for fluid movement including planned injection wells and project monitoring wells associated with the proposed geologic sequestration project or any other projects in proximity to the predicted/modeled, final extent of the carbon dioxide plume and area of elevated pressure;		Text is identical.
730	40 CFR 146.93(c)(1)(ix)	A description of the well construction and an assessment of the quality of plugs of all abandoned wells within the area of review;	§633.A.3.a.ix	ix. a description of the well construction and an assessment of the quality of plugs of all abandoned wells within the area of review;		Text is identical.
731	40 CFR 146.93(c)(1)(x)	The distance between the injection zone and the nearest USDWs above ~~and/or below~~ the injection zone; and	§633.A.3.a.x	x. the distance between the injection zone and the nearest USDW above the injection zone; and	The struck-out text of 40 CFR 146.93(c)(1)(x) will not be adopted.	Text removes "or below" (because waivers are not allowed); no impact on stringency. August 2020 review: no concerns for stringency.
732	40 CFR 146.93(c)(1)(xi)	Any additional site-specific factors required by the Director.	§633.A.3.a.xi	xi. any additional site-specific factors required by the commissioner.		Text is identical.
733	40 CFR 146.93(c)(2)	Information submitted to support the demonstration in paragraph (c)(1) of this section must meet the following criteria:	§633.A.3.b	b. Information submitted to support the demonstration in §633.A.3.a must meet the following criteria:		Text is similar, with no impact on stringency.
734	40 CFR 146.93(c)(2)(i)	All analyses and tests performed to support the demonstration must be accurate, reproducible, and performed in accordance with the established quality assurance standards;	§633.A.3.b.i	i. all analyses and tests performed to support the demonstration must be accurate, reproducible, and performed in accordance with the established quality assurance standards;		Text is identical.
735	40 CFR 146.93(c)(2)(ii)	Estimation techniques must be appropriate and EPA-certified test protocols must be used where available;	§633.A.3.b.ii	ii. estimation techniques must be appropriate and USEPA-certified test protocols must be used where available;		Text is similar, with no impact on stringency.

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Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
736	40 CFR 146.93(c)(2)(iii)	Predictive models must be appropriate and tailored to the site conditions, composition of the carbon dioxide stream and injection and site conditions over the life of the geologic sequestration project;	§633.A.3.b.iii	iii. predictive models must be appropriate and tailored to the site conditions, composition of the carbon dioxide stream and injection and site conditions over the life of the geologic sequestration project;		Text is identical.
737	40 CFR 146.93(c)(2)(iv)	Predictive models must be calibrated using existing information (e.g., at Class I, Class II, or Class V experimental technology well sites) where sufficient data are available;	§633.A.3.b.iv	iv. predictive models must be calibrated using existing information (e.g., at Class I, Class II, or Class V experimental technology well sites) where sufficient data are available;		Text is identical.
738	40 CFR 146.93(c)(2)(v)	Reasonably conservative values and modeling assumptions must be used and disclosed to the Director whenever values are estimated on the basis of known, historical information instead of site-specific measurements;	§633.A.3.b.v	v. reasonably conservative values and modeling assumptions must be used and disclosed to the commissioner whenever values are estimated on the basis of known, historical information instead of site-specific measurements;		Text is identical.
740	40 CFR 146.93(c)(2)(vi)	An analysis must be performed to identify and assess aspects of the alternative post-injection site care timeframe demonstration that contribute significantly to uncertainty. The owner or operator must conduct sensitivity analyses to determine the effect that significant uncertainty may contribute to the modeling demonstration.	§633.A.3.b.vi	vi. an analysis must be performed to identify and assess aspects of the alternative post-injection site care timeframe demonstration that contribute significantly to uncertainty. The owner or operator must conduct sensitivity analyses to determine the effect that significant uncertainty may contribute to the modeling demonstration.		Text is identical.
741	40 CFR 146.93(c)(2)(vii)	An approved quality assurance and quality control plan must address all aspects of the demonstration; and,	§633.A.3.b.vii	vii. an approved quality assurance and quality control plan must address all aspects of the demonstration; and,		Text is identical.
742	40 CFR 146.93(c)(2)(viii)	Any additional criteria required by the Director.	§633.A.3.b.viii	viii. any additional criteria required by the commissioner.		Text is identical.
743	40 CFR 146.93(d)	*Notice of intent for site closure.* The owner or operator must notify the Director in writing at least 120 days before site closure. At this time, if any changes have been made to the original post-injection site care and site closure plan, the owner or operator must also provide the revised plan. The Director may allow for a shorter notice period.	§633.A.4	4. Notice of Intent for Site Closure. The owner or operator must notify the commissioner in writing at least 120 days before site closure. At this time, if any changes have been made to the original post-injection site care and site closure plan, the owner or operator must also provide the revised plan. The commissioner may allow for a shorter notice period.		Text is identical.
744	40 CFR 146.93(e)	After the Director has authorized site closure, the owner or operator must plug all monitoring wells in a manner which will not allow movement of injection or formation fluids that endangers a USDW.	§633.A.5	5. After the commissioner has authorized site closure, the owner or operator must plug all monitoring wells in a manner which will not allow movement of injection or formation fluids that endangers a USDW.		Text is identical.

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Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
745	40 CFR 146.93(f)	The owner or operator must submit a site closure report to the Director within 90 days of site closure, which must thereafter be retained at a location designated by the Director for 10 years. The report must include:	§633.A.6	6. The owner or operator must submit a site closure report to the commissioner within 90 days after site closure, which must also be retained by the owner or operator for at least 10 years. The report must include:		Text is similar, with no impact on stringency.
746	40 CFR 146.93(f)(1)	Documentation of appropriate injection and monitoring well plugging as specified in 40 CFR 146.92 and paragraph (e) of this section. The owner or operator must provide a copy of a survey plat which has been submitted to the local zoning authority designated by the Director. The plat must indicate the location of the injection well relative to permanently surveyed benchmarks. The owner or operator must also submit a copy of the plat to the Regional Administrator of the appropriate EPA Regional Office;	§633.A.6.a	a. documentation of appropriate injection and monitoring well plugging as specified in §631 and §633.A.5. The owner or operator must provide a copy of a survey plat which has been submitted to the local zoning authority designated by the commissioner. The plat must indicate the location of the injection well relative to permanently surveyed benchmarks. The owner or operator must also submit a copy of the plat to the USEPA as in §629.A.5;		Text is similar, with no impact on stringency.
747	40 CFR 146.93(f)(2)	Documentation of appropriate notification and information to such State, local and Tribal authorities that have authority over drilling activities to enable such State, local, and Tribal authorities to impose appropriate conditions on subsequent drilling activities that may penetrate the injection and confining zone(s); and	§633.A.6.b	b. documentation of appropriate notification and information to such State, local and Tribal authorities that have authority over drilling activities to enable such State, local, and Tribal authorities to impose appropriate conditions on subsequent drilling activities that may penetrate the injection and confining zone(s); and		Text is identical.
748	40 CFR 146.93(f)(3)	Records reflecting the nature, composition, and volume of the carbon dioxide stream.	§633.A.6.c	c. records reflecting the nature, composition, and volume of the carbon dioxide stream.		Text is identical.
749	40 CFR 146.93(g)	Each owner or operator of a Class VI injection well must record a notation on the deed to the facility property or any other document that is normally examined during title search that will in perpetuity provide any potential purchaser of the property the following information:	§633.A.7	7. Each owner or operator of a Class VI injection well must record a notation on the deed to the facility property or any other document that is normally examined during title search that will in perpetuity provide any potential purchaser of the property the following information:		Text is identical.
750	40 CFR 146.93(g)(1)	The fact that land has been used to sequester carbon dioxide;	§633.A.7.a	a. the fact that land has been used to sequester carbon dioxide;		Text is identical.
751	40 CFR 146.93(g)(2)	The name of the State agency, local authority, and/or Tribe with which the survey plat was filed, as well as the address of the Environmental Protection Agency Regional Office to which it was submitted; and	§633.A.7.b	b. the name of the State agency, local authority, and/or Tribe with which the survey plat was filed, as well as the address of the USEPA Regional Office to which it was submitted; and		Text is similar, with no impact on stringency.
752	40 CFR 146.93(g)(3)	The volume of fluid injected, the injection zone or zones into which it was injected, and the period over which injection occurred.	§633.A.7.c	c. the volume of fluid injected, the injection zone or zones into which it was injected, and the period over which injection occurred.		Text is identical.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
753	40 CFR 146.93(h)	The owner or operator must retain for 10 years following site closure, records collected during the post-injection site care period. The owner or operator must deliver the records to the Director at the conclusion of the retention period, ~~and the records must thereafter be retained at a location designated by the Director for that purpose.~~	§633.A.8	8. The owner or operator must retain for at least 10 years following site closure, records collected during the post-injection site care period. The owner or operator must deliver the records to the commissioner at the conclusion of the retention period, *and the records must thereafter be retained in a form and manner and at a location designated by the commissioner.*	In lieu of the struck-out language, the following emphasized language has been added: *and the records must thereafter be retained in a form and manner and at a location designated by the commissioner.*	The state rule does not specify that "the records must thereafter be retained at a location designated by the Director for that purpose." LA should clarify (perhaps as part of the primacy application review) that such records will be retained. August 2020 review: added text addresses the above comment; state provision is now similar to CFR.
40 CFR 146.94 Emergency and remedial response.						
754	40 CFR 146.94(a)	As part of the permit application, the owner or operator must provide the Director with an emergency and remedial response plan that describes 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. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.	§623.A.1	1. As part of the permit application, the owner or operator must provide the commissioner with an emergency and remedial response plan that describes 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. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.		Text is identical.
755	40 CFR 146.94(b)	If the owner or operator obtains evidence that the injected carbon dioxide stream and associated pressure front may cause an endangerment to a USDW, the owner or operator must:	§623.A.2	2. If the owner or operator obtains evidence that the injected carbon dioxide stream and associated pressure front may cause an endangerment to a USDW, the owner or operator must:		Text is identical.
756	40 CFR 146.94(b)(1)	Immediately cease injection;	§623.A.2.a	a. immediately cease injection;		Text is identical.
757	40 CFR 146.94(b)(2)	Take all steps reasonably necessary to identify and characterize any release;	§623.A.2.b	b. take all steps reasonably necessary to identify and characterize any release;		Text is identical.
758	40 CFR 146.94(b)(3)	Notify the Director within 24 hours; and	§623.A.2.c	c. notify the commissioner within 24 hours; and		Text is identical.
759	40 CFR 146.94(b)(4)	Implement the emergency and remedial response plan approved by the Director.	§623.A.2.d	d. Implement the emergency and remedial response plan approved by the commissioner.		Text is identical.
760	40 CFR 146.94(c)	The Director may allow the operator to resume injection prior to remediation if the owner or operator demonstrates that the injection operation will not endanger USDWs.	§623.A.3	3. The commissioner may allow the operator to resume injection prior to remediation if the owner or operator demonstrates that the injection operation will not endanger USDWs.		Text is identical.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**

Code of Federal Regulations			Current Louisiana Statutes and Regulations			
Line #	**Federal Citation**	**CFR Text**	**LA Citation**	**LA Rule Text**	**Difference**	**Cadmus/EPA Review**
761	40 CFR 146.94(d)	The owner or operator shall periodically review the emergency and remedial response plan developed under paragraph (a) of this section. In no case shall the owner or operator review the emergency and remedial response plan less often than 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 Director 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 Director, must be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41, as appropriate. Amended plans or demonstrations shall be submitted to the Director as follows:	§623.A.4	4. The owner or operator shall review the emergency and remedial response plan developed under §623.A.1 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, must be incorporated into the permit, and are subject to the permit modification requirements at §613, as appropriate. Amended plans or demonstrations shall be submitted to the commissioner as follows:		Text is similar, with no impact on stringency.
762	40 CFR 146.94(d)(1)	Within one year of an area of review reevaluation;	§623.A.4.a	a. within one year of an area of review reevaluation;		Text is identical.
763	40 CFR 146.94(d)(2)	Following any significant changes to the facility, such as addition of injection or monitoring wells, on a schedule determined by the Director; or	§623.A.4.b	b. following any significant changes to the facility, such as addition of injection or monitoring wells, on a schedule determined by the commissioner; or		Text omits "on a schedule determined by the Director." Clarification is needed regarding the due date of such revisions. August 2020 review: added text addresses the above comment; state provision is now similar to CFR.
764	40 CFR 146.94(d)(3)	When required by the Director.	§623.A.4.c	c. when required by the commissioner.		Text is identical.
40 CFR 146.95 Class VI injection depth waiver requirements.						
765	40 CFR 146.95	This section sets forth information which an owner or operator seeking a waiver of the Class VI injection depth requirements must submit to the Director; information the Director must consider in consultation with all affected Public Water System Supervision Directors; the procedure for Director – Regional Administrator communication and waiver issuance; and the additional requirements that apply to owners or operators of Class VI wells granted a waiver of the injection depth requirements.	N/A		Waivers of the injection depth requirements for Class VI wells will not be granted.	This does not affect stringency.

*** Section 145.11 does not specify that States must have legal authority to implement the highlighted provisions, but some of these provisions may be necessary to clarify State program requirements. Other highlighted provisions describe applicable requirements if States choose to adopt "optional" program elements such as authorization by rule.**