

7. Federal/State Class VI Comparison Crosswalk

State Primacy Crosswalk: Alaska

Note: Last edited 05/14/2026

Comments from Alaska are provided in “Alaska notes.”

Note: **YELLOW** blocks are those federal regs are not required for State programs

CODE FOR TEXT OR COLUMN COLORS

Alaska Notes: (1) Alaska statutes and drafting rules: “Includes” is construed as meaning “but not limited to”, so we do not have to add “but not limited to” after “includes” or “including” AS 01.10.040 [Alaska Statutes 2023](#). Regulation style does not allow the uses of (). So “The agent, or the agent’s representative, and NOT “The agent (or the agent’s representative). This is a minor style issue and has no effect on meaning. The Alaska regulation style standard is to use active voice (The commission shall determine ...) rather than passive voice (It shall be determined that ...). Passive voice is frequently unclear who the actor is (who shall determine?) Wherever the federal rules were in passive voice they are changed to active voice.

Note (2) “And/or”. In the federal code, “and/or” means that one, the other, or both conditions apply. Alaska regulation drafting conventions do not allow use of “and/or.” See, [Drafting Manual for Administrative Regulations](#) (2025) at page 47. Where Alaska regulations use “or” between two or more elements, it allows one, the other, or both conditions to apply. For example, in crosswalk row 201, the federal code provision requires “A review of monitoring and/or testing results conducted in accordance with permit requirements.” The corresponding Alaska regulation, 20 AAC 25.1410 (b)(6) requires “a review of monitoring or testing results conducted in accordance with permit requirements.” That means a review of monitoring results, testing results, or both, and results in the same effect as the federal use of “and/or.”

Note (3): Singular/ plural. Tense, number, and gender. Words in the present tense include past and future tenses. Words in the singular number include the plural, and words in the plural number include the singular. AS 01.10.050. This applies to statutes and has historically been applied to regulation drafting. AS 01.10.050. When an Alaska regulation uses “fluid” that includes “fluids” and results in the same meaning as the federal regulatory language.

Note 4: Alaska statute defines “storage operator” as meaning the person holding or applying for a permit.” AS 41.06.210(9). This could be an owner, operator, applicant, or permit holder. Alaska believes this is interchangeable with the CFR as “owner or operator”. Statute also defines “well” as “a well that is drilled, converted, or reactivated for discovery, testing, or subsurface injection into a reservoir.” AS 41.06.210(13). See definitions for interchangeability of well and Class VI well and injection well within 25.1000 and 25.1900. Alasa statute does not use “geological sequestration” but uses “carbon storage” as meaning the underground storage of carbon dioxide in a storage reservoir.” AS 41.06.210(2). A “reservoir” means a subsurface sedimentary stratum, formation, aquifer, cavity, or void, including pore space, oil and gas reservoirs, saline formations, and coal seams that are suitable, or capable of being made suitable, for injection and carbon storage. AS 41.06.210 (7). You will see geologic sequestration replaced by carbon storage and that it follows the definition/meaning of geological sequestration.

Note 4: Where the CFR calls for Public Water System Supervision Directors, in Alaska this is equivalent to the Department of Environmental Conservation.

Federal Requirement	Federal Citation	Alaska Citation and requirements	Different from federal rule?	Alaska notes	
GENERAL REQUIREMENTS					
PART 124--PROCEDURES FOR DECISION MAKING					
SUBPART A--GENERAL PROGRAM REQUIREMENTS					
40 CFR 124.3 Application for a permit					
1.	Applicable to State programs, see §145.11 (UIC). (1) Any person who requires a permit under the RCRA, UIC, NPDES, or PSD 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).	40 CFR 124.3(a)(1) (See also 145.11(a)(24)) §145.11 Requirements for permitting. (a) All State programs under this part must have legal authority to implement each of the following provisions and must be administered in conformance with each; except that States are not precluded from omitting or modifying any provisions to impose more stringent requirements. (24) Section 124.3(a)—(Application for a permit);	20 AAC 25.1000. Authority of commission; scope of regulations. 20 AAC 25.1000 – 20 AAC 25.1900 implement AS 41.06.105 – 41.06.210, the Carbon Capture, Utilization, and Storage Act as it relates to Class VI wells. Unless otherwise specified in regulation, carbon storage through a Class VI well in a storage facility is governed by 20 AAC 25.1000 - 20 AAC 25.1900; "carbon storage" and "storage facility" have the meaning given in AS 41.06.210; "Class VI well" has the meaning given in 20 AAC 25.1900.	Not in substance. The Alaska regulation establishes the commission as the authority to implement carbon storage, and the details of implementation are detailed in 20 AAC 25.1000 -20 AAC 25.1900, including 20 AAC 25.1080 that requires a permit for underground injection of carbon dioxide for long term carbon storage. The commission will not authorize underground injections by rule.	Alaska statutes AS 41.06.105 – 41.06.210, the Carbon Capture, Utilization and Storage Act provide the state statutory authority of the Alaska Oil and Gas Commission to regulate carbon storage.
2.	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).	40 CFR 124.3(a)(2) (See also 145.11(a)(24))	20 AAC 25.1030 (c) The commission may not begin processing a storage facility permit until the applicant has fully complied with the application requirements for a permit.	No difference.	

<p>3.</p>	<p>Permit applications must comply with the signature and certification requirements of § 144.32 (UIC). §144.32 - Signatories to permit applications and reports. (a) Applications. All permit applications shall be signed as follows: (1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means; (i) 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 (ii) 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. (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or (3) 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: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency. (b) Reports. All reports required by permits, other information requested by the Director, shall be signed by a person described in paragraph (a) of this section, or</p>	<p>40 CFR 124.3(a)(3) (See also 145.11(a)(24))</p>	<p>20 AAC 25.1030 (d) The commission shall approve the format for a storage facility permit application and associated authorizations for injection under 20 AAC 25.1180. A permit application format approved by the commission must require the signature requirements of 40 C.F.R Part 144.32 (a) and (d), the reporting requirements of 40 C.F.R. 144.32(b), and the changes to authorization requirements of 40 C.F.R. 144.32(c) (signatories to permit applications and reports), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference, except that items pertaining to Class II wells are not adopted by reference.</p> <p>20 AAC 25.1030 (e) The commission shall require that all reports required from a storage operator for a storage facility permit, or other information requested by</p>	<p>No, the Alaska regulation adopts the 40 AAC 144.32 on signature requirements by reference, so no difference from the federal requirements.</p> <p>Adopts 40 C.F.R. 144.32 (b) reporting by reference, so no difference from federal rule and no concern for</p>	<p>20 AAC 25.1030 (d) and (e) adopts by reference the signature requirements of 144.32 (a), the reporting requirements of 144.32(b), and the changes to authorization requirements of 144.32(c), and the certification requirements of 144.32(d) by reference to the federal code, so there is no difference from the federal requirements and no concern for stringency.</p> <p>20 AAC 25.1030 (b) adopted 144.32(b) on reporting signatures by reference, so no difference from the federal rule and no concern for stringency.</p>
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	<p>by a duly authorized representative of that person. A person is a duly authorized representative only if:</p> <p>(1) The authorization is made in writing by a person described in paragraph (a) of this section;</p> <p>(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, 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</p> <p>(3) The written authorization is submitted to the Director.</p> <p>(c) 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.</p> <p>(d) Certification. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:</p> <p><i>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</i></p>		<p>the commission regarding a storage facility permit application, must be signed by a person described in 40 C.F.R. 144.32(a), as adopted by reference in this section, or an authorized representative of that person; an authorized representative means a person that qualifies under 40 C.F.R. 144.32(b).</p> <p>20 AAC 25.1030(f) If an authorization under (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the storage facility, a new authorization that satisfies the signature requirements of this section shall be submitted to the commission before, or concurrent with, any report, information, or application required to be signed by an authorized representative.</p> <p>20 AAC 25.1030 (g) Any person signing a document under subsection (d) or (e) of this section shall make the following certification:</p> <p>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</p>	<p>stringency.</p> <p>No difference from the federal rule on changes to authorization.</p> <p>No difference from federal rule</p>	<p>20 AAC 25.1030(f).</p> <p>20 AAC 25.1030(g).</p>
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	<p><i>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.</i></p>		<p>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.</p>		
<p>§ 124.5 Modification, revocation and reissuance, or termination of permits.</p>					

<p>4.</p>	<p>(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.</p> <p>(a) <i>Causes for modification.</i> 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.</p> <p>(1) <i>Alterations.</i> 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.</p> <p>(2) <i>Information.</i> 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</p>	<p>40 CFR 124.5(a) (See also 145.11(a)(25))</p> <p>(1) If the Director tentatively decides to terminate: A permit under §144.40 (UIC) of this chapter, where the permittee objects, 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.</p>	<p>20 AAC 25.1410 (a) A storage facility permit may be modified, or revoked and reissued, either on a request for review by any interested person, or upon the commission's initiative for the reasons specified in this section. The commission will review the termination of a storage facility permit under 20 AAC 25.1420 or a minor modification under 20 AAC 25.1430.</p> <p>20 AAC 25.1410 (b) On receipt of a request for review or of information, including from a storage facility inspection, from a storage operator pursuant to a requirement in a storage facility permit, or from conducting a review of the storage facility permit, the commission may determine that cause exists for modification or revocation and reissuance of a permit. The following constitute cause for modification or revocation and reissuance under this section:</p> <p>20 AAC 25.1410(b)(8) the material and substantial alterations or additions to the permitted facility or activity after permit</p>	<p>The federal rule includes general introductory language in the code that permits may be modified, revoked and reissued or terminated. that does not need to be repeated since the regulations set out the rules –20 AAC 25.1410.</p> <p>No significant difference from federal rule and no concern for stringency. The Alaska regulation orders the causes for modification differently than the federal rule, but this is for clarity and grammar and does not affect stringency.</p> <p>Closely tracks federal language of 40 C.F.R. 144.39 and does not affect stringency.</p> <p>The regulation closely tracks the federal rule and has no effect on stringency.</p>	<p>20 AAC 25.1410 mirrors the federal rule that the commission may modify or revoke and reissue a permit based on a request for review by an interested person or the commission for the reason specified in this section (mirroring 40 CFR 144.39). .20 AAC 25.1420 mirrors 40 CFR 144.40, termination of permits, and 20 AAC 25.1430 mirrors 40 CFR 144.41, minor modification.</p> <p>20 AAC 25.1410 (b)(8).</p> <p>20 AAC 25.1410 (b)(7)</p>
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	<p>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.</p> <p>(3) <i>New regulations.</i> 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:</p> <p>(i) 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 (B) EPA has revised, withdrawn, or modified that portion of the regulation on which the permit condition was based, and (C) 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. (ii) 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</p>		<p>issuance and that justify the application of permit conditions that are different or absent in the existing permit;</p> <p>20 AAC 25.1410 (b)(7) the commission receives information that was not available at the time the permit was issued; for the purposes of this paragraph, information must not have been available at the time of the permit issuance, and must be of the type that would justify application of different permit conditions ;</p> <p>(b)(9) the standards or regulations on which the permit was based have been changed by enactment of new or amended standards or adoption of regulations or by judicial decision with precedential effect after the permit was issued;</p>	<p>The language here differs slightly from the federal rule (the federal rule applies to EPA regulation changes), but the meaning and effect of the Alaska regulation is the same as the federal requirement.</p>	
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	<p>by the permittee in accordance with § 124.5 within ninety (90) days of judicial remand.</p> <p>(4) <i>Compliance schedules.</i> 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).</p> <p>(5) <i>Basis for modification of Class VI permits.</i> Additionally, for Class VI wells, whenever the Director determines that permit changes are necessary based on:</p> <p>(i) Area of review reevaluations under §146.84(e)(1) of this chapter;</p> <p>(ii) Any amendments to the testing and monitoring plan under § 146.90(j) of this chapter;</p> <p>(iii) Any amendments to the injection well plugging plan under § 146.92(c) of this chapter;</p> <p>(iv) Any amendments to the post-injection site care and site closure plan under §146.93(a)(3) of this chapter;</p>			<p>Slight difference in wording, but the federal standards for when and how a modification of a Class VI permit is the same as the federal standard, so no concern for stringency.</p> <p>Slight difference in wording, but the federal standards for when and how a modification of a Class VI permit is the same as the federal standard, so no concern for stringency</p> <p>No difference.</p> <p>No difference.</p> <p>No difference</p> <p>No difference</p>	<p>20 AAC 25.1070 mirrors 146.86, area of review</p> <p>20 AAC 25.1250 mirrors 146.90, testing and monitoring plan</p> <p>20 AAC 25.1300 mirrors 146.92 on the well plugging plan</p> <p>20 AAC 25.1310 mirrors 146.93 on the post injection site care and closure.</p>
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	<p>(v) Any amendments to the emergency and remedial response plan under § 146.94(d) of this chapter; or</p> <p>(vi) A review of monitoring and/or testing results conducted in accordance with permit requirements.</p> <p>(b) <i>Causes for modification or revocation and reissuance.</i> The following are causes to modify or, alternatively, revoke and reissue a permit:</p> <p>(1) Cause exists for termination under § 144.40, and the Director determines that modification or revocation and reissuance is appropriate.</p> <p>(2) 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.</p> <p>(3) 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.</p>		<p>20 AAC 25.1410 (b)(10) determination by the commission that good cause exists for modification of a compliance schedule under 20 AAC 25.1140, including an act of God, strike, flood, earthquake, or materials shortage or other event over which the storage operator has little or no control and for which there is no reasonably available remedy</p> <p>20 AAC 25.1410 (b) On receipt of a request for review or of information, including from a storage facility inspection, from a storage operator pursuant to a requirement in a storage facility permit, or from conducting a review of the storage facility permit, the commission may determine that cause exists for</p>	<p>No difference</p> <p>Alaska regulation uses “or” rather than “and/or” but there is no difference in meaning and no effect on stringency.</p> <p>Slight grammar and organization differences, but the substance is the same and there is no effect on stringency.</p> <p>No difference</p> <p>Similar to federal rule, there is no effect on stringency. There is no automatic transfer of a permit for a Class VI storage facility</p> <p>No difference</p>	<p>20 AAC 1260 mirrors 146.94 on the emergency and remedial response plan</p> <p>See, Note on page 2 that explains Alaska drafting style with regard to “and/or”</p> <p>20 AAC 25.1420 mirrors 144.40 on termination of a permit.</p> <p>The commission is the actor under primacy, not the director.</p> <p>20 AAC 25.1020(c) contains the definition of hazardous waste in 261.3</p>
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	<p>(c) <i>Facility siting.</i> 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.</p> <p>§ 144.40 Termination of permits. (a) The Director may terminate a permit during its term, or deny a permit renewal application for the following causes:</p> <p>(1) Noncompliance by the permittee with any condition of the permit;</p> <p>(2) 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</p> <p>(3) 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;</p>		<p>modification or revocation and reissuance of a permit. The following constitute cause for modification or revocation and reissuance under this section:</p> <p>20 AAC 25.1410 (b)(1) an area of review reevaluation under 20 AAC 25.1070;</p> <p>20 AAC 25.1410 (b)(2) any amendments to the testing and monitoring plan under 20 AC 25.1250;</p> <p>(20 AAC 25.1410 b) (3) any amendments to the injection well plugging plan under 20 AAC 25.1300;</p> <p>20 AAC 25.1410 (b)(4) any amendments to the post-injection site care and site closure plan under 20 AAC 25.1310;</p> <p>20 AAC 25.1410(b)(5) any amendments to the emergency and remedial response plan under 20 AAC 25.1260;</p> <p>20 AAC 25.1410 (b)(6) a review of monitoring or testing results conducted in accordance with permit requirements;</p> <p>20 AAC 25.1410 (e) In addition to the factors set forth in (b) of this section, the commission may consider the following causes as a basis to modify or, alternatively, revoke and reissue a permit</p>	<p>No difference</p> <p>Slight difference is wording to set out how termination review can be started, but no substantive difference from the federal rule.</p> <p>No difference</p> <p>No difference in substance despite use of “storage operator” rather than permittee</p> <p>No difference.</p>	<p>The Alaska regulations use “storage operator” rather than permittee. A “storage operator” means a person holding or applying for a permit. AS 41.06.210(9).</p>
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			<p>20 AAC 25.1410 (e)(1) a finding that cause exists for termination under 20 AAC 25.1420, and the commission determines that modification or revocation and reissuance is appropriate.</p> <p>20 AAC 25.1410 (e)(2) the commission has received notification of a proposed transfer of a storage facility permit;</p> <p>20 AAC 25.1410 (d)(3) a determination that the waste being injected into a storage facility is a hazardous waste as defined in 20 AAC 25.1020(c), either because the definition of hazardous waste has been revised, or because a previous determination has been changed.</p> <p>20 AAC 25.1410 () The commission shall not consider suitability of the storage facility location 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.</p> <p>20 AAC 25.1420 (a) The commission may, on a request for review by any interested person, or on the commission’s initiative, terminate a storage facility permit during its term, or deny a permit renewal application for the following causes:</p>		
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			<p>(1) noncompliance by the storage operator with any condition of the permit;</p> <p>(2) the storage operator'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</p> <p>(3) 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.</p>		
5.	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.	40 CFR 124.5(b)	Not required for state programs for Class VI primacy.	This provision is not required for state programs.	

6.	(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 40 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.	40 CFR 124.5(c)(1)	20 AAC 25.1410 (c) If the commission determines under (b) of this section that cause exists, the commission may modify or revoke and reissue a permit, subject to the limitations of this section, and may request an updated storage facility permit 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 reissuance for a new term under 20 AAC 25.1160. If the commission finds cause does not exist under this section or 20 AAC 25.1431, the commission will not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in 20 AAC 25.1430 for minor modifications, the permit may be modified without a draft permit or public review under 20 AAC 25.1150. Otherwise, a draft permit must be prepared and the procedures in 20 AAC 25.1150 followed.	The Alaska regulation is worded differently from the federal rule for clarity, but the substance is the same and raises no concern for stringency.	
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7.	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.	40 CFR 124.5(c)(2)	20 AAC 25.1410 (c) (c) If the commission determines under (b) of this section that cause exists, the commission may modify or revoke and reissue a permit, subject to the limitations of this section, and may request an updated storage facility permit 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 reissuance for a new term under 20 AAC 25.1160. If the commission finds cause does not exist under this section or 20 AAC 25.1431, the commission will not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in 20 AAC 25.1430 for minor modifications, the permit may be modified without a draft permit or public review under 20 AAC 25.1150. Otherwise, a draft permit must be prepared and the procedures in 20 AAC 25.1150 followed.	The Alaska regulation is worded slightly differently for organization and clarity, but the substance of 124.5 (c)(2) is included and raises no concern for stringency.	
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<p>8.</p>	<p>“Minor modifications” as defined in §144.41 (UIC) are not subject to the requirements of this section.</p> <p>§ 144.41 Minor modifications of permits. 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:</p> <p>(a) Correct typographical errors;</p> <p>(b) Require more frequent monitoring or reporting by the permittee;</p> <p>(c) Change in 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</p> <p>(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.</p>	<p>40 CFR 124.5(c)(3) (See also 145.11(a)(25))</p>	<p>20 AAC 25.1430 Minor modifications; storage facility permit. (a) Upon agreement between the storage operator and the commission, the commission may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without the storage operator filing an application to amend a permit. Any permit modification not processed as a minor modification under this section must be made under 20 AAC 25.1410. A minor modification under this section is allowed only to</p> <p>20 AAC 25.1430 (a)(1) correct ta typographical error;</p> <p>20 AAC 25.1430 (a)(2) require more frequent monitoring or reporting by the storage operator;</p> <p>20 AAC 25.1430 (a) (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; or</p>	<p>Minor difference since the Alaska regulations do not refer to part 124, but the substance is the same as the federal rule and raises no concern for stringency.</p> <p>No difference for purpose of stringency.</p> <p>No difference for purpose of stringency</p> <p>No difference for purpose of stringency</p> <p>No difference for purpose of stringency</p>	<p>The Alaska regulations use “storage operator” rather than permittee. A “storage operator” means a person holding or applying for a permit. AS 41.06.210(9).</p> <p>20 AAC 1410 implements 144.39 (modification or revocation and reissuance of permits)</p> <p>In Alaska drafting style, the singular “a typographical error” includes the plural “typographical errors”.</p> <p>20 AAC 25.1400 is on transfer of permits.</p> <p>In Alaska drafting style, the singular “fluid” includes</p>
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	<p>(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.</p> <p>(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.</p> <p>(g) Amend a plugging and abandonment plan which has been updated under § 144.52(a)(6).</p>		<p>20 AAC 25.1430 (a)(4) allow for a change in ownership or operational control of a facility where the commission 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 commission under 20 AAC 25.1400</p> <p>20 AAC 25.1430 (a) (5) change the quantity or type of fluid injected which are within the capacity of the storage facility as permitted and, in the judgment of the commission, 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 ;</p> <p>(6) change construction requirements approved by the commission under 20 AAC 25.1210, provided that the alteration shall comply with the requirements of 20 AAC 25 .1000 – 20 AAC 25.1900.</p>	<p>Minor language differences, Alaska regulation says “does not” rather than “would not” for better clarity. There is no effect on stringency.</p> <p>No meaningful difference from the federal rule. 20 AAC 25.1000 - 1900 implement the requirements of 124.5 and part 146.</p> <p>The Alaska rule includes more than a plugging. and abandonment plan.</p> <p>Alaska-specific to incorporate state law AS 41.06.145 that requires a certificate stating a permit has been issued. This has no effect on stringency.</p>	<p>the plural “fluids”. <i>See</i>, Note on page 2.</p> <p>In Alaska drafting style, the singular “a construction requirement” includes the plural “construction requirements.” <i>See</i>, Note on page 2.</p>
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			<p>(7) amend a Class VI injection well testing and monitoring plan under 20 AAC 25.1250, plugging plan under 20 AAC 25.1300, post-injection site care and site closure plan under 20 AAC 25.1310, or emergency and remedial response plan under 20 AAC 25.1260 where the modifications merely clarify or correct the plan, as determined by the commission .</p> <p>20 AAC 25.1430(b) Upon approval by the commission of a modification under this section, the commission shall issue an amendment to the certificate issued under 20 AAC 25.1170 that explains the modification made to the original certificate. A modification under this section does not change the duration of the permit, or any aspect of the permit other than specifically addressed by the modification approved by the commission under this section.</p>		
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<p>9.</p>	<p>(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</p> <p>§ 144.40 Termination of permits. (a) The Director may terminate a permit during its term, or deny a permit renewal application for the following causes: (1) Noncompliance by the permittee with any condition of the permit; (2) 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 (3) 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; (b) The Director shall follow the applicable procedures in part 124 in terminating any permit under this section.</p>	<p>40 CFR 124.5(d)(1) (See also 145.11(a)(25))</p>	<p>20 AAC 25.1420 (b) If the commission tentatively decides to terminate a permit, the commission shall issue notice of intent to terminate. A notice of intent to terminate is a type of draft permit which shall be subject to the applicable procedures in 20 AAC 25.1150.</p> <p>20 AAC 25.1420. Termination of permit. (a) The commission may terminate a permit during its term, or deny a permit renewal application for the following causes:</p> <p>(1) noncompliance by the storage operator with any condition of the permit;</p> <p>(2) the storage operator’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</p> <p>(3) a determination that the permitted activity endangers human health or the environment and can only be regulated to</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No difference.</p> <p>No difference, a storage operator is a permittee.</p> <p>No difference, a storage operator is a permittee.</p> <p>No difference.</p> <p>No difference.</p> <p>Alaska process for notice is under 20 AAC 25.1150; that regulation covers the requirements of part 124.</p>	<p>Alaska uses “storage operator” instead of “permittee”. A storage operator is an applicant or permit holder. AS 41.06.210(9). The actor is the commission, not the director</p> <p>Alaska uses “storage operator” instead of “permittee”. A storage operator is an applicant or permit holder. AS 41.06.210(9)</p>
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			<p>acceptable levels by permit modification or termination;</p> <p>(b) If the commission tentatively decides to terminate a permit, the commission shall issue notice of intent to terminate. A notice of intent to terminate is a type of draft permit which shall be subject to the applicable procedures in 20 AAC 25.1150.</p>		
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10.	(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.	40 CFR 124.6(a) (See also 145.11(a)(26))	20 AAC 25.1100. Draft permit; fact sheet. (a)The commission may issue a draft storage facility permit when the commission determines an application under 20 AAC 25.1050 is complete, including receipt of any supplemental information required by the commission. After the commission determines an application for a storage facility permit is complete, the commission will either prepare a draft permit or deny the application. The commission will determine the completeness of an application for a storage facility permit independently of any other permit application or permit for the same facility or activity.	No difference in meaning from intent of federal rule.	The Alaska regulation is more explanatory about the process but tracks the federal requirements and process.
11.	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.	40 CFR 124.6(b)	20 AAC 25.1100 (b) If the commission tentatively decides to deny an application for a storage facility permit, it will issue a notice of intent to deny. Except for a denial based on an incomplete application, a notice of intent to deny an application for a permit is a type of draft permit, and the commission will follow the procedure as any draft permit prepared under this section If the commission's final decision is that the tentative decision to deny a permit was incorrect, the commission will withdraw the notice of intent to deny and proceed to prepare a draft permit under this section.	Not significantly. In Alaska drafting style, "will" is used for actions of a commission, not "shall". The meaning is the same as the federal rule.	Not required for state programs, left in for clarity. The process for preparing a draft permit is in 20 AAC 25.1050 and 20 AAC 25.1100 (c) - (f) and meets all federal requirements.

12.	(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:	40 CFR 124.6(d) (See also 145.11(a)(26))	20 AAC 25.1100 (a)After the commission determines an application for a storage facility permit is complete, the commission shall either prepare a draft permit or deny the application.	Introductory language, not substantive requirements.	The commission, defined as the Alaska Oil and Gas Conservation Commission, 20 AAC 25.1900 (13), is the actor wherever the federal regulations refer to the EPA director.
13.	All conditions under §144.51 and 144.52 (UIC);	40 CFR 124.6(d)(1) (See also 145.11(a)(26))	20 AAC 25.1100 (d) In addition to the findings required under AS 41.06.130, a draft permit must include all the permit conditions required under 20 AAC 25.1120, 20 AAC 25.1130, all compliance schedules under 20 AAC 25.1140, all monitoring requirements under 20 AAC 25.1250, and other conditions determined by the commission.	No difference in substance, incorporates the requirements of the federal rule that requires conditions of 144.51 and 144.52.	20 AAC 25.1120 implements 40 CFR 144.51, conditions of all permits, 20 AAC 25.1130 implements 40 CFR 144.52, establishing permit conditions.
14.	All compliance schedules under §144.53 (UIC);	40 CFR 124.6(d)(2) (See also 145.11(a)(26))	20 AAC 25.1100 (d) In addition to the findings required under AS 41.06.130, a draft permit must include all the permit conditions required under 20 AAC 25.1120, 20 AAC 25.1130, all compliance schedules under 20 AAC 25.1140, all monitoring requirements under 20 AAC 25.1250, and other conditions determined by the commission.	No difference in substance, incorporates the requirements of the federal rule that requires conditions of 144.53.	20AAC 25.1140 implements 40 C.F.R. 144.53
15.	All monitoring requirements under §144.54 (UIC); and	40 CFR 124.6(d)(3) (See also 145.11(a)(26))	20 AAC 25.1100 (d) In addition to the findings required under AS 41.06.130, a draft permit must include all the permit conditions required under 20 AAC 25.1120, 20 AAC 25.1130, all compliance schedules under 20 AAC 25.1140, all monitoring requirements under 20 AAC 25.1250, and other conditions determined by the commission.	No difference in substance, incorporates the requirements of the federal rule that requires conditions of 144.54	20 AAC 25.1250 implements 40 C.F.R 146.90, monitoring for Class VI wells and the time requirements of 1445.4 are in 20 AAC 25.1140(a).
16.	For: *** UIC permits, permit conditions under § 144.52;	40 CFR 124.6(d)(4)(ii) (See also 145.11(a)(26))		20 AAC 25.1130 implements 40 CFR 144.52, establishing permit conditions.	20 AAC 25.1130 implements 40 CFR 144.52, establishing permit conditions.

17.	(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.	40 CFR 124.6(e) (See also 145.11(a)(26))	Introductory language, not regulatory.	No, the Alaska regulation incorporates the federal standards for fact sheets.	A fact sheet as required by the federal rules is established in 20 AAC 25.1100 (e).
18.	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.	40 CFR 124.8(a) (See also 145.11(a)(27))	20 AAC 25.1100 (e) The commission will prepare a fact sheet for each draft permit for each completed storage facility permit application under 20 AAC 25.1050. In addition to setting out the principal facts, and the significant factual, legal, methodological, and policy questions identified by the commission, a fact sheet must include, as applicable	The Alaska regulations require a fact sheet for a carbon storage facility permit, not just ones the commission finds are the subject of wide-spread public interest or that raise major issues.	Alaska drafting style uses “will” for actions of the commission, not “shall.” The meaning is the same as the federal rule and has no effect on stringency.
19.	The fact sheet shall include, when applicable:	40 CFR 124.8(b) (See also 145.11(a)(27))	20 AAC 25.1100 (e) In addition to setting out the principal facts, and the significant factual, legal, methodological, and policy questions identified by the commission, a fact sheet must include, as applicable	No significant difference from federal rule and no concern for stringency.	
20.	A brief description of the type of facility or activity which is the subject of the draft permit;	40 CFR 124.8(b)(1) (See also 145.11(a)(27))	20 AAC 25.1100 (e) (1) a brief description of the type of facility or activity that is the subject of the draft permit;	No difference from federal rule and no concern for stringency.	
21.	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.	40 CFR 124.8(b)(2) (See also 145.11(a)(27))	20 AAC 25.1100 (e) (2) the type and quantity of carbon dioxide that is to be injected and stored;	The intent is to consider the proposed carbon dioxide stream to be injected for permanent storage, the federal rule covers more than Class VI wells and thus different substances.	The Alaska regulation is directed towards Class VI wells and permanent carbon dioxide storage, and not to other injected substances. The federal rule here applies to more than Class VI wells.
22.	A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions;	40 CFR 124.8(b)(4) (See also 145.11(a)(27))	20 AAC 25.1100 (e) (3) a brief summary of the basis for the draft permit conditions including references to applicable statutes and regulations;	No significant difference from federal rule and no concern for stringency.	

23.	Reasons why any requested variances or alternatives to required standards do or do not appear justified;	40 CFR 124.8(b)(5) (See also 145.11(a)(27))	20 AAC 25.1100 (e) (4) reasons why any requested variances or alternatives to required standards do or do not appear justified;	No significant difference from federal rule and no concern for stringency.	
24.	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.	40 CFR 124.8(b)(6) (See also 145.11(a)(27))	20 AAC 25.1100 (e) (5) a description of the procedure for making a final decision on the draft permit, including (A) the beginning and ending dates of the comment period under 20 AAC 25.1050 and the address where comments will be received; (B) how to request a hearing and the nature of that hearing; (C) any other procedures by which the public may participate in the final decision;	No significant difference from federal rule and no concern for stringency.	
25.	Name and telephone number of a person to contact for additional information.	40 CFR 124.8(b)(7) (See also 145.11(a)(27))	20 AAC 25.1100 (e) (5) (D) the name and contact information, including a telephone number, of a person to contact for additional information; 20 AAC 25.1100 (e)(6) if applicable, a description of information related to a Class VI well injection depth waiver request under 20 AAC 25.1270.	No significant difference from federal rule and no concern for stringency.	Alaska adds requirement to provide a description of a depth waiver request, if applicable.
26.	Scope. (a)(1) The Director shall give public notice that the following actions have occurred:	40 CFR 124.10(a)(1) (See also 145.11(a)(28))		No difference in substance, although the Alaska regulation uses “will” for actions of the commission and is organized differently for clarity and logical flow.	Public notice of individual actions is detailed in individual regulations. 20 AAC 25.1100 provides that the commission “will” take required actions rather than the federal use of “shall” to comply with Alaska drafting style.

27.	A permit application has been tentatively denied under § 124.6(b);	40 CFR 124.10(a)(1)(i)	20 AAC 25.1100 (f) The commission will notify and provide a copy of the draft permit and fact sheet, or if applicable, a notice of intent to deny, to persons entitled to notice under 20 AAC 25.1150; the materials required to be publicly provided may be provided electronically and may include an electronic link to access the materials.	Public notice of denial of a permit is not required for state programs but is included in the Alaska regulation.	
28.	(Applicable to State programs, see §145.11 (UIC).) A draft permit has been prepared under §124.6(d);	40 CFR 124.10(a)(1)(ii) (See also 145.11(a)(28))	20 AAC 25.1100 (f) The commission shall notify and provide a copy of the draft permit and fact sheet, or if applicable, a notice of intent to deny, to persons entitled to notice under 20 AAC 25.1150; the materials required to be publicly provided may be provided electronically and may include an electronic link to access the materials.	No difference from the substance of the federal rule, the Alaska regulation requires notice of a draft permit.	

29.	<p>(Applicable to State programs, see §145.11 (UIC).) A hearing has been scheduled under § 124.12;</p> <p>§ 124.12 Public hearings. (a) (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); (2) 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; (4) Public notice of the hearing shall be given as specified in § 124.10. (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.</p>	<p>40 CFR 124.10(a)(1)(iii) (See also 145.11(a)(28))</p>	<p>20 AAC 25.1150 (a) The commission will hold a public hearing subject to the requirements of AS 41.06.125 and this section before issuing or denying a completed storage facility permit, or modification and revocation of a permit under 20 AAC 25.1410.</p> <p>20 AAC 25.1150 (f) During the public comment period, and at a public hearing under this section, any person may submit written or oral statements and data concerning the subject of the hearing. The commission may set reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. The commission may, at the hearing, extend the time for submission of written comments. The commission will make a transcript or recording of the hearing available to the public; the commission may produce a written transcript of a hearing under this section.</p>	<p>The commission will hold a hearing on all storage facility permit requests.</p> <p>The Alaska regulation includes the requirements of the federal process, including a hearing, notice and comment, extension of time, setting of reasonable time and recording of the hearing.</p>	<p>The Alaska drafting style requires “will” for actions of commission rather than the federal “shall”. The use of “will” makes change in meaning from the federal rule and has and no effect on stringency.</p>
30.	<p>An appeal has been granted under § 124.19(c);</p>	<p>40 CFR 124.10(a)(1)(iv)</p>	<p>Not required for state programs for Class VI primacy.</p>		
31.	<p>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.</p>	<p>40 CFR 124.10(a)(2)</p>	<p>Not required for state programs for Class VI primacy.</p>		

32.	Timing (applicable to State programs, see §145.11 (UIC)). (1) 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. (2) 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.)	40 CFR 124.10(b) (See also 145.11(a)(28))	20 AAC 25.1150(b) The commission will give not less than 30 days' notice of a public hearing under this section and will allow not less than 30 days for public comment. The time for public comment under this subsection may end after a public hearing that is scheduled on the issue.	No significant difference from federal rule and no concern for stringency.	The Alaska drafting style requires "will" for actions of commission rather than the federal "shall". The use of "will" makes change in meaning from the federal rule and has and no effect on stringency.
33.	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);	40 CFR 124.10(c)(1) (See also 145.11(a)(28))	20 AAC 25.1150 (c) In addition to publication of notice required by AS 31.05.050(b), the commission will provide notice by electronic mail or if requested by the intended receipt, by United States Postal Service mail to the persons identified in AS 41.06.125 (b), and to	No difference from federal rule and no concern for stringency.	The Alaska drafting style requires "will" for actions of commission rather than the federal "shall". The use of "will" makes change in meaning from the federal rule and has and no effect on stringency.
34.	The applicant;	40 CFR 124.10(c)(1)(i) (See also 145.11(a)(28))	20 AAC 25.1150 (c) (1) the storage operator;	No significant difference from federal rule and no concern for stringency.	The storage operator in Alaska law includes the applicant. AS 41.06.210(9).

35.	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);	40 CFR 124.10(c)(1)(ii) (See also 145.11(a)(28))	<p>20 AAC 25.1150 (c) (2) the U.S. Environmental Protection Agency, Region 10, Drinking Water program;</p> <p>20 AAC 25.1150 (c) (3) the U.S. Environmental Protection Agency, Underground Injection Control Program,</p> <p>20 AAC 25.1150 (c) (11) the U.S. Army Corp of Engineers;</p> <p>20 AAC 25.1150 (c) (12) federal and state agencies not listed above with jurisdiction over fish, shellfish, and wildlife resources and over coast zone management programs;</p> <p>20 AAC 25.1150(c)(14) any other federal or state agency or tribe that the commission knows has issued or is required to issue a permit for the same storage facility or carbon storage activity.</p>	No significant difference from federal rule and no concern for stringency.	
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36.	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).	40 CFR 124.10(c)(1)(iii) (See also 145.11(a)(28))	20 AAC 25.1150 (c) (4) the Alaska Department of Fish and Game; (5) the Alaska Department of Natural Resources; (6) the Alaska Historical Commission; (7) the Office of History and Archeology within the Department of Natural Resources (8) the Alaska Department of Environmental Conservation; (9) any affected State and Indian Tribes; (10) other appropriate governmental authorities, including any unit of local government having jurisdiction over the area covered by a proposed storage facility; (11) U.S. Army Corps of Engineers; (12) federal and state agencies not listed above with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans;	No significant difference from federal rule and no concern for stringency.	The Alaska regulation requires notice to all agencies and persons that the federal rules require.
37.	Persons on a mailing list developed by: (A) Including those who request in writing to be on the list; (B) Soliciting persons for “area lists” from participants in past permit proceedings in that area; and (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.	40 CFR 124.10(c)(1)(ix) (See also 145.11(a)(28))	20 AAC 25.1150 (c) (13) persons on an area notice list developed by the commission that includes persons who request in writing to be on the notice list, participants in past permit actions in the area of the proposed storage facility, and by notifying the public, through publication in newspaper of general circulation, or other written publication, including state-funded newsletters or environmental bulletins of the opportunity to be on the notice list for an area proposed for carbon storage activities;	No significant difference from federal rule and no concern for stringency.	The Alaska regulation does not require submission of notice in State law journals as the Alaska law journal is published annually by Duke University Law School, and notice included in this journal would be untimely to interested parties.

38.	(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.	40 CFR 124.10(c)(1)(x) (See also 145.11(a)(28))	20 AAC 25.1150 (c) (10) other appropriate governmental authorities, including any unit of local government having jurisdiction over the area covered by a proposed carbon storage project;	No significant difference from federal rule and no concern for stringency.	
39.	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.	40 CFR §124.10(c)(1)(xi)	20 AAC 25.1150 (c) (1) (4) the Alaska Department of Fish and Game; (5) the Alaska Department of Natural Resources; (6) the Alaska Historical Commission; (7) The Office of History and Archeology within the Alaska Department of Natural Resources; (8) the Alaska Department of Environmental Conservation; (9) any affected States and Indian Tribes; (10) other appropriate governmental authorities, including any unit of local government having jurisdiction over the area covered by a proposed storage facility;	No significant difference from federal rule and no concern for stringency.	
40.	For permits publication of a notice in a daily or weekly newspaper within the area affected by the facility or activity;	40 CFR 124.10(c)(2)(i) (See also 145.11(a)(28))	20 AAC 25.1150(c) In addition to publication of notice required by AS 31.05.050(b), the commission shall provide notice and a fact sheet, permit application, and draft permit by electronic mail or mail to the persons identified in AS 41.06.125 (b), and to [agencies and entities listed in (c) (1) - (14) as set out in crosswalk rows 34 – 39].	No significant difference from federal rule and no concern for stringency.	AS 41.06.125 requires the commission to give newspaper notice under AS 31.05.050 (b) and will ensure notice as required by the federal rule.

41.	When the program is being administered by an approved State, in a manner constituting legal notice to the public under State law; and	40 CFR 124.10(c)(3) (See also 145.11(a)(28))	AS 41.06.125 requires the commission to give newspaper notice under AS 31.05.050 (b).	No significant difference from federal rule and no concern for stringency.	AS 41.06.125 requires the commission to give newspaper notice under AS 31.05.050 (b).
42.	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.	40 CFR 124.10(c)(4) (See also 145.11(a)(28))	20 AAC 25.1150 (c) In addition to publication of notice required by AS 31.05.050(b), the commission will provide notice and a fact sheet, permit application, and draft permit accessible by an electronic link by electronic mail or if requested by the intended recipient, by United States Postal Service mail to the persons identified in AS 41.06.125 (b), and to	No significant difference from federal rule and no concern for stringency.	Additional notice is set in statute and is incorporated into 20 AAC 25.1150. AS 31.05.050 (b) The commission may also give, or require the giving of, additional notice in a proceeding, or class of proceeding, which it considers necessary and desirable.
43.	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:	40 CFR 124.10(d)(1) (See also 145.11(a)(28))	20 AAC 25.1150 (d) A public notice issued under this section must contain the following information	No difference from federal rule and no concern for stringency.	Alaska drafting style requires “must” for a non-actor, like a permit and causes no effect on stringency.
44.	Name and address of the office processing the permit action for which notice is being given;	40 CFR 124.10(d)(1)(i) (See also 145.11(a)(28))	20 AAC 25.1150 (d)(1) the name and address of the commission processing the permit, closure or other request for which notice is being given;	No difference from federal rule and no concern for stringency.	
45.	Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit;	40 CFR 124.10(d)(1)(ii) (See also 145.11(a)(28))	20 AAC 25.1150 (d)(2) the name and address of the storage operator and if different, the facility or activity subject to the hearing;	No difference from federal rule and no concern for stringency.	Under Alaska law, a storage operator includes a permittee or applicant. No effect on stringency.
46.	A brief description of the business conducted at the facility or activity described in the permit application or the draft permit.	40 CFR 124.10(d)(1)(iii) (See also 145.11(a)(28))	20 AAC 25.1150 (d)(3) if applicable, a brief description of the business conducted at the facility or activity described in the permit application or draft permit, (4) a brief summary of the basis for the draft permit conditions, or findings under AS 41.06.170;	No significant difference from federal rule and no concern for stringency.	

47.	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	40 CFR 124.10(d)(1)(iv) (See also 145.11(a)(28))	20 AAC 25.1150 (d)(5) the name, physical and electronic mailing address, telephone number of a person, and website link information from where an interested person may obtain documents related to the subject of the hearing, including the draft permit, the fact sheet, the application for a storage facility permit or certificate of closure, and further information concerning a permit, other information required by 40 C.F.R. 124.10 (d) (1) (public notice of permit actions and public comment period), subpart A (general program requirements), revised as of June 12, 1990, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	The Alaska regulation also requires identification of a website link for increased options to obtain information. The Alaska regulations also incorporate 40 C.F.R. 12410(d)(1) by reference.
48.	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.	40 CFR 124.10(d)(1)(v) (See also 145.11(a)(28))	20 AAC 25.1150 (d)(6) a brief description of the public comment process, including the time period in which to submit public comments, the address where to submit comments by writing, through electronic mail, or online comment link, and information on how to attend and participate in a public hearing.	No significant difference from federal rule and no concern for stringency.	The Alaska rule fully provides notice of the process and how the public can participate.
49.	Any additional information considered necessary or proper.	40 CFR 124.10(d)(1)(x) (See also 145.11(a)(28))	20 AAC 25.1150 (d) (7) any additional information the commission considers necessary or proper.	No difference from federal rule and no concern for stringency.	
50.	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:	40 CFR 124.10(d)(2) (See also 145.11(a)(28))	20 AAC 25.1150 (e) In addition to the requirements for the contents of a public notice under this section, a public notice of hearing must contain the following information	No difference from federal rule and no concern for stringency.	
51.	Reference to the date of previous public notices relating to the permit;	40 CFR 124.10(d)(2)(i) (See also 145.11(a)(28))	20 AAC 25.1150 (e)(1) reference to the date of previous public notice relating to the permit or storage facility;	No difference from federal rule and no concern for stringency.	
52.	Date, time, and place of the hearing;	40 CFR 124.10(d)(2)(ii) (See also 145.11(a)(28))	20 AAC 25.1150 (e) (2) the date, time, and place of the hearing; and	No difference from federal rule and no concern for stringency.	

53.	A brief description of the nature and purpose of the hearing, including the applicable rules and procedures;	40 CFR 124.10(d)(2)(iii) (See also 145.11(a)(28))	20 AAC 25.1150(e)(3) a brief description of the nature of the nature and purpose of the hearing, including applicable rules and procedures.	No difference from federal rule and no concern for stringency.	
54.	(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).	40 CFR 124.10(e) (See also 145.11(a)(28))	20 AAC 25.1150(c) In addition to publication of notice required by AS 31.05.050(b), the commission shall provide notice and a fact sheet, permit application, and draft permit by electronic mail or mail to the persons identified in AS 41.06.125 (b), and to [(c) (1) - (11)]	No significant difference from federal rule and no concern for stringency.	
55.	(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.	40 CFR 124.11 (See also 145.11(a)(29))	20 AAC 25.1150(f) During the public comment period, and at a public hearing under this section, any person may submit written or oral statements and data concerning the subject of the hearing. The commission may set reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. The commission may, at the hearing, extend the time for submission of written comments. The commission will make a transcript or recording of the hearing available to the public; the commission may produce a written transcript of a hearing under this section .	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, the commission action is shown by “will” not “shall.” The meaning is the same and there is no concern for stringency. “May” has the same meaning as “is not required to” and again, no concern for stringency.
56.	(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);	40 CFR 124.12(a)(1) (See also 145.11(a)(30))	20 AAC 25.1150, above, that requires a public hearing on all draft permits.	No significant difference from federal rule and no concern for stringency.	
57.	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;	40 CFR 124.12(a)(2) (See also 145.11(a)(30))	20 AAC 25.1150, above, that requires a public hearing on all draft permits	No significant difference from federal rule and no concern for stringency.	

<p>58.</p>	<p>Public notice of the hearing shall be given as specified in §124.10 Public notice of permit actions and public comment period.</p> <p>(a) Scope.</p> <p>(1) The Director shall give public notice that the following actions have occurred:</p> <ul style="list-style-type: none"> (i) A permit application has been tentatively denied under §124.6(b); (ii) <i>(Applicable to State programs, see 145.11 (UIC)).</i> A draft permit has been prepared under §124.6(d); (iii) <i>(Applicable to State programs, see §145.11 (UIC)).</i> A hearing has been scheduled under § 124.12, subpart E or subpart F; (iv) An appeal has been granted under §124.19(c); <p>(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.</p> <p>(3) Public notices may describe more than one permit or permit actions.</p> <p>(b) Timing <i>(applicable to State programs, 145.11 (UIC))</i></p> <p>(1) 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.</p> <p>(2) 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.)</p>	<p>40 CFR 124.12(a)(4) (See also 145.11(a)(30))</p>	<p>20 AAC 25.1150 (a) The commission will hold a public hearing subject to the requirements of AS 41.06.125 and this section before issuing or denying a completed storage facility permit application or issuing a modification and revocation of a permit under 20 AAC 25.1410.</p> <p>20 AAC 25.1150(i) Public notice and comment under this section is not required for a minor permit modification under 20 AAC 25.1430 or for a permit denial when the commission determines a permit application is incomplete under 20 AAC 25.1090.</p>	<p>No significant difference from the federal rule and no concern for stringency.</p>	<p>This repeats requirements above and is covered by 20 AAC 25.1150.</p>
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59.	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.	40 CFR 124.12(c)	20 AAC 25.1150(f) During the public comment period, and at a public hearing under this section, any person may submit written or oral statements and data concerning the subject of the hearing. The commission may set reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. The commission may, at the hearing, extend the time for submission of written comments. The commission will make a transcript or recording of the hearing available to the public; the commission may produce a written transcript of a hearing under this section. Not required for state programs for Class VI primacy.		Although this requirement is not required of state programs for primacy, Alaska has included it.
60.	A tape recording or written transcript of the hearing shall be made available to the public.	40 CFR 124.12(d)	20 AAC 25.1150(f) continues... the commission shall make a transcript or recording of the hearing available to the public; the commission is not required to produce a written transcript of a hearing under this section.	No significant difference from federal rule and no concern for stringency.	Although this requirement is not required of state programs for primacy, Alaska has included it.
61.	(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:	40 CFR 124.17(a) (See also 145.11(a)(31))	20 AAC 25.1150 (g) The commission will consider public comment in making a final decision on a storage facility permit or modification under 20 AAC 25.1150, or 20 AAC 25.1410, and will issue a response when the final determination is issued that	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” for actions of commission instead of “shall.” There is no change in meaning and no effect on stringency.
62.	Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and	40 CFR 124.17(a)(1) (See also 145.11(a)(31))	20 AAC 25.1150 (g) (1) specifies which provisions, if any, of the draft permit have been changed in the final decision, and the reasons for the change;	No significant difference from federal rule and no concern for stringency.	

63.	Briefly describe and respond to all significant comments on the draft permit raised during the public comment period, or during any hearing.	40 CFR 124.17(a)(2) (See also 145.11(a)(31))	20 AAC 25.1150(g)(2) briefly describes and responds to all significant comments on the draft permit raised during the public hearing or public comment period.	No significant difference from federal rule and no concern for stringency.	
64.	(Applicable to State programs, see §145.11 (UIC).) The response to comments shall be available to the public.	40 CFR 124.17(c) (See also 145.11(a)(31))	20 AAC 25.1150 (h) A response to public comments under (g) of this section will be made available to the public.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” for actions of commission rather than “shall.” There is no change in meaning and no effect on stringency

65.	Subpart H of part 146 sets forth requirements for owners or operators of Class VI injection wells.	40 CFR §144.1(f)(1)(viii)			This is introductory program language. The Alaska regulations 20 AAC 25.1000 - 1900 incorporate Subpart H of part 146 and are detailed below.
66.	<p><i>Scope of the permit or rule requirement.</i> The UIC permit program regulates underground injection by six classes of wells (see definition of “well injection,” §144.3). The six classes of wells are set forth in §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, 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 (§144.12). No aquifer is an exempted aquifer until it has been affirmatively designated under the procedures at §144.7. 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).***</p>	40 CFR §144.1(g)	<p>This is introductory program language, and not regulatory.</p> <p>This applies to the commission and EPA and can be covered by the MOA.</p>	<p>No, the Alaska regulations explicitly prohibit the movement of fluid into underground sources of drinking water or that may adversely affect the health of a person. 20 AAC 25.1010.</p> <p>20 AAC 25.442 limits expansion to the areal extent of existing Class II aquifers as required by the federal rules.</p>	<p>This is introductory program language, and not regulatory.</p> <p>The federal prohibitions regarding protections of underground sources of drinking water and public health, and limits on expansion of aquifers are set out in the state regulations. 20 AAC 25.1010 and 20 AAC 25.442.</p>

67.	<i>Administrator</i> means the Administrator of the United States Environmental Protection Agency, or an authorized representative.		Not required for state programs for Class VI primacy.		20 AAC 25.1270(b) identifies the Regional Administrator of the United States Environmental Protection Agency for purposes of approval of a waiver of the injection depth requirements.
68.	<i>Application</i> 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.		Not required for state programs for Class VI primacy.	Not required for state primacy.	
69.	<i>Approved State Program</i> 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.		Not required for state programs for Class VI primacy.	Not required for state primacy.	
70.	<i>Aquifer</i> 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.	;	20 AAC 25.1900 (2) "aquifer" has the meaning given in 20 AAC 25.990; 20 AAC 25.990 (79) "aquifer" means a geologic formation or group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring;	No significant difference from federal rule.	20 AAC 25.990 (79) has been in effect for the Class II program.
71.	<i>Contaminant</i> means any physical, chemical, biological, or radiological substance or matter in water.		20 AAC 25.1900 (15)"contaminant" means any physical, chemical, biological, or radiological substance or matter in water;	No.	

72.	<i>Director</i> 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.		Not required for state programs for Class VI primacy. 20 AAC 25.1900(13) "commission" has the meaning given in 20 AAC 25.990; 20 AAC 25.990 "commission" means the Alaska Oil and Gas Commission;	Yes, because under primacy, the Alaska Oil and Gas Conservation Commission will implement the underground carbon storage program.	The commission is authorized by state law, AS 41.06.105, to have jurisdiction over the underground carbon storage program.
73.	<i>Draft permit</i> 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."		20 AAC 25.1900 (16) "draft permit" means a document prepared under 20 AAC 25.1080 indicating the commission's tentative decision to issue or deny a storage facility permit, or modify, revoke and reissue, or terminate an existing storage facility permit; "draft permit" does not include a denial by the commission of a request for modification, revocation and reissuance, or terminate an existing storage facility permit;	No significant difference from federal rule and no concern for stringency.	The Alaska definition incorporates what is a draft permit (124.5) and what does not qualify as a draft permit (124.5).
74.	<i>Drilling mud</i> means a heavy suspension used in drilling an "injection well," introduced down the drill pipe and through the drill bit.		20 AAC 25.990 drilling fluid" means any fluid used for the purpose of drilling a well;	Not required for state programs for Class VI primacy.	
75.	<i>Eligible Indian Tribe</i> is a Tribe that meets the statutory requirements established at 42 U.S.C. 300j-11(b)(1).		Not required for state programs for Class VI primacy.	Not required for state programs for Class VI primacy	
76.	<i>Environmental Protection Agency</i> ("EPA") means the United States Environmental Protection Agency.		20 AAC 25.1900 (18) "Environmental Protection Agency or EPA" means the United States Environmental Protection Agency;	Not required for state programs for Class VI primacy, but the Alaska definition is in line with the federal definition.	

77.	<i>Exempted aquifer</i> 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.		20 AAC 25.1900 (19) "exempted aquifer" has the meaning given in 20 AAC 25.990; 20 AAC 25.990 (10) "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 20 AAC 25.440;	Substantially tracks federal definition; 20 AAC 25.440 was enacted in 1999 and as part of the Class II program primacy and sets out the process for exempting a USDW for purpose of a non-Class VI well; 20 AAC 25.440 tracks the factors in 144.7	
78.	<i>Existing injection well</i> means an “injection well” other than a “new injection well.”		Not required for state programs for Class VI primacy.	Not required for state programs for Class VI primacy.	
79.	<i>Facility or activity</i> means any UIC “injection well,” or an other facility or activity that is subject to regulation under the UIC program.		AS 41.06.210 (40) “storage facility” means the storage reservoir, underground equipment, well, and surface facilities and equipment used in accordance with a permit; “storage facility” does not include pipelines, compressors, surface facilities, and equipment used to transport carbon dioxide to the storage facility that are unrelated to well safety and metering	Alaska law incorporates the federal meaning that a facility or activity does not include transportation equipment.	The definition of “storage facility” is in state statute.
80.	<i>Fluid</i> means any material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.		20 AAC 25.1900 (21) “fluid” means any material or substance that flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state;	No difference from federal rule.	
81.	<i>Formation</i> means a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailing, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.		20 AAC 25.1900 (23) “formation” means a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailing, but not necessarily, tabular and is mappable on the earth’s surface or traceable in the subsurface;	No difference from federal rule.	

82.	<i>Formation fluid</i> means “fluid” present in a “formation” under natural conditions as opposed to introduced fluids, such as “drilling mud.”		20 AAC 25.1900 (24) “formation fluid” means fluid present in a formation under natural conditions as opposed to introduced fluids, such as drilling mud;	No significant difference from the federal rule, the Alaska regulation is the same except for the “ marks to comply with Alaska drafting style.	
83.	<i>Geologic sequestration</i> 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.***	40 CFR §144.3	AS 41.06.210 (2) “carbon storage” means the underground storage of carbon dioxide in a storage reservoir; AS 41.06.210 (8) “storage facility” means the storage reservoir, underground equipment, well, and surface facilities used in accordance with a permit; “storage facility” does not include pipelines, compressors, surface facilities, and equipment used to transport carbon dioxide to the storage facility that are unrelated to well safety and metering. 20 AAC 25.1900 (40) “storage facility” has the meaning given in AS 41.06.210 and includes a “geologic sequestration project” as defined in 40 CFR 146.81.	No significant difference from federal rule and no concern for stringency.	Alaska law uses carbon storage rather than geologic sequestration to mean the underground storage of carbon dioxide in a storage reservoir; the result is consistent with the federal definition and scope.
84.	<i>Ground water</i> means water below the land surface in a zone of saturation.		20 AAC 25.990 (81) “ground water” means water below the land surface in a zone of saturation	No difference from the federal rule.	20 AAC 25.990 (81) is part of the general commission regulations, the provisions apply to the extent they are not inconsistent with the Class VI regulations in 20 AAC 25.1000 - 20 AAC 25.1900. AS 41.06.110 (d).
85.	<i>Hazardous waste</i> means a hazardous waste as defined in 40 CFR 261.3.		20 AAC 25.1900 (6) “carbon dioxide stream” means carbon dioxide that has been captured from an emission source, such as a power plant, plus incidental associated substances derived from source materials and the capture process, and any substances added to the stream to enable or improve the injection process; “carbon dioxide stream” does not apply to any carbon dioxide stream that meets the definition of hazardous waste under 40 C.F.R. part 261;	Not required for state programs for Class VI primacy, but the Alaska definition is consistent with the federal rule.	

86.	<i>Indian Tribe</i> means any Indian Tribe having a Federally recognized governing body carrying out substantial governmental duties and powers over a defined area.		20 AAC 25.1900 (43) "tribe" means a (1) tribe or Indian tribe that is recognized by the United States Secretary of the Interior to exist as an Indian tribe under 25 U.S.C. 5131 (Federally Recognized Indian Tribe List Act of 1994); (2) includes any subdivision, subsidiary, or business enterprise wholly owned by a federally recognized tribe;	This is not required for state programs for Class VI primacy, but the Alaska definition does not conflict with the federal rule.	
87.	<i>Injection well</i> means a "well" into which "fluids" are being injected.		20 AAC 25.1900 (45) "well" has the meaning given in AS 41.06.210, a "well" may include an injection well. 20 AAC 25.1900 (46) "well injection" or "underground injection" means the subsurface emplacement of fluid through a well;	The Alaska regulations and statute designate the different types of wells that are covered by the Class VI regulations and are consistent with the federal intent.	The Alaska regulations define Class VI well and refer to injection into a well where needed. AS 41.06.210 (13) provides that a "well" means a well that is drilled, converted, or reactivate for discovery, testing, or subsurface injection into a reservoir."
88.	<i>New injection wells</i> means an "injection well" which began injection after a UIC program for the State applicable to the well is approved or prescribed.		Not required for state programs for Class VI primacy.		

89.	<i>Owner or operator</i> means the owner or operator of any “facility or activity” subject to regulation under the UIC program.		<p>AS 41.06.210 (9) "storage operator" means a person holding or applying for a permit.</p> <p>20 AAC 25.1900 (28) "operator" means the person recognized as responsible for the well, site, storage facility, or carbon storage project covered by 20 AAC 25.1000 – 20 AAC 25.1900, and includes the storage operator as defined in AS 41.06.210; the operator can, but need not be, the owner of the storage facility;</p> <p>20 AAC 25.1900 (29) " owner" means the person that owns the well, site, storage facility, or carbon storage project, and includes the "storage operator" as defined in AS 41.06.210; the owner may be, but is not always, the operator of the well, site, facility, or activity governed under 20 AAC 25.1000 – 20 AAC 25.1900;</p>	The Alaska regulations use storage operator to cover the “owner or operator” subject to regulation under the state program. The intent is consistent with the federal rule and no concern for stringency.	Uses state definition, but with same intent – captures applicant, permittee, doesn't matter if an owner or an operator.
90.	<i>Permit</i> 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.”		20 AAC 25.1900 (31) "permit" means a storage facility permit under 20 AAC 25.1170, but does not include a permit which has not yet been the subject of final commission action, such as a draft permit;	Area permits are not allowed for Class VI wells, nor do the regulations contemplate an emergency permit for a Class VI well due to notice and hearing requirements.	20 AAC 25.1020 (f) The commission may not issue an area injection order for a Class VI well.
91.	<i>Person</i> means an individual, association, partnership, corporation, municipality, state, federal, or tribal agency, or an agency or employee thereof		20 AAC 25.1900 (32) “person” means an individual, association, partnership, corporation, joint venture, protected series, or other legal or commercial entity, estate, trust, trustee, receiver, executor, administrator, fiduciary, municipality, state, federal, or tribal agency, or an agency or employee thereof;	The Alaska definition includes other legal entities recognized as legal entities under Alaska law.	

92.	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 <i>et seq.</i>).		Not required for state programs for Class VI primacy.		
93.	Regional Administrator means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.		Not required for state programs for Class VI primacy.		This language is required only if the state's regulation does not explicitly use the term "EPA Regional Administrator" when referring to the EPA Regional Administrator. For example, if the state refers to the EPA Regional Administrator as simply the "Regional Administrator", this term is required. If the state uses the term "EPA Regional Administrator" in its regulation, no definition is required.
94.	SDWA means the Safe Drinking Water Act (Pub. L. 93–523, as amended; 42 U.S.C. 300f <i>et seq.</i>).		Not required for state programs for Class VI primacy.		
95.	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.		20 AAC 25.1900 (37) "site" means the land or water area where any storage facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity;	No significant difference from federal rule and no concern for stringency.	
96.	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.		Not required for state programs for Class VI primacy.		

97.	<i>State Director</i> 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.		20 AAC 25.1900 (12) “commission” has the meaning given in 20 AAC 25.990 and means the Alaska Oil and Gas Conservation Commission.”	Yes, in that the Alaska regulation states the state authority for underground injection.	Alaska law is clear that the commission has jurisdiction over the state underground injection control program for purposes of implementation.
98.	<i>Stratum</i> (plural strata) means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.			The meaning of stratum (plural strata) is commonly understood and has been implemented by the commission in the Class II primacy program regulations without a definition.	The Alaska regulations for Class VI mention strata in 20 AAC 25.402 (c) (11), but it is a commonly understood term that does not need a definition. The Class II program regulations make reference to strata and have not needed a definition.
99.	<i>Total dissolved solids</i> means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR part 136.		Not required for state programs for Class VI primacy.	No significant difference from federal rule and no concern for stringency.	
100.	<i>UIC</i> means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an “approved State program.”		Not required for state programs for Class VI primacy.	No significant difference from federal rule and no concern for stringency.	
101.	<i>Underground injection</i> means a “well injection.”		20 AAC 25.1900 (46) “well injection” or “underground injection” means the subsurface emplacement of fluid through a well.	No significant difference from federal rule and no concern for stringency.	

102.	<p><i>Underground source of drinking water (USDW)</i> means an aquifer or its portion:</p> <p>(a)(1) Which supplies any public water system; or</p> <p>(2) Which contains a sufficient quantity of ground water to supply a public water system; and</p> <p>(i) Currently supplies drinking water for human consumption; or</p> <p>(ii) Contains fewer than 10,000 mg/l total dissolved solids; and</p> <p>(b) Which is not an exempted aquifer.</p>		<p>20 AAC 25.990 (83) underground source of drinking water” or “USDW” means an aquifer or its portion</p> <p>(A) that supplies any public water system, or</p> <p>(B) which contains a sufficient amount of ground water to supply a public water system; and</p> <p>(i) currently supplies drinking water for human consumption; or</p> <p>(ii) contains fewer than 10,000 milligrams per liter total dissolved solids; and</p> <p>(b) is not an exempted aquifer under 20 AAC 25.440.</p>	No significant difference from federal rule and no concern for stringency.	20 AAC 25.440 defines the process for designation of a freshwater aquifer, and has been in Alaska law since 1999.
103.	<p><i>Well</i> 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.</p>		<p>20 AAC 25.1900 (45) “well” has the meaning given in AS 41.06.210, a “well” may include an injection well;</p> <p>used to inject carbon dioxide into a storage facility; an injection well includes a well as defined in AS 41.06.210;</p> <p>41.06.210 “well” means a well that is drilled, converted, or reactivated for discovery, testing, or subsurface injection into a reservoir.</p>	No significant difference from federal rule and no concern for stringency.	
104.	<p><i>Well injection</i> means the subsurface emplacement of fluids through a well.</p>		<p>20 AAC 25.1900 (46) “well injection” or “underground injection” means the subsurface emplacement of fluids through a well;</p>	No significant difference from federal rule and no concern for stringency.	
105.	<p>Injection wells are classified as follows:</p>	<p>40 CFR 144.6 (See also 145.11(a)(2))</p>			

106.	Class II. Wells which inject fluids:	40 CFR 144.6(b) (See also 145.11(a)(2))	20 AAC 25.252 (a) (a) The underground disposal of oil field wastes and the underground storage of hydrocarbons are prohibited except as ordered by the commission under this section. In response to a letter of application for injection filed by an operator, the commission will issue an order authorizing the underground disposal of oil field wastes that the commission determines are suitable for disposal in a Class II well, as defined in 40 C.F.R. 144.6(b) as revised as of July 1, 1998, which is adopted by reference, or the underground storage of hydrocarbons. An order authorizing disposal or storage wells remains valid unless revoked by the commission.	No, adopts federal rule 146.6 (b) by reference.	20 AAC 25.252 has been in Alaska regulation since 1999 as part of the Class II program for which the state has primacy.
107.	Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection.	40 CFR 144.6(b)(1) (See also 145.11(a)(2))	See crosswalk row 106	See crosswalk row 106	
108.	For enhanced recovery of oil or natural gas; and	40 CFR 144.6(b)(2) (See also 145.11(a)(2))	See crosswalk row 106	See crosswalk row 106	
109.	For storage of hydrocarbons which are liquid at standard temperature and pressure.	40 CFR 144.6(b)(3) (See also 145.11(a)(2))	See crosswalk row 106	See crosswalk row 106	
110.	Class V. Injection wells not included in Class I, II, III, IV, or VI. Specific types of Class V injection wells are described in §144.81.	40 CFR §144.6(e)	Not required for state programs for Class VI primacy.		

<p>111.</p>	<p><i>Class VI.</i> 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).</p>	<p>40 CFR §144.6(f)</p>	<p>20 AAC 25.1900 (11) "Class VI well" means a well</p> <p>(A) that is not experimental in nature that is used for geologic sequestration of carbon dioxide beneath the lowermost formation containing an underground source of drinking water;</p> <p>(B) used for geologic sequestration of carbon dioxide that has been granted a waiver of the injection depth requirements under 20 AAC 25.1270.;</p> <p>or</p> <p>(C) used for geologic sequestration of carbon dioxide that has received an expansion to the areal extent of an existing Class II well under 20 AAC 25.442.</p>	<p>No significant difference from federal rule and no concern for stringency.</p>	
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112.	<p>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.</p>	40 CFR §144.7(a)	<p>20 AAC 25.435. Identification of underground sources of drinking water. The commission may identify, by narrative description, illustration, maps, or other means, and shall protect as an underground source of drinking water, all aquifers and parts of aquifers which meet the definition of underground source of drinking water under 20 AAC 25.1900 except to the extent there is an applicable freshwater aquifer exemption under 20 AAC 25.440, 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 carbon storage under 20 AAC 25.442 . Other than an approved aquifer exemption expansion that meets the criteria under 20 AAC 25.442 (d), new aquifer exemptions will not be issued for a Class VI well; a Class VI well has the meaning in 20 AAC 25.1900. Even if an aquifer has not been specifically identified by the commission, it is an “underground source of drinking water” if it meets the definition of “underground source of drinking water” in 20 AAC 25.990.</p>	No significant difference from federal rule and no concern for stringency.	<p>Alaska regulations comply with this federal rule and only allow an expansion of an existing Class II aquifer exemption for a Class VI well. The commission is the regulator.</p> <p>Alaska drafting convention is to use “will” for actions of a commission or department, “shall” for actions of a person. The use of “will” raises no concerns for stringency.</p>
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113.	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 §146.4 of this chapter.	40 CFR §144.7(b)(1)	20 AAC 25.435 The commission may identify, by narrative description, illustration, maps, or other means, and shall protect as an underground source of drinking water, all aquifers and parts of aquifers which meet the definition of underground sources of drinking water under 20 AAC 25.990, except to the extent there is an applicable freshwater aquifer exemption under 20 AAC 25.440, 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 carbon storage under 20 AAC 25.442. Other than an approved aquifer exemption expansion that meets the criteria under 20 AAC 25.442(d), new aquifer exemptions will not be issued for a Class VI well; a Class VI well has the meaning in 20 AAC 25.1900. Even if an aquifer has not been specifically identified by the commission, it is an "underground source of drinking water" if it meets the definition of "underground source of drinking water" in 20 AAC 25.990	No significant difference from the federal rule and no concern for stringency.	20 AAC 25.435 implements 144.7(a) 20 AAC 25.440 implements 144.7(b) 146.4 20 AAC 25.442 implements 144.7(d) Exempted aquifers handled under 20 AAC 25.440; an expansion to the areal extent of an existing aquifer for Class VI is under 20 AAC 25.442 See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The Alaska convention is to use "or" rather than "and/or." The meaning is the same and raises no concern for stringency.
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115.	<i>Expansion to the Areal Extent of Existing Class II Aquifer Exemptions for Class VI Wells.</i> 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.	40 CFR §144.7(d)	20 AAC 25.442 (a) An owner or operator of Class II enhanced recovery operation under 20 AAC 25.402 may request that the commission approve an expansion to the areal extent of an aquifer exemption already in place for a Class II enhanced oil or enhanced gas recovery well under 20 AAC 25.440 for the exclusive purpose of Class VI well injection for carbon storage. A request under this section will be treated as a substantial revision to the approved state underground injection control program under 40 C.F.R. 145.32 and will not be final until approved by the United States Environmental Protection Agency.	No significant difference from federal rule and no concern for stringency.	Alaska drafting convention requires “will” instead of “shall” for actions of a commission. The change has no effect on stringency.
116.	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.	40 CFR §144.7(d)(1)	20 AAC 25.442(b).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 carbon storage shall define by narrative description, illustrations, maps, or other means, and describe in geographic or geometric terms such as vertical and lateral limits and gradients that are clear and definite, each aquifer or part thereof that the operator requests be designated as exempted using the criteria in (d) of this section .	No significant difference from federal rule and no concern for stringency.	The Alaska drafting convention requires “shall” instead of “must” for the actions of an individual actor. The change has no effect on stringency. <i>See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or".</i>

117.	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:	40 CFR §144.7(d)(2)	20 AAC 25.442 (c) In evaluating a request to expand the areal extent of an existing aquifer exemption of a Class II enhanced oil recovery or enhanced gas recovery well for the purpose of Class VI injection, the commission will determine whether the request meets the criteria for exemptions this section. In making the determination, the commission will consider, in addition to the criteria in (d) of this section,	No significant difference from federal rule and no concern for stringency.	Alaska drafting convention requires “will” for “shall” to direct actions of a commission. The use of “will” over “shall” does not change the meaning and has no effect on stringency.
118.	Current and potential future use of the USDWs to be exempted as drinking water resources;	40 CFR §144.7(d)(2)(i)	20 AAC 25.442(c) (1) current and potential future use of the underground sources of drinking water to be exempted as a drinking water resource;	No significant difference from federal rule and no concern for stringency.	Alaska drafting convention uses the singular to include the plural (resource = resources) and has no effect on stringency.

119.	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;	40 CFR §144.7(d)(2)(ii)	20 AAC 25.442 (c) (2) 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 storage facility, as informed by computational modeling performed pursuant to 20 AAC 251070(c)(1), in order to ensure that the proposed injection operation will not at any time endanger underground sources of drinking water including non-exempted portions of the injection formation;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1070 (c)(1) implements 146.84(c)(1). (c) The storage operator shall perform the following actions to delineate the area of review and identify all wells that require corrective action: (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 fluid in the subsurface from the commencement of injection activities until the plume movement ceases, until pressure differentials sufficient to cause the movement of injected fluid or formation fluid into a underground sources of drinking water are no longer present, or until the end of a fixed time period as determined by the commission; the model must: (A) be based on detailed geologic data collected to characterize the injection zone, confining zone, and any additional zones; and anticipated operational data, including injection pressures, rates, and total volumes over the proposed life of the storage facility; (B) take into account any geologic heterogeneities, other discontinuities, data quality, and their possible impact on model predictions; and (C) consider potential migration through faults, fractures, and artificial penetrations. Alaska law uses “storage facility” to cover the same meaning as a geological sequestration project. AS 41.06.210(8).
120.	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	40 CFR §144.7(d)(2)(iii)	20 AAC 25.442 (c) (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, under 20 AAC 25.1070 (e); and	No significant difference from federal rule and no concern for stringency.	20 AAC 1070(e) implements 146.84(e)

121.	Any information submitted to support a waiver request made by the owner or operator under §146.95, if appropriate.	40 CFR §144.7(d)(2)(iv)	20 AAC 25.442 (c) (4) any information submitted to support a waiver request made by the storage operator under 20 AAC 25.1270, if appropriate.	No significant difference from federal rule and no concern for stringency. Alaska law uses storage operator to mean an applicant, owner, or operator.	20 AAC 25.1270 implements 146.95, injection depth waiver.
122.	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) <i>Quarterly reports.</i> The Director shall submit quarterly narrative reports for major facilities as follows:	40 CFR 144.8(a) (See also 145.11(a)(4))	This applies to the commission and does not require regulation.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
123.	<i>Format.</i> 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.	40 CFR 144.8(a)(1)(i) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.

124.	<p>For each entry on the list, include the following information in the following order:</p> <p>(A) Name, location, and permit number of the noncomplying permittees.</p> <p>(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.</p> <p>(C) The date(s) and a brief description of the action(s) taken by the Director to ensure compliance.</p> <p>(D) Status of the instance(s) of noncompliance with the date of the review of the status or the date of resolution.</p> <p>(E) Any details which tend to explain or mitigate the instance(s) of noncompliance.</p>	40 CFR 144.8(a)(1)(ii) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
125.	<p><i>Instances of noncompliance to be reported.</i> 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.</p>	40 CFR 144.8(a)(2) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
126.	<p><i>Failure to complete construction elements.</i> 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.</p>	40 CFR 144.8(a)(2)(i) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.

127.	<i>Modifications to schedules of compliance.</i> When a schedule of compliance in the permit has been modified under §§144.39 or 144.41 because of the permittee's noncompliance.	40 CFR 144.8(a)(2)(ii) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
128.	<i>Failure to complete or provide compliance schedule or monitoring reports.</i> 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.	40 CFR 144.8(a)(2)(iii) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
129.	<i>Deficient reports.</i> 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.	40 CFR 144.8(a)(2)(iv) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.

130.	<p><i>Noncompliance with other permit requirements.</i> Noncompliance shall be reported in the following circumstances:</p> <p>(A) 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</p> <p>(B) 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</p> <p>(C) When the Director determines significant permit noncompliance or other significant event has occurred, such as a migration of fluids into a USDW.</p>	40 CFR 144.8(a)(2)(v) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
131.	<p><i>All other.</i> 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.</p>	40 CFR 144.8(a)(2)(vi) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.

132.	<i>Annual reports</i> — (1) <i>Annual noncompliance report</i> . 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.	40 CFR 144.8(b)(1) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA. This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
133.	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:	40 CFR 144.8(b)(2)(i) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
134.	A detailed description of the State's implementation of its program;	40 CFR 144.8(b)(2)(i)(A) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
135.	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;	40 CFR 144.8(b)(2)(i)(B) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
136.	An updated inventory of active underground injection operations in the State.	40 CFR 144.8(b)(2)(i)(C) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
137.	All Class VI program reports shall be consistent with reporting requirements set forth in §146.91 of this chapter.	40 CFR §144.8(b)(2)(iii)	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.

138.	<p>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.</p> <p>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.</p>	40 CFR 144.8(c)(1) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.
139.	<p>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.</p>	40 CFR 144.8(c)(2) (See also 145.11(a)(4))	This applies to the commission and does not require regulatory language.		This responsibility will be covered in the Memorandum of Understanding between the commission and the EPA.

140.	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.	40 CFR 144.11 (See also 145.11(a)(5))	20 AAC 25.1020 (a) A person shall obtain a storage facility permit from the commission under 20 AAC 25.1080 to construct, own, or operate a storage facility. The commission may not authorize a Class VI well by rule to inject carbon dioxide. (b) Any underground injection of carbon dioxide for carbon storage through a Class VI well in a storage facility, except as authorized by a storage facility permit issued by the commission, is prohibited. The construction of a well required to have a storage facility permit under 20 AAC 25.1170 is prohibited before the permit is issued.	No significant difference from federal rule and no concern for stringency.	The Alaska rule prohibits construction “before” a permit is issued rather than “until” a permit has been issued. The Alaska clarification has the same result-no construction until a permit is issued.
141.	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 142 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.	40 CFR 144.12(a) (See also 145.11(a)(6))	20 AAC 25.1010 (a) No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any injection activity that allows the movement of fluid containing a contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulations under 40 C.F.R. part 142, or may otherwise adversely affect the health of persons. A storage facility operator bears the burden of showing the requirements of this subsection are met.	No significant difference from federal rule and no concern for stringency.	A storage facility operator includes a permit applicant and has the same result as the federal rule. AS 41.06.210(9).

142.	If any water quality monitoring of an USDW indicates the movement of any contaminant into the USDW, 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.	40 CFR §144.12(b)	20 AAC 25.1010 (b) If any water quality monitoring of underground sources of drinking water indicates the movement of any contaminant into an underground source of drinking water, except as authorized under 40 C.F.R. Part 146, the commission will impose additional protections for construction, corrective action, operation, monitoring, or reporting, including closure of the injection well, as the commission determines is necessary to prevent such movement.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “will” rather than “shall” for the actions of the commission, but results in the same meaning and has no effect on stringency.
143.	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 USDW may present an imminent and substantial endangerment to the health of persons.	40 CFR 144.12(e) (See also 145.11(a)(6))	20 AAC 25.1010 (c). Notwithstanding any other provision of 20 AAC 25.100 -20 AAC 25.1900, the commission 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	No significant difference from federal rule and no concern for stringency.	
144.	The construction, operation or maintenance of any non-experimental Class V geologic sequestration well is prohibited.	40 CFR §144.15	20 AAC 25.1020 (d) The construction, operation, or maintenance of any non-experimental Class V geologic sequestration well is prohibited; a Class V well has the meaning given in 40 C.F.R. 144.6 (e), Subpart A (classification of wells), as amended effective January 10, 2011 and adopted by reference.	No significant difference from federal rule and no concern for stringency.	

145.	When injection does not occur into, through or above an USDW, the Director may authorize a well or project with less stringent requirements for area of review, construction, mechanical integrity, operation, monitoring, and reporting than required in 40 CFR part 146 or § 144.52 to the extent that the reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water.	40 CFR 144.16(a)	Not required for state programs for Class VI primacy.	Not required for State Class VI programs	
146.	When injection occurs through or above an USDW, but the radius of endangering influence when computed under §146.06(a) is smaller or equal to the radius of the well, the Director may authorize a well or project with less stringent requirements for operation, monitoring, and reporting than required in 40 CFR part 146 or § 144.52 to the extent that the reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water.	40 CFR 144.16(b)	Not required for state programs for Class VI primacy.	Not required for State Class VI programs	
147.	When reducing requirements under paragraph (a) or (b) of this section, the Director shall prepare a fact sheet under §124.8 explaining the reasons for the action.	40 CFR 144.16(c)	Not required for state programs for Class VI primacy.	Not required for State Class VI programs	

148.	The Director may require, by written notice on a selective well-by-well basis, an owner or operator of an injection well to establish and maintain records, make reports, conduct monitoring, and provide other information as is deemed necessary to determine whether the owner or operator has acted or is acting in compliance with Part C of the SDWA or its implementing regulations.	40 CFR 144.17	20 AAC 25.1610. Reporting. See section on reporting requirements under 40 C.F.R. 146.91 in crosswalk rows 587 through 616.		
149.	Owners or operators of Class VI wells must obtain a permit. Class VI wells cannot be authorized by rule to inject carbon dioxide.	40 CFR §144.18	20 AAC 25.1020 (a) A person must obtain a storage facility permit from the commission under 20 AAC 25.1080 to construct, own, or operate a Class VI well. The commission may not authorize a Class VI well by rule to inject carbon dioxide.	No difference.	
150.	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).	40 CFR §144.19(a)	20 AAC 25.444 (a) An owner or operator that is injecting carbon dioxide shall apply for and obtain a storage facility permit under 20 AAC 25.1000 - 20 AAC 25.1900 when the primary purpose of injection is long-term carbon storage or there is an increased risk to underground sources of drinking water when compared to Class II operations. In determining whether there is a primary purpose of long-term carbon storage or an increased risk to underground sources of drinking water, the owner or operator shall consider the factors in (b) of this section.	No significant difference from federal rule and no concern for stringency.	Alaska law requires consideration of whether carbon injection is the primary purpose in addition to whether there is a risk to underground sources of drinking water.
151.	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:	40 CFR §144.19(b)	20 AAC 25.444 (b) In addition to (a) of this section, the commission shall determine when the primary purpose of injection is long-term carbon storage or there is an increased risk to underground sources of drinking water compared to Class II operations, and a Class VI permit is required. In order to make this determination, the commission must consider the following:	No significant difference from federal rule and no concern for stringency.	Alaska law requires consideration of whether carbon injection is the primary purpose in addition to whether there is a risk to underground sources of drinking water.

152.	Increase in reservoir pressure within the injection zone(s);	40 CFR §144.19(b)(1)	20 AAC 25.444 (b) (1) increase in reservoir pressure within the injection zone;	No difference from federal rule and no concern for stringency.	
153.	Increase in carbon dioxide injection rates;	40 CFR §144.19(b)(2)	20 AAC 25.444 (b) (2) increase in carbon dioxide injection rates;	No difference from federal rule and no concern for stringency.	
154.	Decrease in reservoir production rates;	40 CFR §144.19(b)(3)	20 AAC 25.444 (b) (3) decrease in reservoir production rates;	No difference from federal rule and no concern for stringency.	
155.	Distance between the injection zone(s) and USDWs;	40 CFR §144.19(b)(4)	20 AAC 25.444 (b) (4) distance between the injection zone and underground sources of drinking water;	No difference from federal rule and no concern for stringency.	
156.	Suitability of the Class II area of review delineation;	40 CFR §144.19(b)(5)	20 AAC 25.444 (b) (5) suitability of the Class II area of review delineation;	No difference from federal rule and no concern for stringency.	
157.	Quality of abandoned well plugs within the area of review;	40 CFR §144.19(b)(6)	20 AAC 25.444 (b) (6) quality of abandoned well plugs within the area of review;	No difference from federal rule and no concern for stringency.	
158.	The owner's or operator's plan for recovery of carbon dioxide at the cessation of injection;	40 CFR §144.19(b)(7)	20 AAC 25.444 (b) (7) the owner's or operator's plan for recovery of the carbon dioxide at the cessation of injection	No difference from federal rule and no concern for stringency.	
159.	The source and properties of injected carbon dioxide; and	40 CFR §144.19(b)(8)	20 AAC 25.444 (b) (8) the source and properties of the injected carbon dioxide;	No difference from federal rule and no concern for stringency.	
160.	Any additional site-specific factors as determined by the Director.	40 CFR §144.19(b)(9)	20 AAC 25.444 (b) (9) any additional site-specific factors determined by the commission.	No difference from federal rule and no concern for stringency.	

161.	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).	40 CFR §144.22(b)	20 AAC 25.1020 (e) If applicable, 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 under 20 AAC 25.1080, or a well plug and abandonment plan approved by the commission under 20 AAC 25., or upon well conversion.	No significant difference from the federal rule and no concern for stringency.	Alaska does not authorize by rule, this edit recognizes that there may be an existing federal authorization that might be applicable. This does not change the meaning or raise concerns for stringency.
162.	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.	40 CFR 144.31(a) (See also 145.11(a)(10))	This is introductory language to permits, the regulatory standards are below.		
163.	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.	40 CFR 144.31(b) (See also 145.11(a)(10))	20 AAC 25.1030(b). The owner of the proposed storage facility must submit the application for a permit; except that when a facility is owned by a person, but operated by another, it is the operator's duty to apply for a storage facility permit.	No significant difference from federal rule and no concern for stringency.	

164.	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:	40 CFR 144.31(c) (See also 145.11(a)(10))	20 AAC 25.1030 (a) The storage operator of a proposed storage facility shall apply to the commission for a storage facility permit in a format required by the commission.	No significant difference from federal rule and no concern for stringency.	AS 41.06.120(c)(1) requires a preapplication meeting where timing of an application will be discussed.
165.	For existing wells, as expeditiously as practicable and in accordance with the schedule in any program description under § 145.23(f), but no later than 4 years from the approval or promulgation of the UIC program.	40 CFR 144.31(c)(1) (See also 145.11(a)(10))	Not required for state programs for Class VI primacy.		
166.	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.	40 CFR 144.31(c)(2) (See also 145.11(a)(10))	A 20 AAC 25.1040(b) A person who requires a storage facility permit must apply to the commission a reasonable time before storage facility construction is expected to begin or in compliance with a date determined by the commission based on pre-application contact with the potential applicant.	No significant difference from federal rule and no concern for stringency.	AS 41.06.120(c)(1) requires a preapplication meeting where timing of an application will be discussed.

167.	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.	40 CFR 144.31(d) (See also 145.11(a)(10))	<p>20 AAC 25.1030 (c) The commission will only begin processing an application for a storage facility permit when the storage operator has fully complied with the application requirements for a permit.</p> <p>20 AAC 25.1100 (a) The commission may issue a draft storage facility permit when the commission determines an application under 20 AAC 25.1050 is complete, including receipt of any supplemental information required by the commission. After the commission determines an application for a storage facility permit is complete, the commission will either prepare a draft permit or deny the application. The commission will determine the completeness of an application for a storage facility permit independently of any other permit application or permit for the same facility or activity.</p>	No significant difference from federal rule and no concern for stringency. Alaska does not offer emergency permits for Class VI.	Under AS 41.06.210 (9), a “storage operator” is a person holding or applying for a permit. Alaska drafting style uses “will” for actions of a commission rather than shall. The use of “will” has no effect on stringency.
168.	(e) 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.	40 CFR §144.31(e)	20 AAC 25.1080(a)(1) Prior to the issuance of a storage facility permit authorizing the construction of a new Class VI well, or the conversion on an existing Class I, Class II, or Class V well to a Class VI well, the storage operator shall submit, and the commission shall consider the following: (1) the information required by 40 C.F.R. 144.31 (e) (1) - (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)

169.	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.	40 CFR 144.31(e)(1) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
170.	Name, mailing address, and location of the facility for which the application is submitted.	40 CFR 144.31(e)(2) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
171.	Up to four SIC codes which best reflect the principal products or services provided by the facility.	40 CFR 144.31(e)(3) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
172.	The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.	40 CFR 144.31(e)(4) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
173.	Whether the facility is located on Indian lands.	40 CFR 144.31(e)(5) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
174.	A listing of all permits or construction approvals received or applied for under any of the following programs:	40 CFR 144.31(e)(6) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)

175.	Hazardous Waste Management program under RCRA.	40 CFR 144.31(e)(6)(i) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
176.	UIC program under SDWA.	40 CFR 144.31(e)(6)(ii) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
177.	NPDES program under CWA.	40 CFR 144.31(e)(6)(iii) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
178.	Prevention of Significant Deterioration (PSD) program under the Clean Air Act.	40 CFR 144.31(e)(6)(iv) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
179.	Nonattainment program under the Clean Air Act.	40 CFR 144.31(e)(6)(v) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
180.	National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.	40 CFR 144.31(e)(6)(vi) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)

181.	Ocean dumping permits under the Marine Protection Research and Sanctuaries Act.	40 CFR 144.31(e)(6)(vii) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
182.	Dredge and fill permits under section 404 of CWA.	40 CFR 144.31(e)(6)(viii) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)
183.	Other relevant environmental permits, including State permits.	40 CFR 144.31(e)(6)(ix) (See also 145.11(a)(10))	20 AAC 25.1080(a)(1) adopts by reference by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference federal rule 40 C.F.R. 144.31 (e) (1) – (6)

184.	Applications. All permit applications, except those submitted for Class II wells (see paragraph (b) of this section), shall be signed as follows:	40 CFR 144.32(a) (See also 145.11(a)(11))	20 AAC 25.1030 (d) he commission shall approve the format for a storage facility permit application and associated Class VI permit and injection authorizations for injection under 20 AAC 25.1180. A permit application format approved by the commission must require the signature requirements of 40 C.F.R Part 144.32(a) and (d), the reporting requirements of 40 C.F.R. 144.32(b), and the changes to authorization requirements of 40 C.F.R. 144.32(c) (signatories to permit applications and reports), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference, except that items pertaining to Class II wells are not adopted by reference. (e) All reports required from a storage operator for a storage facility permit, or other information requested by the commission regarding a storage facility permit application, shall be signed by a person described in 40 C.F.R. 144.32(a), as adopted by reference in this section, or an authorized representative of that person; an authorized representative means a person that qualifies under 40 C.F.R. 144.32(b).	No significant difference from federal rule and no concern for stringency.	Alaska adopts federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d).
185.	For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means;	40 CFR 144.32(a)(1) (See also 145.11(a)(11))	20 AAC 25.1030 (d)	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference the federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d).
186.	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	40 CFR 144.32(a)(1)(i) (See also 145.11(a)(11))	20 AAC 25.1030 (d)	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference the federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d).

187.	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: I 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.	40 CFR 144.32(a)(1)(ii) (See also 145.11(a)(11))	20 AAC 25.1030 (d)	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference the federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d).
188.	For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or	40 CFR 144.32(a)(2) (See also 145.11(a)(11))	20 AAC 25.1030 (d)	No significant difference from federal rule and no concern for stringency	Alaska adopts by reference the federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d).
189.	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:	40 CFR 144.32(a)(3) (See also 145.11(a)(11))	20 AAC 25.1030 (d)	No significant difference from federal rule and no concern for stringency	Alaska adopts by reference the federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d).
190.	The chief executive officer of the agency, or	40 CFR 144.32(a)(3)(i) (See also 145.11(a)(11))	20 AAC 25.1030 (d)	No significant difference from federal rule and no concern for stringency	Alaska adopts by reference the federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d).
191.	a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).	40 CFR 144.32(a)(3)(ii) (See also 145.11(a)(11))	20 AAC 25.1030 (d)	No significant difference from federal rule and no concern for stringency	Alaska adopts by reference the federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d).

192.	Reports. All reports required by permits, other information requested by the Director, and all permit applications submitted for Class II wells under § 144.31 shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:	40 CFR 144.32(b) (See also 145.11(a)(11))	20 AAC 25.1030 (e) All reports required from a storage operator for a storage facility permit, or other information requested by the commission regarding a storage facility permit application, shall be signed by a person described in 40 C.F.R. 144.32(a), as adopted by reference in this section, or an authorized representative of that person; an authorized representative means a person that qualifies under 40 C.F.R. 144.32(b).	No significant difference from federal rule and no concern for stringency.	Alaska adopts by reference the federal rule on signatures and certification by reference – 40 C.F.R. 144.32 (a), (b), (c), and (d) in 20 AAC 25.1030(d).
193.	The authorization is made in writing by a person described in paragraph (a) of this section;	40 CFR 144.32(b)(1) (See also 145.11(a)(11))	20 AAC 25.1030 (e) The commission shall require that all reports required from a storage operator for a storage facility permit, or other information requested by the commission regarding a storage facility permit application, must be signed by a person described in 40 C.F.R. 144.32(a), as adopted by reference in this section, or an authorized representative of that person; an authorized representative means a person that qualifies under 40 C.F.R. 144.32(b).	No significant difference from federal rule and no concern for stringency.	Alaska adopts federal rule 40 C.F.R. 144.32 (b) by reference at 20 AAC 25.1030(d).

194.	The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, 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	40 CFR 144.32(b)(2) (See also 145.11(a)(11))	20 AAC 25.1030 (e) The commission shall require that all reports required from a storage operator for a storage facility permit, or other information requested by the commission regarding a storage facility permit application, must be signed by a person described in 40 C.F.R. 144.32(a), as adopted by reference in this section, or an authorized representative of that person; an authorized representative means a person that qualifies under 40 C.F.R. 144.32(b).	No significant difference from federal rule and no concern for stringency.	Alaska adopts federal rule 40 C.F.R. 144.32 (b) by reference at 20 AAC 25.1030(d).
195.	The written authorization is submitted to the Director.	40 CFR 144.32(b)(3) (See also 145.11(a)(11))	20 AAC 25.1030 (e) The commission shall require that all reports required from a storage operator for a storage facility permit, or other information requested by the commission regarding a storage facility permit application, must be signed by a person described in 40 C.F.R. 144.32(a), as adopted by reference in this section, or an authorized representative of that person; an authorized representative means a person that qualifies under 40 C.F.R. 144.32(b).	No significant difference from federal rule and no concern for stringency.	Alaska adopts federal rule 40 C.F.R. 144.32 (b) by reference at 20 AAC 25.1030(d).
196.	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.	40 CFR 144.32(c) (See also 145.11(a)(11))	20 AC 25.1030 (f) If an authorization under (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the storage facility, a new authorization that satisfies the signature requirements of this section shall be submitted to the commission before, or concurrent with, any report, information, or application required to be signed by an authorized representative.	No significant difference from federal rule and no concern for stringency.	

197.	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.	40 CFR 144.32(d) (See also 145.11(a)(11))	20 AAC 25.1030 (g) Any person signing a document under subsection (d) or (e) 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	No significant difference from federal rule and no concern for stringency.	
198.	The Director may issue a permit on an area basis, rather than for each well individually, provided that the permit is for injection wells:	40 CFR 144.33(a) (See also 145.11(a)(12))	20 AAC 25.1020 (f) The commission may not issue an area injection order for a Class VI well.	Area permits are not allowed for Class VI wells.	
199.	Used to inject other than hazardous waste; and	40 CFR §144.33(a)(4)	20 AAC 25.1020 (c) 20 AAC 25.1000 – 20 AAC 25.1900 do not apply to the injection of a carbon dioxide stream that is a hazardous waste as defined in 40 C.F.R. Part 146.3, Subpart A (definitions) as revised September 29, 2025 and adopted by reference.	Alaska regulations do not apply to hazardous waste as defined in federal law.	
200.	Other than Class VI wells.	40 CFR §144.33(a)(5)	20 AAC 25.1020 (f) The commission may not issue an area injection order for a Class VI well.	No significant difference from federal rule and no concern for stringency.	

201.	<p>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.</p> <p>(a) Causes for modification. The following are causes for modification. For Class VI wells the following may be causes for revocation and reissuance as well as modification</p> <p>(1) 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.</p> <p>(2) 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.</p>	40 CFR 144.35(a) (See also 145.11(a)(14))	<p>20 AAC 25.1410. (a) A storage facility permit may be modified or revoked and reissued either on a request for review by any interested person, or on the commission's initiative for the reasons specified in this section. The commission will review the termination of a storage facility permit under 20 AAC 25.1420, or a minor modification under 20 AAC 25.1430.</p> <p>20 AAC 25.1410 (b) -On receipt of a request for review of information, including from a storage facility inspection, from a storage operator pursuant to a requirement in the storage facility permit, or from conducting a review of the storage facility permit, the commission may determine that cause exists for modification or revocation and reissuance of a permit. The following constitute cause for modification and revocation and reissuance under this section:</p> <p>20 AAC 25.1410 (b)(8) material and substantial alterations or additions to the permitted facility or activity after permit issuance that justifies the application of permit conditions that are different or absent in the existing permit</p> <p>20 AAC 25.1410 (b)(7) the commission receives information that was not available at the time the permit was issued that justifies application of different permit conditions;</p>	<p>No significant difference from the federal rule and no concern for stringency.</p> <p>No significant difference from the federal rule and no concern for stringency.</p> <p>No significant difference from the federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	The Alaska regulation differs from the federal rule only for a better flow, but there is no difference in meaning. Alaska regulations closely follow federal rules – 20 AAC 25.1410 implements 40 C.F.R. 144.39 and 20 AAC 25.1420 implements 40 C.F.R. 144.40.
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	<p>(3) 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 may be modified during their terms for this cause only as follows:</p> <p>(4) 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).</p> <p>(5) Basis for modification of Class VI permits. Additionally, for Class VI wells, whenever the Director determines that permit changes are necessary based on:</p> <p>(i) Area of review reevaluations under § 146.84(e)(1) of this chapter;</p> <p>(ii) Any amendments to the testing and monitoring plan under §146.90(j) of this chapter;</p> <p>(iii) Any amendments to injection well plugging plan under § 146.92(c) of this chapter;</p> <p>(iv) Any amendments to the post-injection site care and site closure plan under §146.93(a)(3) of this chapter;</p>		<p>20 AAC 25.1410(b)(9) the standards or regulations on which the permit was based have been changed by enactment of new or amended standards or adoption of regulations or by judicial decision with precedential effect after the permit was issued;</p> <p>20 AAC 25.1410 (b)(10) determination by the commission that good cause exists for modification of a compliance schedule under 20 AAC 25.1140, including an act of God, strike, flood, earthquake, or materials shortage or other event over which the storage operator has little or no control and for which there is no reasonably available remedy.</p> <p>1410 (b)(1) an area of review reevaluation under 20 AAC 25.1070;</p> <p>1410(b) (2) any amendments to the testing and monitoring plan under 20 AC 25.1250;</p> <p>1410(b)(3) any amendments to the Class VI well plugging plan under 20 AAC 25.1300;</p>	<p>No significant difference from federal rule and no concern for stringency</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency</p> <p>No significant difference from federal rule and no concern for stringency</p>	<p>The Alaska regulations at 20 AAC 25.1410 (b)(1) - (5) apply to Class VI wells, so incorporate the federal rule of 144.35 (a).</p> <p>20 AAC 25.1070 tracks 146.84</p> <p>20 AAC 25.1025 tracks 146.90</p> <p>20 AAC 25.1300 tracks 146.92</p> <p>20 AAC 25.1310 tracks 146.93</p>
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	<p>(v) Any amendments to the emergency and remedial response plan under §146.94(d) of this chapter; or</p> <p>(vi) A review of monitoring and/or testing results conducted in accordance with permit requirements.</p> <p>(b) Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit:</p> <p>(1) Cause exists for termination under § 144.40, and the Director determines that modification or revocation and reissuance is appropriate.</p>		<p>(4) any amendments to the post-injection site care and site closure plan under 20 AAC 25.1310;</p> <p>(5) any amendments to the emergency and remedial response plan under 20 AAC 25.1260;</p> <p>(6) a review of monitoring or testing results conducted in accordance with permit requirements;</p> <p>20 AAC 25.1410 (e) In addition to the factors set forth in (b) of this section, the commission may consider the following causes as a basis to modify or, alternatively, revoke and reissue a permit:</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	<p>20 AAC 25.1260 tracks 146.94</p> <p>Alaska drafting style uses “or” for the federal “and/or” but the meaning is the same and there is no effect on stringency.</p>
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	<p>(2) 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.</p> <p>(3) 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.</p> <p>(c) 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.</p>		<p>(1) a finding that cause exists for termination under 20 AAC 25.1420, and the commission determines that modification or revocation and reissuance is appropriate.</p> <p>(2) the commission has received notification of a proposed transfer of a storage facility permit;</p> <p>(3) a determination that the waste being injected into a storage facility is a hazardous waste as defined in 20 AAC 25.1020(c), either because the definition of hazardous waste has been revised, or because a previous determination has been changed.</p> <p>20 AAC 25.1410 (f) f) The commission will not consider suitability of the storage facility location 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</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	<p>The Alaska regulations do not allow an automatic transfer of a storage facility permit, so that part of the federal regulation is omitted.</p> <p>20 AAC 25.1020(c) 20 AAC 25.1000 - 20 AAC 25.1900 do not apply to the injection of a carbon dioxide stream that is a hazardous waste as defined in 40 C.F.R. Part 146.3, Subpart A (definitions), revised as of September 29, 2025, and adopted by reference.</p>
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202.	The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.	40 CFR 144.35(b) (See also 145.11(a)(14))	20 AAC 25.1120 (g) Except as provided by AS 41.06.165; the storage facility permit does not convey any property rights of any sort, or any exclusive privilege;	No significant difference from the federal rule and no effect on stringency	AS 41.06.165 covers who has title to carbon dioxide injected into a storage reservoir for state law purposes.
203.	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.	40 CFR 144.35(c) (See also 145.11(a)(14))	20 AAC 25.1120 (g) continues... nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.	No significant difference from the federal rule and no effect on stringency	

204.	<p>.....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 ... 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.</p>	40 CFR §144.36(a)	<p>20 AAC 25.1160 (a) Upon approval of a storage facility permit, the commission will issue the permit for the operating life of the facility and the post-injection site care period specified in the permit. The commission will review each storage facility permit, including each associated Class VI well permit, not less than once every five years to determine if it should be modified, revoked and reissued, terminated or a minor modification made as provided in this chapter. The term of a permit may not be extended by modification beyond the maximum duration specified in this subsection except as provided in (d) of this section.</p> <p>(b) The commission may issue a storage facility permit for a duration that is less than the full allowable term under (a) of this section.</p> <p>(c) A storage facility permit, including a Class VI well permit and authorization to inject for a Class VI well, may only be transferred, modified, revoked and reissued, terminated, or a minor modification made as provided in 20 AAC 25.1410 or, 20 AAC 25.1430, as applicable.</p> <p>(d) The conditions of an expired storage facility permit may continue until the effective date of a new permit if the permittee has submitted a timely and complete application under 20 AAC 25.1080, and the commission, 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. A permit continued under this subsection remains fully effective and enforceable. When a permittee is not in</p>	No significant difference from federal rule and no concern for stringency.	<p>Alaska drafting style requires use of “will” for the actions of the commission rather than “shall”. The directive meaning is the same and has no concern for stringency.</p> <p>Alaska will issue an authorization to inject for a Class VI well as part of a storage facility permit.</p>
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			<p>compliance with the terms of an expiring or expired storage facility permit, the commission may</p> <p>(1) initiate enforcement action, including civil penalties under AS 41.06.180;</p> <p>(2) issue a notice of intent to deny the new permit; in the event of a notice of intent to deny, the storage operator must cease activities authorized by the permit, except for approved well plugging and abandonment under 20 AAC 25.1300, or be subject to enforcement action;</p> <p>(3) issue a new permit consistent with the requirements and process of 20 AAC 25.1410; or</p> <p>(4) take other actions authorized by AS 41.06.110 or this chapter.</p>		<p>The Alaska regulation adds “or” between (3) and (4) to show that the commission may require any or all of the actions in (1) - (4).</p>
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205.	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.	40 CFR 144.38(a) (See also 145.11(a)(16))	20 AAC 25.1400(a) A storage facility permit, and an associated Class VI well permit and injection authorization may be transferred to a new storage operator only by application by the proposed permit transferee as though that person were the original applicant for the permit, and upon approval by the commission. A permit may be transferred by the holder of the permit to a new storage operator only if (1) the permit has been modified or revoked and reissued under 20 AAC 25.1410 or (2) a minor modification is made under 20 AAC 25.1430 to identify the new permittee and incorporate any other requirements necessary under federal and state laws, including 42 U.S.C. 300f-300j-27 (Safe Drinking Water Act). (b) The commission will not approve a transfer-if the storage operator is not in compliance with any term or condition of the storage facility permit to be transferred unless the permittee agrees to bring the storage facility back into compliance with the permit.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1410 mirrors 40 C.F.R. 144.39 (modification or revocation and reissuance of permits). 20 AAC 25.1430 mirrors 40 C.F.R. 144.41 (termination of a permit). Alaska regulation 20 AAC 25.1180 requires an authorization to inject as part of a storage facility permit.
206.	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:	40 CFR §144.38(b)	Not required for state programs for Class VI primacy.		Alaska does not allow for automatic transfer. 20 AAC 25.1430(a) (4) allows for change in ownership upon review of the commission.

207.	<p>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.</p>	<p>40 CFR 144.39 (See also 145.11(a)(17))</p>	<p>20 AAC 25.1410(b) When the commission receives any information, for example, from a storage facility inspection, from information by the storage operator as required in the storage facility permit, a request for or revocation and reissuance of a storage facility permit, or conducts a review of the storage facility permit, the commission may determine if one or more causes listed in this section for modification or revocation and reissuance or both exist. If cause exists, the commission may modify or revoke and reissue the permit accordingly, subject to the limitations of this section, and may request an updated storage facility permit application. 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 reissuance for a new term under 20 AAC 25.1160. If the commission finds cause does not exist under this section or 20 AAC 25.1431, the commission shall not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in 20 AAC 25.1430 for minor modifications, the permit may be modified without a draft permit or public review under 20 AAC 25.1150. Otherwise, a draft permit must be prepared and the procedures in 20 AAC 25.1150 followed.</p>	<p>No significant difference from federal rule and no concern for stringency.</p>	<p>20 AAC 25.1430 mirrors 144.41 on minor modifications of a permit. The Alaska regulations include hearing and draft permit procedures as required by 124.5. Minor modifications do not require a draft permit, but the commission will issue an amendment to a permit that qualifies for minor modification.</p>
208.	<p>Causes for modification. The following are causes for modification. For Class VI wells the following may be causes for revocation and reissuance as well as modification.....</p>	<p>40 CFR 144.39(a) (See also 145.11(a)(17))</p>	<p>20 AAC 25.1410 (b) The following constitute cause for modification or revocation and reissuance under this section:</p>	<p>No significant difference from federal rule and no concern for stringency.</p>	

209.	<i>Alterations.</i> 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.	40 CFR 144.39(a)(1) (See also 145.11(a)(17))	20 AAC 25.1410 (b) (8) material and substantial alterations or additions to the permitted facility or activity after permit issuance and that justify the application of permit conditions that are different or absent in the existing permit;	No significant difference from federal rule and no concern for stringency.	
210.	<i>Information.</i> 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.	40 CFR 144.39(a)(2) (See also 145.11(a)(17))	20 AAC 25.1410 (b) (7) the commission receives information that was not available at the time the permit was issued that justifies application of different permit conditions;	No significant difference from federal rule and no concern for stringency.	
211.	<i>New regulations.</i> 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:	40 CFR 144.39(a)(3) (See also 145.11(a)(17))	20 AAC 25.1410 (b) (9) the standards or regulations on which the permit was based have been changed by enactment of new or amended standards or adoption of regulations or by judicial decision with precedential effect after the permit was issued;	No significant difference from federal rule and no concern for stringency.	
212.	<i>Compliance schedules.</i> 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).	40 CFR 144.39(a)(4) (See also 145.11(a)(17))	20 AAC 25.1410 (b) (10) determination by the commission that good cause exists for modification of a compliance schedule under 20 AC 25.1140, including an act of God, strike, flood, earthquake, or materials shortage of other event over which the permittee has little or no control and for which there is no reasonably available remedy.	No significant difference from federal rule and no concern for stringency.	

213.	<i>Basis for modification of Class VI permits.</i> Additionally, for Class VI wells, whenever the Director determines that permit changes are necessary based on:	40 CFR §144.39(a)(5)	20 AAC 25.1410 (b) On receipt of a request for review or of information, including from a storage facility inspection, from a storage operator pursuant to a requirement in a storage facility permit, or from conducting a review of the storage facility permit, the commission may determine that cause exists for modification or revocation and reissuance of a permit. The following constitute cause for modification or revocation and reissuance under this section:	No significant difference from federal rule and no concern for stringency.	
214.	Area of review reevaluations under §146.84(e)(1) of this chapter;	40 CFR §144.39(a)(5)(i)	20 AAC 25.1410 (b)(1) an area of review reevaluation under 20 AAC 25.1070;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1070 mirrors 146.84
215.	Any amendments to the testing and monitoring plan under §146.90(j) of this chapter;	40 CFR §144.39(a)(5)(ii)	20 AAC 25.1410 (b) (2) any amendments to the testing and monitoring plan under 20 AAC 25.1250	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1250 mirrors 146.90
216.	Any amendments to the injection well plugging plan under §146.92(c) of this chapter;	40 CFR §144.39(a)(5)(iii)	20 AAC 25.1410 (b) (3) any amendments to the injection well plugging plan under 20 AAC 25.1300	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1300 mirrors 146.92
217.	Any amendments to the post-injection site care and site closure plan under §146.93(a)(3) of this chapter;	40 CFR §144.39(a)(5)(iv)	20 AAC 25.1410 (b) (4) any amendments to the post-injection site care and site closure plan under 20 AAC 25.1310;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1310 mirrors 146.93
218.	Any amendments to the emergency and remedial response plan under §146.94(d) of this chapter; or	40 CFR §144.39(a)(5)(v)	20 AAC 25.1410 (b) (5). any amendments to the emergency and remedial response plan under 20 AAC 25.1260	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1260 mirrors 146.94
219.	A review of monitoring and/or testing results conducted in accordance with permit requirements.	40 CFR §144.39(a)(5)(vi)	20 AAC 25.1410(b)(6) a review of monitoring or testing results conducted in accordance with permit requirements;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or". Alaska drafting style uses "or" rather than the federal use of "and/or". The meaning is the same and raises no concern for stringency.

220.	Causes for modification or revocation and reissuance. The following are causes to modify or, alternatively, revoke and reissue a permit:	40 CFR 144.39(b) (See also 145.11(a)(17))	20 AAC 25.1410 (e) In addition to the factors set forth in (b) of this section, the commission may consider the following causes as a basis to modify or, alternatively, revoke and reissue a permit:	No significant difference from federal rule and no concern for stringency.	
221.	Cause exists for termination under §144.40, and the Director determines that modification or revocation and reissuance is appropriate.	40 CFR 144.39(b)(1) (See also 145.11(a)(17))	20 AAC 25.1410 (e)(1) a finding that cause exists for termination under 20 AAC 25.1420, and the commission determines that modification or revocation and reissuance is appropriate.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1420 mirrors 144.40
222.	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.	40 CFR 144.39(b)(2) (See also 145.11(a)(17))	20 AAC 25.1410 (d) (2) the commission has received notification of a proposed transfer of a storage facility permit	There is no automatic transfer for Class VI, so that part of 144.39(b)(2) is left out.	There is no automatic transfer for Class VI, so that part of 144.39(b)(2) is left out.
223.	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.	40 CFR 144.39(b)(3) (See also 145.11(a)(17))	20 AAC 25.1410(d)(3) a determination that the waste being injected into a storage facility is a hazardous waste as defined in 20 AAC 25.1020(c), either because the definition of hazardous waste has been revised, or because a previous determination has been changed.	No significant difference from federal rule and no concern for stringency.	
224.	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.	40 CFR 144.39(c) (See also 145.11(a)(17))	20 AAC 25.1410 (e) The commission shall not consider suitability of the storage facility location 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.	No significant difference from federal rule and no concern for stringency.	

225.	The Director may terminate a permit during its term, or deny a permit renewal application for the following causes:	40 CFR 144.40(a) (See also 145.11(a)(18))	20 AAC 25.1420 (a) The commission may on a request for review by an interested person, or on the commission’s initiative, terminate a permit during its term, or deny a permit renewal application for the following causes:	No significant difference from federal rule and no concern for stringency.	Under Alaska law, a storage operator includes a permittee, so Alaska regulations use storage operator rather than permittee. This is consistent with the federal meaning and raises no concerns for stringency.
226.	Noncompliance by the permittee with any condition of the permit;	40 CFR 144.40(a)(1) (See also 145.11(a)(18))	20 AAC 25.1420 (a)(1) noncompliance by the permittee with any condition of the permit;	No significant difference from federal rule and no concern for stringency.	
227.	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	40 CFR 144.40(a)(2) (See also 145.11(a)(18))	20 AAC 25.1420(a)(2) the storage operator’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	No significant difference from federal rule and no concern for stringency.	
228.	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;	40 CFR 144.40(a)(3) (See also 145.11(a)(18))	20 AAC 25.1420(a) (3) 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;	No significant difference from federal rule and no concern for stringency.	
229.	The Director shall follow the applicable procedures in part 124 in terminating any permit under this section.	40 CFR 144.40(b) (See also 145.11(a)(18))	20 AAC 25.1420 (b) If the commission tentatively decides to terminate a permit, the commission will issue notice of intent to terminate. A notice of intent to terminate is a type of draft permit which shall be subject to the applicable procedures in 20 AAC 25.1150.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “will” for directive actions of the commission, not “shall”. The use of will has no change in meaning and no concern for stringency. 20 AAC 25.1150 on notice and hearing follows the requirements of part 124.

230.	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:	40 CFR 144.41	20 AAC 25.1430 (a) Upon agreement between a storage operator and the commission, the commission may modify a permit to make a correction or allowance for changes in the permitted activity listed in this section, without an application to amend the permit. Any permit modification not processed as a minor modification under this section will be made under 20 AAC 25.1410. A minor modification under this section is allowed only to	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, the singular includes the plural unless specified otherwise. Under Alaska drafting style, “will” is used rather than “must” for actions of the commission. There is no change to meaning and no concern for stringency.
231.	Correct typographical errors;	40 CFR 144.41(a)	20 AAC 25.1430 (a)(1) correct a typographical error;	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, the singular includes the plural unless specified otherwise. There is no change in meaning and no concern for stringency.
232.	Require more frequent monitoring or reporting by the permittee;	40 CFR 144.41(b)	20 AAC 25.1430 (a) (2) require more frequent monitoring or reporting by the storage operator;	No significant difference from federal rule and no concern for stringency.	
233.	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	40 CFR 144.41(c)	20 AAC 25.1430 (a) (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; or	No significant difference from federal rule and no concern for stringency.	
234.	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.	40 CFR 144.41(d)	20 AAC 25.1430 (4) allow for a change in ownership or operational control of a facility where the commission 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 permittee has been submitted to the commission under 20 AAC 25.1400;	No significant difference from federal rule and no concern for stringency.	

235.	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.	40 CFR 144.41(e)	20 AAC 25.1430 (5) change in the quantity or type of fluid injected which is within the capacity of the storage facility as permitted and, in the judgment of the commission, does not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification;	No significant difference from federal rule and no concern for stringency.	The Alaska regulation makes minor changes for readability and grammar. Under Alaska drafting style, the singular includes the plural unless specified otherwise.
236.	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.	40 CFR 144.41(f)	20 AAC 25.1430 (a)(6) change a construction requirement approved by the commission under 20 AAC 25.1210, provided that the alteration shall comply with the requirements of 20 AAC 25.1000 – 20 AAC 25.1900	No significant difference from federal rule and no concern for stringency.	The Alaska regulation makes minor changes for readability and grammar. Under Alaska drafting style, the singular includes the plural unless specified otherwise. 20 AAC 25.1000 - 20 AAC 25.1900 covers the requirements of 144.52 and part 146.
237.	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.	40 CFR §144.41(h)	20 AAC 25.1430 (a) (7) amend a Class VI well testing and monitoring plan under 20 AAC 25.1250, plugging plan under 20 AAC 25.1300, post-injection site care and site closure plan under 20 AAC 25.1310, or emergency and remedial response plan under 20 AAC 25.1260 if the modifications merely clarifies or correct the plan, as determined by the commission.	No significant difference from federal rule and no concern for stringency.	The Alaska regulation makes minor changes for readability and grammar. Under Alaska drafting style, the singular includes the plural unless specified otherwise.
238.	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.	40 CFR 144.51 (See also 145.11(a)(19))	20 AAC 25.1120 (a) For each storage facility permit, including a draft permit under 20 AAC 25.1150, the commission will incorporate the conditions of this section and applicable federal and state law. If incorporated by reference, a specific citation to the applicable state regulation must be given in the permit.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” for actions of a commission.

239.	<p>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;</p> <p>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.</p>	40 CFR 144.51(a) (See also 145.11(a)(19))	<p>20 AAC 25.1120 (a) The storage operator shall comply with all conditions of the permit; any 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. The storage operator shall give advance notice to the commission of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.</p> <p>20 AAC 25.1010 (c) Notwithstanding any other provision of 20 AAC 25.1000 – 20 AAC 25.1900, the commission may take emergency action upon receipt of information that a contaminant which is present in or likely to enter a public water system or an underground source of drinking water may present an imminent and substantial endangerment to the health of persons.</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>There are no emergency permits for Class VI. AOGCC may take emergency action when needed.</p>	<p>A storage operator includes a permittee and Alaska drafting style requires “shall” rather than “must” for individual actors.</p> <p>There are no emergency permits for Class VI. AOGCC may take emergency action when needed</p>
240.	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.	40 CFR 144.51(b) (See also 145.11(a)(19))	20 AAC 25.1120 (b) If a storage operator wishes to continue an activity regulated by a storage facility permit after the expiration date of the permit, the storage operator shall apply for and obtain a new permit.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “shall” for individual actors rather than “must.” This raises no concerns for stringency.
241.	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.	40 CFR 144.51(c) (See also 145.11(a)(19))	20 AAC 25.1120 (c) It is not a defense for a storage operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of the permit;	No significant difference from federal rule and no concern for stringency.	The Alaska regulation makes edits for clarity and the edits do not change the meaning for purpose of stringency.

242.	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.	40 CFR 144.51(d) (See also 145.11(a)(19))	20 AAC 25.1120(d) A storage operator shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit;	No significant difference from federal rule and no concern for stringency.	
243.	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.	40 CFR 144.51(e) (See also 145.11(a)(19))	20 AAC 25.1120 (e) A storage facility operator 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 responsibility requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.	No significant difference from federal rule and no concern for stringency.	
244.	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.	40 CFR 144.51(f) (See also 145.11(a)(19))	20 AAC 25.1120(f) A storage facility permit may be modified, revoked and reissued, or terminated for cause under 20 AAC 25.1410. The filing of a request by the storage operator 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 significant difference from federal rule and no concern for stringency.	
245.	Property rights. This permit does not convey any property rights of any sort, or any exclusive privilege.	40 CFR 144.51(g) (See also 145.11(a)(19))	20 AAC 25.1120 (g) Except as provided by AS 41.06.165; the storage facility permit does not convey any property rights of any sort, or any exclusive privilege; nor does it authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.	No significant difference from federal rule and no concern for stringency.	AS 41.06.165 is an Alaska statute provision governing who owns and is responsible for carbon dioxide injected into a storage reservoir, but the Alaska statute does not change the federal requirements or raise any concerns for stringency.

246.	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.	40 CFR 144.51(h) (See also 145.11(a)(19))	20 AAC 25.1120 (h) The storage operator shall furnish to the commission, within a time specified by the commission, any information which the commission may request to determine whether cause exists for modifying, revoking and reissuing, or terminating a storage facility permit, or to determine compliance with the permit. The storage operator shall also furnish to the commission, upon request, copies of records required to be kept by the storage facility permit.	No significant difference from federal rule and no concern for stringency.	
247.	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:	40 CFR 144.51(i) (See also 145.11(a)(19))	20 AAC 25.1120 (i) The storage operator shall allow the commission or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:	No significant difference from federal rule and no concern for stringency.	
248.	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;	40 CFR 144.51(i)(1) (See also 145.11(a)(19))	20 AAC 25.1080 implements the storage facility premises where the regulated facility or activity is located or conducted or where records must be kept under the conditions of the permit;	No significant difference from federal rule and no concern for stringency.	
249.	Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;	40 CFR 144.51(i)(2) (See also 145.11(a)(19))	20 AAC 25.1120 (i)(2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;	No significant difference from federal rule and no concern for stringency.	
250.	Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and	40 CFR 144.51(i)(3) (See also 145.11(a)(19))	20 AAC 25.1120 (i) (3) inspect at reasonable times, any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required under the permit; and	No significant difference from federal rule and no concern for stringency.	
251.	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.	40 CFR 144.51(i)(4) (See also 145.11(a)(19))	20 AAC 25.1120 (i)(4) sample or monitor at reasonable times, for the purposes of assuring permit compliance, or as otherwise authorized by the Safe Drinking Water Act, any substance or parameters at any location.	No significant difference from federal rule and no concern for stringency.	

252.	Monitoring and records. (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.	40 CFR 144.51(j)(1) (See also 145.11(a)(19))	20 AAC 25.1120 (j) The storage operator shall prepare, maintain, and comply with a testing and monitoring plan under 20 AAC 25.1250.	No significant difference from federal rule and no concern for stringency	
253.	The permittee shall retain records of all monitoring information, including the following:	40 CFR 144.51(j)(2) (See also 145.11(a)(19))	20 AAC 25.1120 (k)The storage operator shall comply with the reporting requirements of 20 AAC 25.1610. 20 AAC 225.1610 20 AAC 25.1610 (f) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity A storage operator shall maintain records of all monitoring information, including	No significant difference from federal rule and no concern for stringency	The storage operator means the permittee and has the same scope as the federal rule. 20 AAC 25.1610 implements the reporting requirements of 40 C.F.R. 144.51 (j).
254.	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	40 CFR 144.51(j)(2)(i) (See also 145.11(a)(19))	20 AAC 25.1610 (f) (1) calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the storage facility permit, and records of all data used to complete the application for a storage facility permit for a period of at least three years from the date of the sample, measurement, report, or application; this period may be extended by request of the commission at any time; and	No significant difference from federal rule and no concern for stringency.	
255.	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.	40 CFR 145.1(j)(2)(ii) (See also 145.11(a)(19))	20 AAC 25.1610 (f) (2) the nature and composition of all injected fluid until not less than three years after the completion of any plugging and abandonment procedures specified under 20 AAC 25.1300; the commission may require a storage operator to deliver the records to the commission at the conclusion of the retention period.	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, the singular includes the plural unless specified otherwise. There is no change in meaning and no concern for stringency.

256.	Records of monitoring information shall include:	40 CFR 144.51(j)(3) (See also 145.11(a)(19))	20 AAC 25 .1250 (e) Records of monitoring information under this section must include	No significant difference from federal rule and no concern for stringency.	
257.	The date, exact place, and time of sampling or measurements;	40 CFR 144.51(j)(3)(i) (See also 145.11(a)(19))	20 AAC 25 .1250 (e) (1) the date, exact place, and time of sampling or measurements;	No significant difference from federal rule and no concern for stringency.	
258.	The individual(s) who performed the sampling or measurements;	40 CFR 144.51(j)(3)(ii) (See also 145.11(a)(19))	20 AAC 25 .1250 (e) (2) the individual who performed the sampling or measurements;	No significant difference from federal rule and no concern for stringency.	
259.	The date(s) analyses were performed;	40 CFR 144.51(j)(3)(iii) (See also 145.11(a)(19))	20 AAC 25 .1250 (e) 3) the date the analyses were performed;	No significant difference from federal rule and no concern for stringency.	
260.	The individual(s) who performed the analyses;	40 CFR 144.51(j)(3)(iv) (See also 145.11(a)(19))	20 AAC 25 .1250 (e) (4) the individual who performed the analyses;	No significant difference from federal rule and no concern for stringency.	
261.	The analytical techniques or methods used; and	40 CFR 144.51(j)(3)(v) (See also 145.11(a)(19))	20 AAC 25 .1250 (e) (5) the analytical technique or method used; and	No significant difference from federal rule and no concern for stringency.	
262.	The results of such analyses.	40 CFR 144.51(j)(3)(vi) (See also 145.11(a)(19))	20 AAC 25 .1250 (e) (6) the result of the analyses.	No significant difference from federal rule and no concern for stringency.	

<p>263.</p>	<p>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.</p> <p>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.</p> <p>(f) Records shall be retained by owner or operator as follows: (1) All data collected under § 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. (2) Data on the nature and composition of all injected fluids collected pursuant to § 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. (3) Monitoring data collected pursuant to § 146.90(b) through (i) shall be retained for 10 years after it is collected. (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 §§ 146.93(f) and (h) shall</p>	<p>40 CFR §144.51(j)(4)</p>	<p>20 AAC 25. 1610(g) A storage operator shall retain</p> <p>20 AAC 25.1610 (g) (1) all data collected under 20 AAC 25.1080 for a storage facility permit application throughout the life of the storage facility and for not less than 10 years following issuance of a certificate of completion under 20 AAC 25.1320;</p> <p>20 AAC 25.1610 (g) (2) data on the nature and composition of all injected fluid collected pursuant to 20 AAC 25.1250 for not less than 10 years following issuance of a certificate of completion; the commission may require the storage operator to deliver the records to the commission or other state agency at the conclusion of the retention period;</p> <p>20 AAC 25.1610(g)(3) monitoring data collected pursuant to 20 AAC 25.1250 for not less than 10 years after it is collected.</p> <p>20 AAC 25.1610(g) (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 certificate of completion report collected</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency</p> <p>No significant difference from federal rule and no concern for stringency</p> <p>No significant difference from federal rule and no concern for stringency.</p>	<p>The Alaska regulations incorporate 146.84(g) in 20 AAC 25.1070, 146.91 in 20 AAC 25.1610, 146.92 in 20 AAC 25.1330 and 146.93 in 1310.</p> <p>The Alaska term for carbon storage project is storage facility.</p> <p>Under Alaska drafting style, the singular includes the plural unless specified otherwise. There is no change in meaning and no concern for stringency.</p> <p>The Alaska rule allows for delivery of records to the commission or other state agency. This is appropriate because after a certificate of completion is issued by the commission, the Department of Natural Resources will be responsible for long-term monitoring and maintenance. AS 41.06.305.</p> <p>20 AAC 25.1320 mirrors 146.93.</p>
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	<p>be retained for 10 years following site closure.</p> <p>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.</p> <p>146.91(f) Records shall be retained by the owner or operator as follows:</p> <p>(1) All data collected under § 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.</p> <p>(2) Data on the nature and composition of all injected fluids collected pursuant to § 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.</p>		<p>pursuant to requirements at 20 AAC 25.1310 for 10 years following issuance of a certificate of completion under 20 AAC 25.1320.</p> <p>20 AAC 25.1610(h) The storage operator shall deliver the records to the commission at the conclusion of the retention period, and the records will thereafter be retained at a location designated by the commission for that purpose. The commission may require the storage operator to retain any records required in this section for longer than 10 years after issuance of a certificate of completion.</p> <p>20 AAC 25.1610 (g)(1) all data collected under 20 AAC 25.1080 for a storage facility permit application throughout the life of the storage facility and for not less than 10 years following issuance of a certificate of completion under 20 AAC 25.1320</p> <p>20 AAC 25.1610(g) (2) data on the nature and composition of all injected fluid collected pursuant to 20 AAC 25.1250 for not less than 10 years following issuance of a certificate of completion; the commission may require the storage operator to deliver the records to the commission or other state agency at the conclusion of the retention period;</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	<p>20 AAC 25.1080 mirrors 146.82. In Alaska, the commission issues a certificate of completion upon completion of long-term monitoring.</p>
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	<p>(3) Monitoring data collected pursuant to § 146.90(b) through (i) shall be retained for 10 years after it is collected.</p> <p>(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 §§ 146.93(f) and (h) shall be retained for 10 years following site closure.</p> <p>(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.</p> <p>146.92(d) Plugging report. Within 60 days after plugging, the owner or operator must submit, pursuant to § 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.</p>		<p>20 AAC 25.1610(g)(3) monitoring data collected pursuant to 20 AAC 25.1250 for not less than 10 years after it is collected.</p> <p>20 AAC 25.1610(g)(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 certificate of completion report collected pursuant to requirements at 20 AAC 25.1310 for 10 years following issuance of a certificate of completion under 20 AAC 25.1320.</p> <p>20 AAC 25.1610 (g)(5) all modeling inputs and data used to support area of review reevaluations under 20 AAC 25.1070(e);</p> <p>20 AAC 25.1610 (h) The commission may require the storage operator to retain any records required in this section for longer than 10 years after issuance of a certificate of completion.</p> <p>20 AAC 25.1300 (d) Within 60 days after plugging, the storage operator must submit, pursuant to 20 AAC 25.1610, a plugging report to the commission. The report must be certified as accurate by the storage operator and by the person who performed the plugging operation if other than the storage operator. The storage operator shall retain the well plugging report for not less than 10 years following project completion. Upon project completion, the storage operator shall</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	
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	<p>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:</p> <p>(1) Documentation of appropriate injection and monitoring well plugging as specified in § 146.92 and paragraph (e) of this section.</p> <p>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;</p> <p>(2) Documentation of appropriate notification and information to such State authorities that have authority over drilling activities to enable such State authorities to impose appropriate conditions on subsequent drilling activities that may penetrate the injection and confining zone(s); and</p>		<p>furnish the records under this subsection to the commission.</p> <p>20 AAC 25. 1320 (e) Not more than 90 days after the commission approves a certificate of completion, the storage operator must submit a report to the commission, the report must be retained at a location designated by the commission for not less than 10 years. The report must include:</p> <p>20 AAC 25. 1610 (e)(1) documentation of appropriate injection and monitoring well plugging as specified in 20 AAC 25.1300 and (d) of this section;</p> <p>20 AAC 25. 1320 (e)(2) documentation that a survey plat has been submitted to the state recorder's office; the plat must indicate the location of the injection well relative to permanently surveyed benchmarks, and the storage must also submit a copy of the plat to the regional administrator of the appropriate United States Environmental Protection Agency regional officer;</p> <p>20 AAC 25. 1320 (e) (3) documentation of appropriate notification and information to each State, local and Tribal authorities that have authority over drilling activities to allow the State, local, and Tribal authorities to impose appropriate conditions on subsequent drilling activities that may penetrate the injection and confining zone; and</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	<p>The commission will issue a certificate of completion upon ending long-term monitoring, that is the federal equivalent of site closure.</p>
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	<p>(3) Records reflecting the nature, composition, and volume of the CO2 stream.</p> <p>146.93(h) The owner or operator must retain for 10 years following site closure, records collected during the post-injection site care 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.</p>		<p>20 AAC 25. 1320 (e) (4) records reflecting the nature, composition, and volume of the carbon dioxide stream.</p> <p>20 AAC 25.1610(g) (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 certificate of completion report collected pursuant to requirements at 20 AAC 25.1310 for 10 years following issuance of a certificate of completion under 20 AAC 25.1320.</p> <p>20 AAC 25.1610(h) The storage operator shall deliver the records to the commission at the conclusion of the retention period, and the records will thereafter be retained at a location designated by the commission for that purpose. The commission may require the storage operator to retain any records required in this section for longer than 10 years after issuance of a certificate of completion.</p> <p>20 AAC 25.1320 (g) The storage operator must retain for 10 years following issuance of the certificate of completion, records collected during the post-injection site care period. The storage operator must deliver the records to the Department of Natural Resources at the conclusion of the retention period, and the Department of Natural Resources shall maintain the</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	
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			records. The commission shall be notified by the Department of Natural Resources when the records are delivered to the department.		
264.	Signatory requirement. All applications, reports, or information submitted to the Administrator shall be signed and certified. (See §144.32.)	40 CFR 144.51(k) (See also 145.11(a)(19))	<p>20 AAC 25.1030 (e) The commission shall require that all reports required from a storage operator for a storage facility permit, or other information requested by the commission regarding a storage facility permit application, must be signed by a person described in 40 C.F.R. 144.32(a), as adopted by reference in this section, or an authorized representative of that person; an authorized representative means a person that qualifies under 40 C.F.R. 144.32(b).</p> <p>20 AAC 25.1610 (a) A storage operator must, at a minimum, provide the reports identified in this section to the commission and the United States Environmental Protection Agency, for each permitted injection well as part of a storage facility permit. Reports required by this section, or a storage facility permit, or other information required by the commission shall be signed by a person authorized under 40 C.F.R. 144.32(b), effective January 10, 2011, and adopted by reference.</p>	No significant difference from federal rule and no concern for stringency.	The Alaska regulation adopts 144.32 by reference and thus incorporates the federal signatory requirements.
265.	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.	40 CFR 144.51(l)(1) (See also 145.11(a)(19))	20 AAC 25.1120 (e) continues... A storage operator shall give notice to the commission as soon as possible of any planned physical alterations or additions to the storage facility.	No significant difference from federal rule and no concern for stringency.	

266.	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.	40 CFR 144.51(l)(2) (See also 145.11(a)(19))	20 AAC 25.1120(f) A storage facility permit may be modified, revoked and reissued, or terminated for cause under 20 AAC 25.1410. The filing of a request by the storage operator 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 significant difference from federal rule and no concern for stringency.	
267.	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.)	40 CFR 144.51(l)(3) (See also 145.11(a)(19))	20 AAC 25.1400(a) A storage facility permit, and an associated Class VI well injection authorization may be transferred to a new storage operator only by application by the proposed permit transferee as though that person were the original applicant for the permit, and upon approval by the commission. A permit may be transferred by the holder of the permit to a new storage operator only if (1) the permit has been modified or revoked and reissued under 20 AAC 25.1410 or (2) a minor modification is made under 20 AAC 25.1430 to identify the new permittee and incorporate any other requirements necessary under federal and state laws, including 42 U.S.C. 300f-300j-27 (Safe Drinking Water Act). (b) A transfer is not allowed if the permittee is in noncompliance with any term or condition of the storage facility permit to be transferred unless the permittee agrees to bring the storage facility back into compliance with the permit .	No significant difference from federal rule and no concern for stringency. No significant difference from federal rule and no concern for stringency.	
268.	Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.	40 CFR 144.51(l)(4) (See also 145.11(a)(19))	20 AAC 25.1140 (c) A storage operator shall orally report noncompliance covered by (b) of this section to the commission within 24 hours from the time the storage operator becomes aware of the noncompliance.	No significant difference from federal rule and no concern for stringency.	

269.	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.	40 CFR 144.51(l)(5) (See also 145.11(a)(19))	20 AAC 25.1140 (a) As required by the commission on a case-by-case basis, the storage operator shall submit to the commission identified actions to be taken to achieve full compliance with the requirements of a storage facility permit and associated Class VI well. A schedule of compliance must require compliance as soon as possible, and in no case later than three years after the date of the storage facility permit under 20 AAC 25.1170. If the permit establishes a schedule of compliance that exceeds one year from the date of the storage facility permit under 20 AAC 25.1170, the schedule of compliance must set forth interim requirements and dates for completion; the time between interim dates must not exceed one year. If the time necessary for completion of any interim requirement is more than one year, and is not readily divisible into stages for completion, the storage facility permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and shall indicate a project completion date. The permit must require that, if the commission requires a schedule of compliance, the storage operator shall submit a progress report to the commission not later than 30 days after each interim date and the final date of completion.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” for an individual action, and “must” for a non-actor. Other minor edits are made for clarity but have no effect on stringency and the regulation captures the federal rule on compliance requirements.
270.	Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment, including:	40 CFR 144.51(l)(6) (See also 145.11(a)(19))	20 AAC 25.1140 (b) A storage operator shall report any noncompliance which may endanger health or the environment, including:	No difference from federal rule and no concern for stringency.	20 AAC 25.1140 (c) requires reporting of events under (b) within 24 hours.

271.	Any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW; or	40 CFR 144.51(l)(6)(i) (See also 145.11(a)(19))	20 AAC 25.1140 (b)(1) any monitoring or other information which indicates that any contaminant may endanger underground sources of drinking water;	No difference from federal rule and no concern for stringency.	
272.	<p>Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.</p> <p>Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.</p> <p>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.</p>	40 CFR 144.51(l)(6)(ii) (See also 145.11(a)(19))	<p>20 AAC 25.1140 (b) (2) any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water</p> <p>20 AAC 25.1140 (c) A storage operator shall orally report noncompliance covered by (b) of this section to the commission within 24 hours from the time the storage operator becomes aware of the noncompliance. A storage operator shall provide a written submission to the commission within 5 days of the time the storage operator becomes aware of the noncompliance, including</p> <ol style="list-style-type: none"> (1) a description of the noncompliance and its cause, (2) the period of noncompliance, including exact dates and times, (3) if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (4) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance . 	<p>No difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	<p>The Alaska regulation differs slightly from the federal rule for clarity, but the changes do not affect stringency or meaning.</p> <p>The Alaska regulation differs slightly from the federal rule for clarity, but the changes do not affect stringency or meaning.</p>

273.	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.	40 CFR 144.51(l)(7) (See also 145.11(a)(19))	20 AAC 25.1140(d) For noncompliance not covered by (b) of this section, the storage operator shall report all instances of noncompliance not reported in (c) of this section, at the time monitoring reports required by 20 AAC 25.1250 and 20 AAC 25.1610 are submitted. The reports must contain the information listed in paragraph (c) of this section	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “must” for a non-actor, this has no effect on stringency.
274.	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.	40 CFR 144.51(l)(8) (See also 145.11(a)(19))	20 AAC 25.1140(e) When a storage operator becomes aware that the storage operator failed to submit any relevant facts in a storage facility permit application, or submitted incorrect information in a storage facility permit application or in any report to the commission, the storage operator shall promptly submit such facts or information to the commission .	No significant difference from federal rule and no concern for stringency.	Alaska regulations use “storage operator” rather than permittee; “storage operator” includes a permittee.

275.	Requirements prior to commencing injection. ... a new injection well may not commence injection until construction is complete, and	40 CFR 144.51(m) (See also 145.11(a)(19))	<p>20 AAC 25.1180 (b) A storage operator must submit an application to drill, deepen, convert, operate, or reenter a well to the commission in the format and with the information required by the commission .</p> <p>20 AAC 25.1180(c) Not more than 30 days after conclusion of well drilling and completion activities, the storage operator shall submit to the commission an application to operate an injection well; the application shall be in a format approved by the commission and contain the information required by the commission. The application must include notice of completion of construction in compliance with 20 AAC 25.1210. The commission may inspect or otherwise make a determination that the Class VI well is in compliance with the conditions of the permit.</p> <p>(d) Injection of carbon dioxide is prohibited until construction, or for a Class II well converting to carbon storage, approval by the commission of well mechanical integrity under 20 AAC 25.1240, and</p>	No significant difference from federal rule and no concern for stringency.	The Alaska regulation refers to Class VI well for specificity.
276.	The permittee has submitted notice of completion of construction to the Director; and	40 CFR 144.51(m)(1) (See also 145.11(a)(19))	20 AAC 25.1180(d) Injection of carbon dioxide is prohibited until construction is complete or for a Class II well converting to carbon storage, approval by the commission of well mechanical integrity under 20 AAC 25.1240, and (1) the storage operator has submitted a notice of completion of construction, or confirmation of well mechanical integrity as determined by the commission;	No significant difference from federal rule and no concern for stringency.	The Alaska regulations have a regulation for well injection authorization for a Class VI well or converted Class II well under a storage facility permit. The regulation is as stringent as the federal rules.

277.	The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or	40 CFR 144.51(m)(2)(i) (See also 145.11(a)(19))	20 AAC 25.1180 (d) (2) the commission has approved an authorization to inject.	No significant difference from federal rule and no concern for stringency.	
278.	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.	40 CFR 144.51(m)(2)(ii) (See also 145.11(a)(19))	20 AAC 25.1180 (d) (2) the commission has approved an authorization to inject.	Authorization to inject is required from the commission. The regulation is not less stringent than the federal rule.	Alaska law is clear that the operator needs consent from the commission. The commission will not waive authorization.
279.	The permittee shall notify the Director at such times as the permit requires before conversion or abandonment of the well.....	40 CFR 144.51(n) (See also 145.11(a)(19))	20 AAC 25.444 governs transitioning from a Class II well to a Class VI well and 20 AAC 25.1300 governs injection well plugging; both require notice to the commission.	No significant difference from federal rule and no concern for stringency.	
280.	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.	40 CFR §144.51(o)	20 AAC 25.1300 implements 40 C.F.R. 146.92 20 AAC 25.1220 (l) The storage operator shall prepare, maintain, and comply with a well plugging plan under 20 AAC 25.1300(b).	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1300 implements 40 CFR 146.92 on injection well plugging and the requirements are required as part of a storage facility permit.
281.	<i>Duty to establish and maintain mechanical integrity.</i> 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 VI wells must maintain mechanical integrity as defined in §146.89 of this chapter.	40 CFR §144.51(q)(1)	20 AAC 25.1240 implements 40 C.F.R. 146.89, mechanical integrity.	No significant difference from federal rule and no concern for stringency.	The standards of 144.51 are covered in 20 AAC 25.1120 and in the permit requirements.

282.	<p>When the Director determines that a ...Class 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.</p> <p>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.</p>	40 CFR 144.51(q)(2) (See also 145.11(a)(19))	20 AAC 25.1240 (h) When the commission determines that a Class VI well lacks mechanical integrity under 20 AAC 25.1070 or this section the commission shall give written notice of the commission's determination to the storage operator. Unless the commission requires immediate cessation, the storage operator shall cease injection into the well within 48 hours of receipt of the commission's determination. The commission may allow plugging of the well pursuant to the requirements of 20 AAC 25.1300, or require the storage operator to perform additional construction, operation, monitoring, reporting and corrective action as is necessary to prevent the movement of fluid into or between underground sources of drinking water caused by the lack of mechanical integrity. The storage operator may resume injection upon written notification from the commission that the storage operator has demonstrated mechanical integrity pursuant to this section.	No significant difference from federal rule and no concern for stringency.	The Alaska regulation uses the commission as the actor, not an individual he/she. The storage operator covers both the owner and operator.
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283.	<p>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)...</p> <p>Permits for owners or operators of Class VI injection wells shall include conditions meeting the requirements of subpart H of part 146.</p>	40 CFR §144.52(a)	<p>20 AAC 25.1130. Establishing storage facility permit conditions. (a) In addition to the requirements of 20 AAC 25.1080 and 20 AAC 25.1020, the commission shall establish additional conditions for a storage facility permit and associated Class VI well as required on a case-by-case basis to prevent the migration of fluids into underground sources of drinking water and assure compliance with the Safe Drinking Water Act and 40 C.F.R. parts 144, 145, 146, and 124 and to provide for and assure compliance with federal or state legal requirements that take effect before the commission makes a final determination to issue a storage facility permit under 20 AAC 25.1080</p>	No significant difference from federal rule and no concern for stringency.	<p>20 AAC 25.1130 implements 40 C.F.R. 144.51, 20 AAC 25.1020 implements 40 C.F.R. 144.52, and 20 AAC 25.1080 implements 40 C.F.R. 146.82.</p> <p>40 CFR 144.52 repeats standards found elsewhere in part 146, so here we point out the regulations that incorporate the standards and are discussed in more detail in other parts of the crosswalk.</p>
284.	<p>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.</p> <p>The owner or operator of a proposed new injection well shall submit plans for testing, drilling, and construction as part of the permit application.</p> <p>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).</p> <p>No such changes may be physically incorporated into construction of the well prior to approval of the modification by the Director.</p>	40 CFR 144.52(a)(1) (See also 145.11(a)(20))	<p>20 AAC 25.1210 Class VI well construction requirements implement 40 C.F.R. 146.86 standards.</p> <p>20 AAC 25.1120 (k) The storage operator must obtain an injection well permit under 20 AAC 25.1180, and an injection well must meet the construction and completion requirements of 20 AAC 25.1210 .</p> <p>20 AAC 25.1430 Minor modifications; storage facility permit implements 40 C.F.R. 144.41, modifications</p>	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1120 implements 40 C.F.R. 144.52

285.	Corrective action as set forth in §§144.55, 146.7, and 146.84 of this chapter.	40 CFR §144.52(a)(2)	<p>20 AAC 25.1120 (o) The storage operator shall prepare, maintain, and comply with the area of review and corrective action plan under 20 AAC 25.1070 .</p> <p>§§144.55 is not Class VI specific but requires a corrective active plan (where applicable) and compliance schedule. This is covered in 20 AAC 25.1070.</p> <p>146.7 is implemented at 20 AAC 25.1070 146.84 is implemented at 20 AAC 25.1070</p>	No significant difference from federal rule and no concern for stringency.	
286.	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.	40 CFR 144.52(a)(3) (See also 145.11(a)(20))	20 AAC 25.1230 (a) Except during stimulation, the owner or operator of a Class VI well must ensure that injection pressure does not exceed 90 percent of the fracture pressure of the injection zone so as to 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 or cause the movement of injection or formation fluids that endangers an underground source of drinking water. Under 20 AAC 25.1080 (a)(9), all stimulation programs must be approved by the commission as part of the storage facility permit application and incorporated into the permit.	No significant difference from federal rule and no concern for stringency.	<p>See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or". Alaska uses "or" for the federal "and/or"; there is no change in meaning and no effect on stringency.</p> <p>20 AAC 25.1230 implements 40 C.F.R. 146.88, operating requirements.</p>

287.	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.	40 CFR 144.52(a)(5) (See also 145.11(a)(20))	20 AAC 25.1250 implements 40 C.F.R. 146.90 on reporting, and 20 AAC 25.1610 implements the reporting tests and methods used to generate monitoring data.	No significant difference from federal rule and no concern for stringency. This crosswalk row refers to a general federal regulation that is implemented in other regulations as noted in the Alaska notes.	20 AAC 25.1250 and 20 AAC 25.1610 implement the federal monitoring and reporting requirements.
288.	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:	40 CFR §144.52(a)(6) (See also 145.11(a)(20))	20 AAC 25.1120 (p) The storage operator shall maintain financial responsibility under 20 AAC 25.1200. 20 AAC 1200(a)(2) the qualifying instrument must be sufficient to cover the cost of (A) corrective action that meets the requirements of 20 AAC 25.1070; (B) injection well plugging that meets the requirements of 20 AAC 25.1300;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1200 implements 40 C.F.R. 146.85
289.	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	40 CFR §144.52(a)(7)(i)(A)	20 AAC 25.1120 (m) The storage operator shall prepare, maintain, and comply with a Class VI well plugging plan under 20 AAC 25.1300(b). 20 AAC 25.1300(d) Within 60 days after plugging, the storage operator must submit, pursuant to 20 AAC 25.1610, a plugging report to the commission. The report must be certified as accurate by the storage operator and by the person who performed the plugging operation if other than the storage operator. The storage operator shall retain the well plugging report for not less than 10 years following project completion. Upon project completion, the storage operator shall furnish the records under this subsection to the commission.	No significant difference from federal rule and no concern for stringency.	144.51 (o) requires that a class VI permit include the requirements of 146.92; the Alaska regulations do this as 20 AAC 25.1300 implements 40 C.F.R 146.92 144.51 (p), plugging and abandonment report, applies to EPA administered programs.

290.	The well has been converted in compliance with the requirements of §144.51(n); or	40 CFR 144.52(a)(7)(i)(B) (See also 145.11(a)(20)) 144.51(n) 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.	20 AAC 25.1300 implements requirements for plugging under 40 C.F.R. 146.92 20 AAC 25.444 Covers conversion from Class II to Class VI 20 AAC 25.1300(c) The storage operator must notify the commission in writing pursuant to 20 AAC 25.1610, at least 60 days before plugging a Class VI well , although the commission may allow for a shorter notice period.	No significant difference from federal rule and no concern for stringency.	144.51 (n) refers to area permits, which are not allowed for state programs of primacy for Class VI. This crosswalk row repeats requirements that appear in other sections more specific to Class VI wells.
291.	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.	40 CFR 144.52(a)(7)(i)(C) (See also 145.11(a)(20))	20 AAC 25.1400 implements 40 C.F.R. 144.38 20 AAC 25.1120 (p) The storage operator shall maintain financial responsibility under 20 AAC 25.1200.	The Alaska regulation requires a transferor of a permit to meet all permit requirements, 20 AAC 25.1400. The intent of the federal rule is captured in the Alaska regulations.	144.52 is implemented as 20 AAC 25.1130 and 20 AAC 25.1120.
292.	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. 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.	40 CFR §144.52(a)(7)(ii) 40 CFR §146.85	20 AAC 25.1200 implements 40 C.F.R. 146.85 20 AAC 25.1120 (q) The storage operator shall maintain and comply with the postinjection and site care and facility closure plan under 20 AAC 25.1310. 20 AAC 25.1120 (p) The storage operator shall maintain financial responsibility under 20 AAC 25.1200.	No significant difference from federal rule and no concern for stringency. The Alaska regulations address the specifics of 144.52 and part 146.	Financial responsibility for Class VI wells is covered by 20 AAC 25.1200, which implements the financial obligation requirements of 146.85.

293.	<i>Mechanical integrity.</i> A permit for any Class VI well which lacks mechanical integrity shall 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.	40 CFR §144.52(a)(8) 40 CFR §146.89	20 AAC 25.1900 () The storage operator shall establish and maintain mechanical integrity before commencing injection and shall maintain mechanical integrity under 20 AAC 25.1240.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1240 implements 40 C.F.R. 146.89
294.	<i>Additional conditions.</i> 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.	40 CFR 144.52(a)(9) (See also 145.11(a)(20))	20 AAC 25.1130 (a) In addition to the requirements of 20 AAC 25.1080 and 20 AAC 25.1020, the commission will establish additional conditions for a storage facility permit and associated Class VI well as required on a case-by-case basis to prevent the migration of fluid into underground sources of drinking water ... No significant difference from federal rule and no concern for stringency.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” for actions of a commission. In Alaska drafting, the singular form includes the plural unless specified otherwise.
295.	144.52(b)(1) 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.	40 CFR 144.52(b)(1) (See also 145.11(a)(20))	20 AAC 25.1130 (a) continues...and assure compliance with the Safe Drinking Water Act and 40 C.F.R. parts 144, 145, 146, and 124 and to provide for and assure compliance with federal or state legal requirements that take effect before the commission makes a final determination to issue a storage facility permit under 20 AAC 25.1080	No significant difference from federal rule and no concern for stringency.	
296.	144.52(b)(2) 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.	40 CFR 144.52(b)(2) (See also 145.11(a)(20))	20 AAC 25.1130 (a) continues...and to provide for and assure compliance with federal or state legal requirements that take effect before the commission makes a final determination to issue a storage facility permit under 20 AAC 25.1080	No significant difference from federal rule and no concern for stringency.	

297.	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.	40 CFR 144.52(b)(3) (See also 145.11(a)(20))	20 AAC 25.1130(b) A new storage facility permit and to the extent allowed under 20 AAC 25.1410, a modified or revoked and reissued permit, must incorporate the requirements of this section and 20 AAC 25.1120.	No significant difference from federal rule and no concern for stringency.	The Alaska regulation differs slightly for better flow and readability.
298.	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.	40 CFR 144.52 (See also 145.11(a)(20))	20 AAC 25.1130 (c) The conditions in this section must be incorporated into a final permit either expressly or by reference. If incorporated by reference, the commission will identify in the permit a specific citation to the applicable regulation or other requirement.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” for actions of a commission; this has no effect on stringency.
299.	General. The permit may, when appropriate, specify a schedule of compliance leading to compliance with the SDWA and parts 144, 145, 146, and 124.	40 CFR 144.53(a) (See also 145.11(a)(21))	20 AAC 25.1140(a) As required by the commission on a case-by-case basis, the storage operator shall submit to the commission -identified actions to be taken to achieve full compliance with the requirements of a storage facility permit and associated Class VI well.	No significant difference from federal rule and no concern for stringency.	The Alaska regulation varies slightly in wording by requiring submission of a list of identified action to be taken to achieve full compliance with the requirements of a storage facility permit; a permit will include compliance with required federal standards of the SDWA and parts 144, 145, 146, and 124.
300.	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.	40 CFR 144.53(a)(1) (See also 145.11(a)(21))	20 AAC 25.1140(a).continues...A schedule of compliance must require compliance as soon as possible, and in no case later than three years after the date of the storage facility permit under 20 AAC 25.1170.	No significant difference from federal rule and no concern for stringency.	
301.	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.	40 CFR 144.53(a)(2) (See also 145.11(a)(21))	20 AAC 25.1140(a) continues...A schedule of compliance must require compliance as soon as possible, and in no case later than three years after the date of the storage facility permit under 20 AAC 25.1170. If the permit establishes a schedule of compliance that exceed one year from the date of the storage facility permit under 20 AAC 25.1170, the schedule of compliance must set forth interim requirements and dates for completion; the time between interim dates shall not exceed one year.	No significant difference from federal rule and no concern for stringency.	

302.	The time between interim dates shall not exceed 1 year.	40 CFR 144.53(a)(2)(i) (See also 145.11(a)(21))	20 AAC 25.1140(a) continued If the permit establishes a schedule of compliance that exceed one year from the date of the storage facility permit under 20 AAC 25.1170, the schedule of compliance must set forth interim requirements and dates for completion; the time between interim dates shall not exceed one year.	No significant difference from federal rule and no concern for stringency.	
303.	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.	40 CFR 144.53(a)(2)(ii) (See also 145.11(a)(21))	20 AAC 25.1140 (a) continues...If the time necessary for completion of any interim requirement is more than one year, and is not readily divisible into stages for completion, the storage facility permit must specify interim dated for the submission of reports of progress toward completion of the interim requirements, and shall indicate a project completion date	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “must” rather than “shall” for a non-person actor, like a permit. This has no effect on stringency.
304.	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.	40 CFR 144.53(a)(3) (See also 145.11(a)(21))	20 AAC 25.1140(a) continues...The permit must require that, if the commission requires a schedule of compliance, the storage operator shall submit a progress report to the commission not later than 30 days after each interim date and the final date of completion	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires” must” for a permit and “shall” for an actor like a storage operator. This has no effect on stringency.
305.	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);	40 CFR 144.54(a) (See also 145.11(a)(22))	20 AAC 25.1210 (well construction), 20 AAC 25.1220 logging, sampling, testing), 20 AAC 25.1230 (injection well operating), 20 AAC 25.1250 (testing and monitoring)	No, the Alaska regulations contain all these requirements.	20 AAC 25.1210 (well construction), 20 AAC 25.1220 logging, sampling, testing), 20 AAC 25.1230 (injection well operating), 20 AAC 25.1250 (testing and monitoring)
306.	Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including when appropriate, continuous monitoring;	40 CFR 144.54(b) (See also 145.11(a)(22))	20 AAC 25.1250	No, the Alaska regulations contain all these requirements.	20 AAC 25.1250 covers testing and monitoring, and some recordkeeping.

307.	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.	40 CFR 144.54(c) (See also 145.11(a)(22))	20 AAC 25.1610	No, the Alaska regulations contain all these requirements.	20 AAC 25.1250 and 20 AAC 25.1610 contain testing, monitoring, and reporting requirements as required by part 146.
308.	(a) This part sets forth technical criteria and standards for the UIC Program. This part should be read in conjunction with 40 CFR parts 124, 144, and 145, which also apply to UIC programs. 40 CFR part 144 defines the regulatory framework of EPA administered permit programs. 40 CFR part 145 describes the elements of an approvable State program and procedures for EPA approval of State participation in the permit programs. 40 CFR part 124 describes the procedures the Agency will use for issuing permits under the covered programs. Certain of these procedures will also apply to State-administered programs as specified in 40 CFR 5.	40 CFR 146.1(a)	This is general language, no regulatory implementation needed.		
309.	Upon the approval, partial approval or promulgation of a State UIC program by the Administrator, any underground injection which is not authorized by the Director by rule or by permit is unlawful.	40 CFR 146.1(b)	20 AAC 25.1020 (b) Any underground injection of carbon dioxide for carbon storage through a Class VI well in a storage facility, except as authorized by a storage facility permit issued by the commission, is prohibited. The construction of any well required to have a storage facility permit under 20 AAC 25.1170 is prohibited until the permit is issued.;	No significant difference from the federal code, and no concern for stringency.	The Alaska regulations are clear that the commission must authorize underground injection by permit.
310.	<i>Abandoned well</i> 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.		20 AAC 25.1900 (1) “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;	No difference from federal definition and no concern for stringency.	

311.	<i>Casing</i> 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.		20 AAC 25.1900 (9) “casing” means a pipe or tubing of appropriate material, of varying diameter and weight, which is installed into a well to maintain the structural integrity of a well, to prevent the loss of drilling mud into porous ground, or to prevent water, gas, or other fluid from entering or leaving the hole;	No difference from federal definition and no concern for stringency.	
312.	<i>Cementing</i> means the operation whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing.		25.1900 (10) “cementing” means the operation whereby a cement slurry is pumped into a drilled hole and forced behind the casing;	No significant difference from the federal definition and no concern for stringency.	See, note 2 on page 1 for an explanation of how “or” suffices for federal use of “and/or”. The Alaska drafting style uses “or” rather than “and/or”; there is no change in meaning and no concern for stringency.
313.	<i>Effective date of a UIC program</i> means the date that a State UIC program is approved or established by the Administrator.		Not required for state programs for Class VI primacy.	Not required for state programs for Class VI primacy.	
314.	<i>Experimental technology</i> means a technology which has not been proven feasible under the conditions in which it is being tested.		(11) "Class VI well" means a well (A) that is not experimental in nature that is used for geologic sequestration of carbon dioxide beneath the lowermost formation containing an underground sources of drinking water; for the purpose of this subparagraph; "experimental" means use of a technology that has not been proven feasible under the conditions in which it is being tested;	No significant difference from the federal definition and no concern for stringency.	Because “experimental is used only in this definition, it is included in the definition of Class VI well.
315.	<i>Fault</i> means a surface or zone of rock fracture along which there has been displacement.		20 AAC 25.1900 (21) “fault” means a surface or zone of rock fracture along which there has been displacement;	No difference.	
316.	<i>Flow rate</i> 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.		20 AAC 25.1900 (23) “flow rate” means the volume per time unit given to the flow of gases or other fluid substances which emerges from an orifice, pump, turbine or passes along a conduit or channel;	No difference.	

317.	<i>Lithology</i> means the description of rocks on the basis of their physical and chemical characteristics.		20 AAC 25.1900 (27) "lithology" means the description of rocks on the basis of their physical and chemical characteristics;	No difference.	
318.	<i>Owner or operator</i> means the owner or operator of any facility or activity subject to regulation under the RCRA, UIC, NPDES, or 404 programs.		Alaska Statute AS 41.06.210 (9) has storage operator means "a person holding or applying for a permit" (29) "operator" means the person recognized as responsible for the well, site, storage facility, or carbon storage project covered by 20 AAC 25.1000 – 20 AAC 25.1900, and includes the storage operator as defined in AS 41.06.210; the operator can, but need not be, the owner of the storage facility; (30) " owner" means the person that owns the well, site, storage facility,-and includes the "storage operator" as defined in AS 41.06.210; the owner may be, but is not always, the operator of the well, site, facility, or activity governed under 20 AAC 25.1000 – 20 AAC 25.1900;	No significant difference from federal rule and no concern for stringency. Owner and Operator defined separately in Alaska regulations. See also row 89.	Reference to "carbon storage project" not needed as term is "storage facility" in Alaska law.
319.	<i>Packer</i> means a device lowered into a well to produce a fluid-tight seal.		20 AAC 25.1900 (31)"packer" means a device lowered into a well to produce a fluid tight seal;	No difference.	
320.	<i>Permit</i> 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."		20 AAC 25.1900 (32) "permit" means a storage facility permit under 20 AAC 25.1170, but does not include a permit which has not yet been the subject of final commission action, such as a draft permit;	No significant difference from federal rule and no concern for stringency.	

321.	<i>Plugging</i> 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.		20 AAC 25.1900 (34) "plugging" or "well 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;	No difference.	
322.	<i>Plugging record</i> 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.		Plugging record is not used in Alaska Class VI regulations and therefore is not defined. Further, it is a commonly understood term in oil and gas.	The intent and scope of the Alaska regulations include reporting and monitoring to meet the type of reporting and records required under federal rules. 20 AAC 25.1250 (testing and monitoring requirements; records of monitoring) and 20 AAC 25.1610 (reporting requirements; monitoring and records).	Plugging record is not used in Alaska Class VI regulations and is not defined. The regulations define "plugging" and require that an operator make and maintain a plugging report.
323.	<i>Pressure</i> means the total load or force per unit area acting on a surface.		20 AAC 25.1900 (35) "pressure" means the total load or force per unit area acting on a surface	No difference.	
324.	<i>Sole or principal source aquifer</i> means an aquifer which has been designated by the Administrator pursuant to section 1424 (a) or (e) of the SDWA.		Not required for state programs for Class VI primacy.	No difference.	
325.	<i>Surface casing</i> means the first string of well casing to be installed in the well.		20 AAC 25.990 "(41) surface casing" has the meaning given in 20 AAC 25.990; 20 AAC 25.990 (70) surface casing means a string of casing set and cemented in a well to prevent lost circulation while drilling deeper and to protect strata known or reasonably expected to serve as a source of drinking water for human consumption; usually "surface casing" is the first string of casing upon which BOPE is set	The definitions are similar and cause no concern for stringency.	20 AAC 25.990 (70) is currently law.

326.	<i>Well plug</i> means a watertight and gastight seal installed in a borehole or well to prevent movement of fluids.		20 AAC 25.1900 (48) "well plug" means a watertight and gastight seal installed in a borehole or well to prevent movement of fluids'	No difference.	
327.	<i>Well stimulation</i> 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.		20 AAC 25.1900 (40) "stimulation" includes "well stimulation" and 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;	No significant difference from federal rule and no concern for stringency.	
328.	<i>Well monitoring</i> means the measurement by on-site instruments or laboratory methods, of the quality of water in a well		20 AAC 25.1900 (47) "well monitoring" means the measurement, by on-site instruments or laboratory methods, of the quality of water in a well.	No difference.	
329.	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:	40 CFR §146.4	20 AAC 25.440(a) (a) Upon receipt of a letter of application, and in accordance with (b) of this section, the commission will, in its discretion, issue an order designating a freshwater aquifer or portion of it as an exempt freshwater aquifer, if the freshwater aquifer meets the following criteria:	No significant difference from federal rule and no concern for stringency.	20 AAC 25.440 was adopted in 1986 and revised in 1999.
330.	It does not currently serve as a source of drinking water; and	40 CFR 146.4(a)	20 AAC 25.440 (a)(1) it does not currently serve as a source of drinking water, and ...	No significant difference from federal rule and no concern for stringency.	20 AAC 25.440 was adopted in 1986 and revised in 1999
331.	It cannot now and will not in the future serve as a source of drinking water because:	40 CFR 146.4(b)	20 AAC 25.440 (a) (1) continues...it cannot now and will not in the future serve as a source of drinking water because..."	No significant difference from federal rule and no concern for stringency.	20 AAC 25.440 was adopted in 1986 and revised in 1999

332.	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.	40 CFR 146.4(b)(1)	20 AAC 25.440 (a) (1)(A) it is hydrocarbon-producing or can be demonstrated by the applicant to contain hydrocarbons that, considering their quantity and location, are expected to be commercially producible;..." Alaska Admin. Code Title 20 § 25.440 Freshwater aquifer exemption (Alaska Administrative Code (2024 Edition))	No significant difference from federal rule and no concern for stringency.	20 AAC 25.440 was adopted in 1986 and revised in 1999
333.	It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;	40 CFR 146.4(b)(2)	20 AAC 25.440 (a) (1)(B) it is situated at a depth or location that makes recovery of water for drinking water purposes economically or technologically impractical; or..." Alaska Admin. Code Title 20 § 25.440 Freshwater aquifer exemption (Alaska Administrative Code (2024 Edition))	No significant difference from federal rule and no concern for stringency.	20 AAC 25.440 was adopted in 1986 and revised in 1999
334.	It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or	40 CFR 146.4(b)(3)	20 AAC 25.440 (a) (1)(C) it is so contaminated that recovery of water for drinking water purposes is economically or technologically impractical; or...	No significant difference from federal rule and no concern for stringency.	20 AAC 25.440 was adopted in 1986 and revised in 1999
335.	It is located over a Class III well mining area subject to subsidence or catastrophic collapse; or	40 CFR 146.4(b)(4)	Not in AAC		The AOGCC doesn't regulate Class III well mining.
336.	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.	40 CFR 146.4(c)	20 AAC 25.440 (a) (2) 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."	No significant difference from federal rule and no concern for stringency.	20 AAC 25.440 was adopted in 1986 and revised in 1999
337.	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:	40 CFR §146.4(d)	20 AAC 25.442 (d) The areal extent of an aquifer exemption for a Class II enhanced oil recovery or enhanced gas recovery may be expanded for the exclusive purpose of Class VI injection for carbon storage under (c) of this section if it meets the following criteria	No significant difference from federal rule and no concern for stringency.	
338.	It does not currently serve as a source of drinking water; and	40 CFR §146.4(d)(1)	20 AAC 25.442(d)(1) it does not currently serve as a source of drinking water; and	No significant difference from federal rule and no concern for stringency.	

339.	The total dissolved solids content of the ground water is more than 3,000 mg/l and less than 10,000 mg/l; and	40 CFR §146.4(d)(2)	20 AAC 25.442 (d)(2) the total dissolved solids content of the ground water is more than 3, 000 mg// and less than 10,000 mg//; and	No significant difference from federal rule and no concern for stringency.	
340.	It is not reasonably expected to supply a public water system.	40 CFR §146.4(d)(3)	20 AAC 25.442(d)(3) it is not reasonably expected to supply a public water system.	No significant difference from federal rule and no concern for stringency.	
341.	<i>Class V.</i> Injection wells not included in Class I, II, III, IV or VI. ***	40 CFR §146.5(e)	20 AAC 25.1020 (d) The construction, operation, or maintenance of any non-experimental Class V geologic sequestration well is prohibited; a Class V well has the meaning given in 40 C.F.R. 144.6 (e), Subpart A (classification of wells), as amended effective January 10, 2011 and adopted by reference.	Alaska is not seeking primacy for Class V and has no EPA or AOGCC authorized Class V wells. No concern for stringency	
342.	<i>Class VI.</i> 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; 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).	40 CFR §146.5(f)	20 AAC 25.1900 (11) "Class VI well" means a well (A) that is not experimental in nature that is used for geologic sequestration of carbon dioxide beneath the lowermost formation containing an underground sources of drinking water ; for the purpose of this subparagraph; "experimental" means use of a technology that has not been proven feasible under the conditions in which it is being tested; (B) used for geologic sequestration of carbon dioxide that has been granted a waiver of the injection depth requirements under 20 AAC 25.1270.; or (C) used for geologic sequestration of carbon dioxide that has received an expansion to the areal extent of an existing Class II well under 20 AAC 25.442.	No significant difference from federal rule and no concern for stringency.	Under Alaska law, "carbon storage" is used rather than "geologic sequestration." The intent and scope is the same as the federal term – underground long-term storage of carbon dioxide. The definition of “experimental” is included in the definition for clarity.

343.	This subpart establishes criteria and standards for UIC programs to regulate any Class VI carbon dioxide geologic sequestration injection wells.	40 CFR §146.81(a)	This is introductory language and does not require state regulatory implementation.		
344.	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.	40 CFR §146.81(b)	20 AAC 25.1000 - 20 AAC 25.1900 apply to underground carbon storage.		Under Alaska law, "carbon storage" is used rather than "geologic sequestration." The intent and scope is the same – underground long-term storage of carbon dioxide
345.	<p>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 §146.86(a) and ensure protection of USDWs, in lieu of requirements at §§146.86(b) and 146.87(a).</p> <p>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.</p>	40 CFR §146.81(c)	20 AAC 25.1025. Conversion to carbon storage. An owner or operator seeking to convert existing Class I, Class II, or Class V experimental wells or any other well authorized by 20 AAC 25.005 to Class VI carbon storage wells must demonstrate to the commission that the wells were engineered and constructed to meet the requirements at 20 AAC 25.1210 (a) and ensure protection of underground sources of drinking water, in lieu of requirements at 20 AAC 25.1210 (b) and 20 AAC 25.1220 (a) (1) – (5). A converted well must still meet all other requirements under 20 AAC 25.1000 – 20 AAC 25.1900. For the purpose of this section, "Class I" well has the meaning given in 40 C.F.R. 144.6, Subpart A (classification of wells), revised January 10, 2011, and adopted by reference, and "Class II" has the meaning given in 20 AAC 25.252.	<p>AOGCC will allow all well types drilled/authorized by AOGCC to convert to Class VI if they can meet the requirements. No concern for stringency.</p> <p>AOGCC is not implementing requirements for which the deadline has passed and are therefore not relevant for a new program today.</p>	

346.	<i>Definitions.</i> The following definitions apply to this subpart. To the extent that these definitions conflict with those in §§144.3 or 146.3 of this chapter these definitions govern for Class VI wells:	40 CFR §146.81(d)	20 AAC 25.1900 definitions		
347.	<i>Area of review</i> 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.	40 CFR §146.81(d)	20 AAC 25.1900 (3) “area of review” means the area surrounding a -storage facility where underground sources of drinking water 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 fluidand is based on available site characterization, monitoring and operational data under 20 AAC 25.1070;	No significant difference from the federal rule and no concern for stringency.	20 AAC 25.1070 implements 40 C.F.R. 146.84. Under Alaska law, “storage facility” is used rather than carbon storage project. The scope and meaning is the same as the federal rule. The singular “fluid” is appropriate under Alaska drafting style and includes the plural “fluids.”
348.	<i>Carbon dioxide plume</i> means the extent underground, in three dimensions, of an injected carbon dioxide stream.	40 CFR §146.81(d)	20 AAC 25.1900 (5) “carbon dioxide plume” means the extent underground, in three dimensions of an injected carbon dioxide stream.	No difference.	
349.	<i>Carbon dioxide stream</i> 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.	40 CFR §146.81(d)	20 AAC 25.1900 (6) “carbon dioxide stream” means carbon dioxide that has been captured from an emission source, such as a power plant, plus incidental associated substances derived from source materials and the capture process, and any substances added to the stream to enable or improve the injection process; “carbon dioxide stream” does not apply to any carbon dioxide stream that meets the definition of hazardous waste under 40 C.F.R. part 261;	No significant difference from the federal rule and no concern for stringency.	

350.	<i>Confining zone</i> 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).	40 CFR §146.81(d)	20 AAC 25.1900 (14) “confining zone” means a geological formation, group of formations, or part of a formation stratigraphically overlying the injection zone that acts as a barrier to fluid movement. For a Class VI well operating under an injection depth waiver under 20 AAC 25.1270, confining zone means a geologic formation, group of formations, or part of a formation stratigraphically overlying and underlying the injection zone;	No significant difference from the federal rule and no concern for stringency	Under Alaska drafting style, the singular includes the plural unless specified otherwise. There is no difference in meaning from the federal rule and no concern for stringency.
351.	<i>Corrective action</i> 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).	40 CFR §146.81(d)	20 AAC 25.1900 (16) corrective action" means commission-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;	No difference.	
352.	<i>Geologic sequestration</i> 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.	40 CFR §146.81(d)	20 AAC 25.1900 (7) “carbon storage has the meaning given in AS 41.06.210 and includes “geologic sequestration defined in 40 CFR 146.81, Pat H, Applicability, effective January 10, 2011 and adopted by reference.		See Note on page 2. Under Alaska law, “carbon storage” is used rather than geologic sequestration. The scope and meaning are the same, and the Alaska regulations adopt the federal rule defining “geologic sequestration.”

353.	<i>Geologic sequestration project</i> 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 of this chapter and 144.7(d). 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.	40 CFR §146.81(d)	See Crosswalk row 351 and 20 AAC 25.1900 (7).	No significant difference from the federal rule and no concern for stringency.	20 AAC 25.442 implements 146.6 and 144.7 (d) on the expansion to the areal extent of an existing Class II aquifer.
354.	<i>Injection zone</i> 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.	40 CFR §146.81(d)	20 AAC 25.1900 (26) "injection zone" means a geological 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 storage facility;	No significant difference from the federal rule and no concern for stringency.	
355.	<i>Post-injection site care</i> 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.	40 CFR §146.81(d)	20 AAC 25.1900(36) "post injection site care" means appropriate monitoring and other actions, including corrective action, needed following cessation of injection to ensure that underground sources of drinking water are not endangered, as required by 20 AAC 25.1310	No difference from the federal rule and no concern for stringency.	20 AAC 25.1310 Post injection site care and site closure implements 146.93.

356.	<i>Pressure front</i> 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.	40 CFR §146.81(d)	20 AAC 25.1900 (37) "pressure front" means the zone of elevated pressure that is created by the injection of carbon dioxide into the subsurface; 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 fluid or formation fluid into underground sources of drinking water;	No significant difference from the federal rule and no concern for stringency.	Alaska drafting style includes singular to mean the plural unless specified otherwise, so "fluid" includes "fluids."
357.	<i>Site closure</i> 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.	40 CFR §146.81(d)	20 AAC 25.1900 (39) "site closure" means the point or time, as determined by the commission through a certificate of completion under 20 AAC 25.1320, at which the storage operator of a carbon storage project is released from post-injection site care responsibilities;	No significant difference from the federal rule and no concern for stringency.	Under Alaska law, site closure occurs when the commission issues a certificate of completion AS 41.06.170
358.	<i>Transmissive fault or fracture</i> means a fault or fracture that has sufficient permeability and vertical extent to allow fluids to move between formations.	40 CFR §146.81(d)	20 AAC 25.1900 (42) "transmissive fault or fracture" means a fault or fracture that has sufficient permeability and vertical extent to allow fluids to move between formations;	No difference.	

359.	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.	40 CFR §146.82	This is introductory language; the regulatory requirements are below.		
360.	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 §146.91(e), and the Director shall consider the following:	40 CFR §146.82(a)	20 AAC 25.1080. Storage facility permit; required Class VI well permit information. (a) Prior to the issuance of a storage facility permit authorizing the construction of a new Class VI well, or the conversion on an existing Class I, Class II, or Class V well to a Class VI well, the storage operator shall submit, and the commission shall consider the following	No, the Alaska regulations require a person to submit an application, and the commission to consider it.	

361.	<p>Information required in §144.31 (e)(1) through (6) of this chapter;</p> <p>(e) 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 <u>§146.82</u> of this chapter.</p> <p>(1) The activities conducted by the applicant which require it to obtain permits under RCRA, UIC, the NPDES program under the Clean Water Act, or the Prevention of Significant Deterioration (PSD) program under the Clean Air Act.</p> <p>(2) Name, mailing address, and location of the facility for which the application is submitted.</p> <p>(3) Up to four SIC codes which best reflect the principal products or services provided by the facility.</p> <p>(4) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.</p> <p>(5) Whether the facility is located on Indian lands.</p> <p>(6) A listing of all permits or construction approvals received or applied for under any of the following programs:</p> <ul style="list-style-type: none"> (i) Hazardous Waste Management program under RCRA. (ii) UIC program under SDWA. (iii) NPDES program under CWA. (iv) Prevention of Significant Deterioration (PSD) program under the Clean Air Act. (v) Nonattainment program under the Clean Air Act. (vi) NESHAPS preconstruction approval under the Clean Air Act. 	<p>40 CFR §146.82(a)(1)</p> <p>§146.82 Required Class VI permit information. This section sets forth the information which must be considered by the Director in authorizing Class VI wells.</p> <p>For converted Class I, Class II, or Class V experimental wells, certain maps, cross-sections, tabulations of wells within the AOR 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.</p> <p>(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 <u>§ 146.91(e)</u>, and the Director shall consider the following:</p> <p>(1) Information required in 144.31(e)(1)-(6) of this chapter;</p>	<p>20 AAC 25.1080 (a) (1) the information required by 40 C.F.R. 144.31 (e) (1) – (6) (application for a permit; authorization by permit), Subpart D (authorization by permit), revised as of January 10, 2011, and adopted by reference;</p>	<p>Adopts federal rule and no concern for stringency.</p>	<p>20 AAC 25.1080 closely tracks 40 C.F.R. 146.82.</p> <p>20 AAC 25.1080 (a) (1) adopts by reference 40 C.F.R. 144.31 (e) (1) – (6).</p>
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	<p>(vii) Ocean dumping permits under the Marine Protection Research and Sanctuaries Act.</p> <p>(viii) Dredge and fill permits under section 404 of CWA.</p> <p>(ix) Other relevant environmental permits, including State permits.</p>				
362.	<p>A map showing the injection well for which a permit is sought and the applicable area of review consistent with §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.</p> <p>The map should also show faults, if known or suspected. Only information of public record is required to be included on this map;</p>	40 CFR §146.82(a)(2)	20 AAC 25.1080 (a) (2) a map showing the Class VI well for which a permit is sought and the applicable area of review consistent with 20 AAC 25.1070. 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 United States Environmental Protection Agency-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; additionally, the map must also show faults, if known or suspected; only information of public record is required to be included on this map;	<p>No significant difference from federal rule and no concern for stringency.</p> <p>Alaska regulation uses “must” rather than “should” regarding what the map must show.</p>	<p>The Alaska regulation clarifies that information must show where the Class VI well is to be located, in addition to other wells in area.</p> <p>20 AAC 25.1070 closely tracks 146.84 on Area of review.</p>
363.	Information on the geologic structure and hydrogeologic properties of the proposed storage site and overlying formations, including:	40 CFR §146.82(a)(3)	20 AAC 25.1080 (a) (3) information on the geologic structure and hydrogeologic properties of the proposed storage site and overlying formations, including:	No difference from federal rule and no concern for stringency.	
364.	Maps and cross sections of the area of review;	40 CFR §146.82(a)(3)(i)	20 AAC 25.1080 (a) (3) (A) maps and cross sections of the area of review;	No difference from federal rule and no concern for stringency.	

365.	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;	40 CFR §146.82(a)(3)(ii)	20 AAC 25.1080 (a) (3) (B) the location, orientation, and properties of known or suspected faults or fractures that may transect the confining zone in the area of review and a determination of non-interference with containment;	No difference from federal rule and no concern for stringency.	
366.	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;	40 CFR §146.82(a)(3)(iii)	20 AAC 25.1080 (a) (3) C) data on the depth, areal extent, thickness, mineralogy, porosity, permeability, and capillary pressure of the injection and confining zone, including geology or facies changes based on field data which may include geologic cores, outcrop data, seismic surveys, well logs, and names and lithologic descriptions;	No difference from federal rule and no concern for stringency.	
367.	Geomechanical information on fractures, stress, ductility, rock strength, and in situ fluid pressures within the confining zone(s);	40 CFR §146.82(a)(3)(iv)	20 AAC 25.1080 (a) (3) (D) geomechanical information on fractures, stress, ductility, rock strength, and in situ fluid pressures within the confining zone;	No difference from federal rule and no concern for stringency.	
368.	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	40 CFR §146.82(a)(3)(v)	20 AAC 25.1080(a) (3) (E) information on the seismic history including the presence and depth of seismic sources and a determination that the seismicity would not interfere with containment;	No significant difference from federal rule and no concern for stringency.	
369.	Geologic and topographic maps and cross sections illustrating regional geology, hydrogeology, and the geologic structure of the local area.	40 CFR §146.82(a)(3)(vi)	20 AAC 25.1080 (a) (3) (F) geologic and topographic maps and cross sections that illustrate regional geology, hydrogeology, and the geologic structure of the local area.	No difference from federal rule and no concern for stringency.	
370.	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;	40 CFR §146.82(a)(4)	20 AAC 25.1080 (a) (4) a tabulation of all wells within the area of review which penetrate the injection or confining zone; the data must include a description of each well type, construction, date drilled, location, depth, record of plugging or completion, and any additional information required by the commission;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or". Alaska drafting style uses "or" for the federal "and/or". There is no change to meaning and no effect on stringency.

371.	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;	40 CFR §146.82(a)(5)	20 AAC 25.1080 (a)(5) maps and stratigraphic cross sections indicating the general vertical and lateral limits of all underground sources of drinking water, water wells, and springs within the area of review, their positions relative to the injection zone, and, where known, the direction of water movement;	No difference from federal rule and no concern for stringency.	
372.	Baseline geochemical data on subsurface formations, including all USDWs in the area of review;	40 CFR §146.82(a)(6)	20 AAC 25.1080 (a) (6) baseline geochemical data on subsurface formations, including all underground sources of drinking water in the area of review;	No difference from federal rule and no concern for stringency.	
373.	Proposed operating data for the proposed geologic sequestration site:	40 CFR §146.82(a)(7)	20 AAC 25.1080 (a) (7) proposed operating data for the proposed carbon storage site, including	No significant difference from federal rule and no concern for stringency.	
374.	Average and maximum daily rate and volume and/or mass and total anticipated volume and/or mass of the carbon dioxide stream;	40 CFR §146.82(a)(7)(i)	20 AAC 25.1080 (a) (7) (A) the average and maximum daily rate and volume or mass and total anticipated volume or mass of the carbon dioxide stream;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or". Alaska drafting style uses "or" for the federal "and/or". There is no change to meaning and no effect on stringency
375.	Average and maximum injection pressure;	40 CFR §146.82(a)(7)(ii)	20 AAC 25.1080 (a) (7) (B) the average and maximum injection pressure;	No difference from federal rule and no concern for stringency.	
376.	The source(s) of the carbon dioxide stream; and	40 CFR §146.82(a)(7)(iii)	20 AAC 25.1080 (a) (7)(C) the source of the carbon dioxide stream and	No difference from federal rule and no concern for stringency.	
377.	An analysis of the chemical and physical characteristics of the carbon dioxide stream.	40 CFR §146.82(a)(7)(iv)	20 AAC 25.1080 (a) (7)(D) an analysis of the chemical and physical characteristics of the carbon dioxide stream;	No difference from federal rule and no concern for stringency.	
378.	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 §146.87;	40 CFR §146.82(a)(8)	20 AAC 25.1080 (a) (8) the proposed pre-operational formation testing program to obtain an analysis of the chemical and physical characteristics of the injection zone and confining zone that meets the requirements of 20 AAC 25.1220;	No difference from federal rule and no concern for stringency.	20 AAC 25.1220 implements 146.87 on logging, sampling, and testing before well operations.

379.	Proposed stimulation program, a description of stimulation fluids to be used and a determination that stimulation will not interfere with containment;	40 CFR §146.82(a)(9)	20 AAC 25.1080 (a) (9) the proposed stimulation program, a description of stimulation fluid to be used and a determination that stimulation will not interfere with containment;	No significant difference from federal rule and no concern for stringency.	In Alaska drafting style, the singular is used to include the plural unless specified otherwise. Here “fluid” means the same as “fluids.”
380.	Proposed procedure to outline steps necessary to conduct injection operation;	40 CFR §146.82(a)(10)	20 AAC 25.1080 (a) (10) the proposed procedure to outline steps necessary to conduct injection operation;	No difference from federal rule and no concern for stringency.	
381.	Schematics or other appropriate drawings of the surface and subsurface construction details of the well;	40 CFR §146.82(a)(11)	20 AAC 25.1080 (a) (11) schematics or other appropriate drawings of the surface and subsurface construction details of the well;	No difference from federal rule and no concern for stringency.	
382.	Injection well construction procedures that meet the requirements of §146.86. Injection well construction requirements.	40 CFR §146.82(a)(12)	20 AAC 25.1080 (a) (12) the Class VI well construction procedures that meet the requirements of 20 AAC 25.1210;	No significant difference from federal rule and no concern for stringency.	Edit to “Class VI well” for clarity as 20 AAC 25.1210 covers Class VI wells.
383.	Proposed area of review and corrective action plan that meets the requirements under §146.84 Area of Review and corrective action.	40 CFR §146.82(a)(13)	20 AAC 25.1080 (a) (13) the proposed area of review and corrective action plan that meets the requirements under 20 AAC 25.1070;	No difference from federal rule and no concern for stringency.	20 AAC 25.1070 implements 146.84 on Area of Review and corrective action
384.	A demonstration, satisfactory to the Director, that the applicant has met the financial responsibility requirements under §146.85;	40 CFR §146.82(a)(14)	20 AAC 25.1080 (a) (14) a demonstration, satisfactory to the commission, that the storage operator meets the financial responsibility requirements under 20 AAC 25.1200;	No significant difference from federal rule and no concern for stringency.	Edit for consistency, storage operator includes an applicant.
385.	Proposed testing and monitoring plan required by §146.90;	40 CFR §146.82(a)(15)	20 AAC 25.1080 (a) (15) the proposed testing and monitoring plan required by 20 AAC 25.1250;	No difference from federal rule and no concern for stringency.	20 AAC 25.1250 implements 146.90.
386.	Proposed injection well plugging plan required by §146.92(b)	40 CFR §146.82(a)(16)	20 AAC 25.1080 (a) (16) the proposed Class VI well plugging plan required by 20 AAC 25.1300	No significant difference from federal rule and no concern for stringency.	Edit for clarity, 20 AAC 25.1300 covers Class VI wells and implements 146.92.
387.	Proposed post-injection site care and site closure plan required by §146.93(a);	40 CFR §146.82(a)(17)	20 AAC 25.1080 (a) (17) the proposed post-injection site care and site closure plan required by 20 AAC 25.1310;	No difference from federal rule and no concern for stringency.	
388.	At the Director’s discretion, a demonstration of an alternative post-injection site care timeframe required by §146.93(c);	40 CFR §146.82(a)(18)	20 AAC 25.1080 (a) (18) at the commission’s discretion, a demonstration of an alternative post-injection site care timeframe required by 20 AAC 25.1310 (h);	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1310 (h) is the equivalent for 146.93(c) as it requires EPA consultation.

389.	Proposed emergency and remedial response plan required by §146.94(a);	40 CFR §146.82(a)(19)	20 AAC 25.1080 (a) (19) a proposed emergency and remedial response plan required by 20 AAC 25.1260;	No difference from federal rule and no concern for stringency.	20 AAC 25.1260 implements 146.94.
390.	A list of contacts, submitted to the Director, for those States, Tribes, and Territories identified to be within the AOR of the Class VI project based on information provided in paragraph (a)(2) of this section; and	40 CFR §146.82(a)(20)	20 AAC 25.1080 (a) (20) a list of contact information to the commission that identifies any states, tribes, or territories within the area of review of the proposed storage facility based on the information provided by the map required in (a)(2) of this section;	No significant difference from federal rule and no concern for stringency.	Alaska law uses storage facility for consistency in regulations.
391.	Any other information requested by the Director.	40 CFR §146.82(a)(21)	20 AAC 25.1080 (a) (21) any other information required by the commission.	No significant difference from federal rule and no concern for stringency.	The commission acts instead of a director.
392.	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 §14 5.23(f)(13) of this chapter.	40 CFR §146.82(b)	20 AAC 25.1080 (b) The commission shall notify in writing any state, tribe, or territory within the area of review of the proposed storage facility project based on the information provided by the applicant in (a)(2) and (a)(20) of this section and pursuant to the requirements of 40 C.F.R. 145.23 (f) (13), effective January 10, 2011, and adopted by reference.	No significant difference from federal rule and no concern for stringency.	The commission acts instead of a director.
393.	Prior to granting approval for the operation of a Class VI well, the Director shall consider the following information:	40 CFR §146.82(c)	20 AAC 25.1080 (c) In addition to the requirements of subsection (a), before granting approval for the operation of an injection well as part of a storage facility, the commission will consider the following information	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “will” to direct a department or commission.
394.	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;	40 CFR §146.82(c)(1)	20 AAC 25.1080 (c) (1) the final area of review based on modeling, using data obtained during logging and test of the proposed Class VI well , and the formation as required by paragraphs (c) (2) – (4), (6), (7), and (10) of this subsection.	No significant difference from federal rule and no concern for stringency.	

395.	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;	40 CFR §146.82(c)(2)	20 AAC 25.1080 (c) (2) any relevant updates based on data obtained during logging and testing of the proposed Class VI well and the formation required by paragraphs (c) (3), (4), (6), (7), and (10) of this section, to the information on geologic structure and hydrogeologic properties of the proposed storage site and overlying foundation submitted under (a) (3) of this section	No difference from federal rule and no concern for stringency.	
396.	Information on the compatibility of the CO ₂ 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;	40 CFR §146.82(c)(3)	20 AAC 225.1080 (c) (3) information on the compatibility of the carbon dioxide stream with fluid in the injection zone and minerals in both the injection and confining zone, based on the results of the formation testing program, and with the materials used to construct the well;	No difference from federal rule and no concern for stringency.	
397.	The results of the formation testing program required at paragraph (a)(8) of this section;	40 CFR §146.82(c)(4)	20 AAC 25.1080 (c) (4) the results of the formation testing program required by (a)(8) of this section;	No difference from federal rule and no concern for stringency.	
398.	Final injection well construction procedures that meet the requirements of §146.86;	40 CFR §146.82(c)(5)	20 AAC 25.1080 (c) (5) the final Class VI well construction procedures that meet the requirements of 20 AAC 25.1210;	No significant difference from federal rule and no concern for stringency.	Edit to Class VI wells as 20 AAC 25.1210 concerns Class VI wells.
399.	The status of corrective action on wells in the area of review;	40 CFR §146.82(c)(6)	20 AAC 25.1080 (c) (6) the status of corrective action on wells in the area of review under 20 AAC 25.1070;	No significant difference from federal rule and no concern for stringency.	
400.	All available logging and testing program data on the well required by §146.87;	40 CFR §146.82(c)(7)	20 AAC 25.1080 (c) (7) all available logging and testing program data required by 20 AAC 25.1220;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1220 implements 40 C.F.R. 146.87
401.	A demonstration of mechanical integrity pursuant to §146.89;	40 CFR §146.82(c)(8)	20 AAC 25.1080 (c) (8) a demonstration of mechanical integrity under 20 AAC 25.1240;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1240 implements 40 C.F.R. 146.89

402.	Any updates to the proposed AOR 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	40 CFR §146.82(c)(9)	20 AAC 25.1080 (c) (9) any updates to the proposed area of review and corrective action plan under 20 AAC 25.1070, testing and monitoring plan under 20 AAC 25.1250, Class VI well plugging plan under 20 AAC 25.1300, post-injection site care and site closure plan under 20 AAC 25.1310 or the emergency and remedial response plan submitted under 20 AAC 25.1260 as required by (a) of this section, which are necessary to address new information collected during the logging and testing of the Class VI well to be used in the storage facility and the formation as required by all paragraphs of this section and any updates to the alternative post-injection site care timeframe demonstration under 20 AAC 25.1310, if applicable, submitted under subsection (a) of this section and which are necessary to address new information collected during the logging and test of the well and the formation as required by all paragraphs of this section; and	No significant difference from federal rule and no concern for stringency.	Edit to Class VI for clarity as 20 AAC 25.1300 concerns Class VI wells.
403.	Any other information requested by the Director.	40 CFR §146.82(c)(10)	20 AAC 25.1080 (c) (10) any other information required by the commission.	No difference from federal rule and no concern for stringency.	The commission acts instead of a director.
404.	Owners or operators seeking a waiver of the requirement to inject below the lowermost USDW must also refer to §146.95 and submit a supplemental report, as required at §146.95(a). The supplemental report is not part of the permit application.	40 CFR §146.82(d)	20 AAC 25.1080 (d) A storage operator seeking a waiver of the requirement to inject below the lowermost underground source of drinking water shall also refer to 20 AAC 25.1270 and submit a supplemental report as required under that section. A supplemental report is not a part of the permit application.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” to direct a person to take an action rather than “must.” The meaning is the same.

405.	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:	40 CFR §146.83(a)	20 AAC 25.1060 (a) A storage operator shall demonstrate to the satisfaction of the commission that the well will be sited in areas with a suitable geologic system. The storage operator must demonstrate that the geologic system comprises	No significant difference from federal rule and no concern for stringency.	Alaska drafting style is “shall” when a person is doing an action rather than “must.” A storage operator must do this regardless of type of well.
406.	An injection zone(s) of sufficient areal extent, thickness, porosity, and permeability to receive the total anticipated volume of the carbon dioxide stream;	40 CFR §146.83(a)(1)	20 AAC 25.1060 (a) (1) an injection zone of sufficient areal extent, thickness, porosity, and permeability to receive the total anticipated volume of the carbon dioxide stream;	No difference from federal rule and no concern for stringency.	
407.	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).	40 CFR §146.83(a)(2)	20 AAC 25.1060 (a) (2) a confining zone free of transmissive faults or fractures and of sufficient areal extent and integrity to contain the injected carbon dioxide stream and displaced formation fluid and allow injection at proposed maximum pressures and volumes without initiating or propagating fractures in the confining zone.	No significant difference from federal rule and no concern for stringency.	In Alaska drafting style, singular includes plural unless the context indicates otherwise. So “fluid” includes “fluids”
408.	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.	40 CFR §146.83(b)	20 AAC 25.1060 (b) The commission may require that a storage operator of a Class VI well 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.	No significant difference from federal rule and no concern for stringency.	A storage operator includes an applicant or a permit holder.

409.	The AOR is the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity. The AOR is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected CO2 stream and is based on available site characterization, monitoring, and operational data.	40 CFR §146.84(a)	<p>20 AAC 25.1070 (a)The area of review is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon storage stream and is based on available site characterization, monitoring, and operational data.</p> <p>20 AAC 25.1900 (3) "area of review" means the area surrounding a storage facility where underground sources of drinking water 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 fluid, and is based on available site characterization, monitoring and operational data under 20 AAC 25.1070;</p>	No significant difference from federal rule and no concern for stringency	Under Alaska drafting style, definitions are generally not included in substantive regulation.
410.	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:	40 CFR §146.84(b)	20 AAC 25.1070(b) The storage operator shall prepare, maintain, and comply with a plan to delineate the area of review for a proposed storage facility project, periodically reevaluate the delineation, and perform corrective action that meets the requirements of this section and is acceptable to the commission. 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 storage operator shall submit an area of review and corrective action plan that includes the following information:	No significant difference from federal rule and no concern for stringency.	Minor changes to reflect Alaska drafting style," shall" is used for a person actor, "must" for a commission or department.

411.	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;	40 CFR §146.84(b)(1)	20 AAC 25.1070 (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;	No difference from federal rule and no concern for stringency.	
412.	A description of:	40 CFR §146.84(b)(2)	20 AAC 25.1070 (b) (2) a description of	No difference from federal rule and no concern for stringency.	
413.	The minimum fixed frequency, not to exceed five years, at which the owner or operator proposes to reevaluate the area of review;	40 CFR §146.84(b)(2)(i)	20 AAC 25.1070 (b) (2) (A) the minimum fixed frequency, not to exceed five years, at which the storage operator proposes to reevaluate the area of review;	No significant difference from federal rule and no concern for stringency.	Storage operator is the permit holder, whether an owner or operator.
414.	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.	40 CFR §146.84(b)(2)(ii)	20 AAC 25.1070 (b)(2) (B) 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)(A) of this section.	No difference from federal rule and no concern for stringency.	
415.	How monitoring and operational data (e.g., injection rate and pressure) will be used to inform an area of review reevaluation; and	40 CFR §146.84(b)(2)(iii)	20 AAC 25.1070 (b) (2) (C) how monitoring and operational data, including the injection rate and pressure, will be used to inform an area of review reevaluation; and	No difference from federal rule and no concern for stringency.	
416.	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.	40 CFR §146.84(b)(2)(iv)	20 AAC 25.1070 (b) (2)(D) 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.	No difference from federal rule and no concern for stringency.	

417.	Owners or operators of Class VI wells must perform the following actions to delineate the AOR and identify all wells that require corrective action:	40 CFR §146.84(c)	20 AAC 25.1070 (c) The storage operator shall perform the following actions to delineate the area of review and identify all wells that require corrective action:	No significant difference from federal rule and no concern for stringency.	Removed Class VI well, it does not matter what kind of well, storage operator must still perform actions. In Alaska drafting style, a single actor is directed by use of “shall” rather than “must.” There is no change to meaning.
418.	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:	40 CFR §146.84(c)(1)	20 AAC 25.1070 (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 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 underground sources of drinking water are no longer present, or until the end of a fixed time period as determined by the commission; the model must:	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting convention, singular includes plural unless the context requires otherwise, so “fluid” includes “fluids.”
419.	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;	40 CFR §146.84(c)(1)(i)	20 AAC 25.1070 (c) (1) (A) be based on detailed geologic data collected to characterize the injection zone, confining zone, and any additional zones; and anticipated operational data, including injection pressures, rates, and total volumes over the proposed life of the storage facility;	No significant difference from federal rule and no concern for stringency.	Edits for consistency to use “storage facility” throughout, has same scope as geologic sequestration project.
420.	Take into account any geologic heterogeneities, other discontinuities, data quality, and their possible impact on model predictions; and	40 CFR §146.84(c)(1)(ii)	20 AAC 25.1070 (c)(1) (B) take into account any geologic heterogeneities, other discontinuities, data quality, and their possible impact on model predictions; and	No difference from federal rule and no concern for stringency.	
421.	Consider potential migration through faults, fractures, and artificial penetrations.	40 CFR §146.84(c)(1)(iii)	20 AAC 25.1070 (c)(1) (C) consider potential migration through faults, fractures, and artificial penetrations.	No difference from federal rule and no concern for stringency.	

422.	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	40 CFR §146.84(c)(2)	20 AAC 25.1070 (c)(2) using methods approved by the commission, identify all penetrations, including active and abandoned wells and underground mines, in the area of review that may penetrate the confining zone; provide a description of each well's type, construction, date drilled, location, depth, record of plugging or completion, and any additional information the commission may require; and	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." Alaska style uses "or" rather than "and/or." There is no change in meaning.
423.	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.	40 CFR §146.84(c)(3)	20 AAC 25.1070 (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 fluid that may endanger underground sources of drinking water, including use of materials compatible with the carbon dioxide stream	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting convention, singular includes plural unless the context requires otherwise, so "fluid" includes "fluids."
424.	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.	40 CFR §146.84(d)	20 AAC 25.1070 (d) The storage operator shall 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 underground sources of drinking water, including use of materials compatible with the carbon dioxide stream, where appropriate.	No significant difference from federal rule and no concern for stringency.	Edits for clarity as all storage operators must do this regardless of type of well. Alaska drafting style uses "shall" rather than "must" for actions of a person.
425.	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:	40 CFR §146.84(e)	20 AAC 25.1070 (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, the storage operator shall	No significant difference from federal rule and no concern for stringency.	Minor changes to reflect Alaska drafting style, shall is used for a person actor, must for a commission or department. The storage operator includes an owner or operator.
426.	Reevaluate the area of review in the same manner specified in paragraph (c)(1) of this section;	40 CFR §146.84(e)(1)	20 AAC 25.1070 (e)(1) reevaluate the area of review in the same manner specified in paragraph (c)(1) of this section;	No difference from federal rule and no concern for stringency.	

427.	Identify all wells in the reevaluated area of review that require corrective action in the same manner specified in paragraph (c) of this section;	40 CFR §146.84(e)(2)	20 AAC 25.1070 (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;	No difference from federal rule and no concern for stringency.	
428.	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	40 CFR §146.84(e)(3)	20 AAC 25.1070 (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	No difference from federal rule and no concern for stringency.	
429.	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 AOR 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 §§144.39 or 144.41 of this chapter, as appropriate.	40 CFR §146.84(e)(4)	20 AAC 25.1070 (e) (4) submit an amended area of review and corrective action plan or demonstrate to the commission 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 commission, must be incorporated into the permit, and are subject to the permit modification requirements at 20 AAC 25.1410 or 20 AAC 25.1430, as appropriate.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1410 implements 146.39 and 20 AAC 25.1430 implements 144.41.
430.	The emergency and remedial response plan (as required by §146.94) and the demonstration of financial responsibility (as described by §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.	40 CFR §146.84(f)	20 AAC 25.1070 (f) The emergency and remedial response plan as required by 20 AAC 25.1260 and the demonstration of financial responsibility as required by 20 AAC 25.1200 must account for the area of review identified in (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.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1260 implements 146.94; 20 AAC 1200 implements 146.85.
431.	All modeling inputs and data used to support AOR reevaluations under paragraph (e) of this section shall be retained for 10 years.	40 CFR §146.84(g)	20 AAC 25.1070 (g) All modeling inputs and data used to support area of review reevaluations under paragraph (e) of this section shall be retained by the record holder and provided to the commission upon request for not less than 10 years.	No significant difference from federal rule and no concern for stringency.	

432.	The owner or operator must demonstrate and maintain financial responsibility as determined by the Director that meets the following conditions:	40 CFR §146.85(a)	20 AAC 25.1200 Financial responsibility. (a) A storage operator shall demonstrate and maintain one of the following forms of financial responsibility satisfying requirements of this section;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1200 is formatted and numbered differently from 146.85, but it contains the requirements of 146.85. Alaska drafting convention uses “shall” rather than “must” for actions of a person. A storage operator is the permit holder, whether owner or operator.
433.	The financial responsibility instrument(s) used must be from the following list of qualifying instruments:	40 CFR §146.85(a)(1)	20 AAC 25.1200 (a), above	No significant difference from federal rule and no concern for stringency.	
434.	Trust Funds	40 CFR §146.85(a)(1)(i)	20 AAC 25.1200 (a) (1) trust fund;	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning. The singular includes the plural unless specified otherwise under Alaska drafting style. There is no change in meaning from the federal rule.
435.	Surety Bonds	40 CFR §146.85(a)(1)(ii)	20 AAC 25.1200 (a) (2) surety bond;	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning. The singular includes the plural unless specified otherwise under Alaska drafting style. There is no change in meaning from the federal rule.
436.	Letter of Credit	40 CFR §146.85(a)(1)(iii)	20 AAC 25.1200 (a) (3) letter of credit;	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning. The singular includes the plural unless specified otherwise under Alaska drafting style. There is no change in meaning from the federal rule.
437.	Insurance	40 CFR §146.85(a)(1)(iv)	20 AAC 25.1200 (a) (4) insurance;	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning. The singular includes the plural unless specified otherwise under Alaska drafting style. There is no change in meaning from the federal rule.
438.	Self Insurance (i.e., Financial Test and Corporate Guarantee)	40 CFR §146.85(a)(1)(v)	20 AAC 25.1200 (a)(5) self-insurance, including financial test and corporate guarantee;	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning.
439.	Escrow Account	40 CFR §146.85(a)(1)(vi)	20 AAC 25.1200 (a) (6) escrow account; or	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning.

440.	Any other instrument(s) satisfactory to the Director	40 CFR §146.85(a)(1)(vii)	20 AAC 25.1200 (a) (7) any other instrument satisfactory to the commission;	No significant difference from federal rule and no concern for stringency.	Commission is the actor here.
441.	The qualifying instrument(s) must be sufficient to cover the cost of:	40 CFR §146.85(a)(2)	20 AAC 25.1200 (b) Qualifying financial responsibility under this section must be sufficient to address endangerment of underground sources of drinking water and cover the cost of	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning.
442.	Corrective action (that meets the requirements of §146.84);	40 CFR §146.85(a)(2)(i)	20 AAC 25.1200 (b)(1) corrective action that meets the requirements of 20 AAC 25.1070;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1070 implements 146.84.
443.	Injection well plugging (that meets the requirements of §146.92);	40 CFR §146.85(a)(2)(ii)	20 AAC 25.1200 (b)(2) Class VI well plugging that meets the requirements of 20 AAC 25.1300;	No significant difference from federal rule and no concern for stringency.	Change to class VI well from injection well to reflect that 20 AAC 25.1300 concerns Class VI wells. 20 AAC 25.1300 implements 146.92.
444.	Post injection site care and site closure (that meets the requirements of §146.93); and	40 CFR §146.85(a)(2)(iii)	20 AAC 25.1200 (b)(3) post injection site care and site closure that meets the requirements of 20 AAC 25.1310; and	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1310 implements 146.93.
445.	Emergency and remedial response (that meets the requirements of §146.94).	40 CFR §146.85(a)(2)(iv)	20 AAC 25.1200 (b)(4) emergency and remedial response that meets the requirements of 20 AAC 25.1260.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1260 implements 146.94.
446.	The financial responsibility instrument(s) must be sufficient to address endangerment of underground sources of drinking water.	40 CFR §146.85(a)(3)	20 AAC 25.1200 (b) 20 AAC 25.1200 (b) Qualifying financial responsibility under this section must be sufficient to address endangerment of underground sources of drinking water and cover the cost of	No significant difference from federal rule and no concern for stringency.	See crosswalk row 440 on 20 AAC 25.1200(b).
447.	The qualifying financial responsibility instrument(s) must comprise protective conditions of coverage.	40 CFR §146.85(a)(4)	20 AAC 25.1200 (c) Qualifying financial responsibility under this section must include the following-protective conditions of coverage	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning.

448.	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.	40 CFR §146.85(a)(4)(i)	20 AAC 25.1200 (c)(1) cancellation, renewal, and continuation provisions, specifications including a prohibition on when the provider becomes liable following a notice of cancellation, termination or, failure to renew for other than failure to pay the financial instrument; 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	No significant difference from federal rule and no concern for stringency.	The edits to 20 AAC 25.1200 (b) and (c) are for clarity and to streamline. No change in meaning is intended, and there is no effect on stringency. Remainder of 20 AAC 25.1200 (c) is at crosswalk row 44
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449.	<p>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.</p>	40 CFR §146.85(a)(4)(i)(A)	<p>20 AAC 25.1200 (c) (2) notice of cancellation, termination, or non-renewal by certified mail to the storage operator and the commission received not less than 120 days prior to cancellation, termination, or non-renewal;</p> <p>20 AAC 25.1200 (d) If a provider cancels, terminates, or fails to renew financial responsibility under this section for failure to pay, the storage operator shall 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 commission.</p>	No significant difference from federal rule and no concern for stringency.	<p>Grammatical edit only for numbering and flow; no change to meaning.</p> <p>See 20 AAC 25.1200 (b), above. The substance of 1200 (c) was moved into 20 AAC 25.1200 (b).</p> <p>Edits for clarity, substance of 146.85 (a)(4)(j)(A) appears in 20 AAC 25.1200 (c)(2).</p>
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450.	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.	40 CFR §146.85(a)(4)(i)(B)	20 AAC 25.1200 (e) A storage operator shall renew all financial instruments, if an instrument expires, for the entire term of the storage facility The instrument may be automatically renewed if the storage 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.	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning. Alaska drafting style uses “shall” rather than “must” for the actions of a person. A storage facility is the same as a carbon storage project. The edits do not change the meaning and have no effect on stringency.
451.	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.	40 CFR §146.85(a)(4)(i)(C)	20 AAC 25.1200 (c) Qualifying financial responsibility under this section must include the following protective conditions of coverage: (1) cancellation, renewal, and continuation provisions, including a prohibition on cancellation, termination, or failure to renew for other than failure to pay the financial instrument; 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 (A) the commission deems the storage facility abandoned; (B) the permit is terminated or revoked or a new permit is denied; (C) closure is ordered by the commission or a U.S. district court or other court of competent jurisdiction; (D) the storage operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy) U.S. Code; or (E) the amount due is paid.	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning.

452.	The qualifying financial responsibility instrument(s) must be approved by the Director.	40 CFR §146.85(a)(5)	20 AAC 25.1200 (f) The qualifying financial responsibility under this section must be approved by the commission and may include more than one qualifying financial instrument for a storage facility, or phase of a storage facility. In addition,	No significant difference from federal rule and no concern for stringency.	The edits are for clarity, no change to substance. Term “storage facility” is used throughout regulations, so changed here for consistency.
453.	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 (§146.82).	40 CFR §146.85(a)(5)(i)	20AAC25.1200 (f) (1) the commission will require a financial responsibility demonstration for all the phases of the storage facility before issuing a storage facility permit under 20 AAC 25.1170 and	No significant difference from federal rule and no concern for stringency.	Edit for clarity, no change to substance. Alaska drafting style requires “will” instead of “shall” for actions of the commission. A storage facility is the same as a carbon storage project. The edits do not change the meaning of the federal rule.
454.	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.	40 CFR §146.85(a)(5)(ii)	20AAC25.1200 (f) (2) the storage operator shall provide any updated information related to the storage operator’s financial responsibility instrument to the commission annually on a date set by the commission and if there are any changes, the commission will evaluate, within a reasonable time, the financial responsibility demonstration to confirm that the instrument used remain adequate for use; the storage operator shall maintain financial responsibility requirements regardless of the status of the commission’s review of the financial responsibility demonstration;	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” instead of “shall” for actions of the commission. There is no change to meaning. A storage facility is the same as a carbon storage project. The edits do not change the meaning of the federal rule. The commission is the regulator here, not the Director.
455.	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.	40 CFR §146.85(a)(5)(iii)	20AAC25.1200 (f) (3) the commission may disapprove of the use of a financial instrument upon a determination that it is not sufficient to meet the requirements of this section.	No significant difference from federal rule and no concern for stringency.	The commission is the regulator here, not the Director.
456.	The owner or operator may demonstrate financial responsibility by using one or multiple qualifying financial instruments for specific phases of the geologic sequestration project.	40 CFR §146.85(a)(6)	20 AAC 25.1200 (g) In making the financial responsibility demonstration required by this section, the storage operator may demonstrate financial responsibility by using one or multiple qualifying financial instruments for specific phases of the carbon storage project.	No significant difference from federal rule and no concern for stringency.	

457.	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.	40 CFR §146.85(a)(6)(i)	20 AAC 25.1200 (g) continued If a the storage operator combines more than one instrument for a specific carbon storage phase, including, well plugging, the combination may not include instruments that are based on financial strength or performance of the storage operator such as ,self-insurance or a performance bond, but shall include other mechanisms described in (a) of this section, including, trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, escrow accounts, and insurance.-Financial responsibility under this subsection is demonstrated by the-combination of mechanisms, rather than a single mechanism, which must provide coverage for an amount at least equal to the current cost estimate	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning
458.	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.	40 CFR §146.85(a)(6)(ii)	20 AAC 25.1200 (g) continues...To demonstrate financial responsibility under this subsection, a storage operator (1) when using a third-party instrument to demonstrate financial responsibility, shall provide proof that the third-party providers either have passed financial strength requirements based on credit ratings; or have met a minimum rating, minimum capitalization, and ability to pass the bond rating when applicable;	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning

459.	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.	40 CFR §146.85(a)(6)(iii)	20 AAC 25.1200 (g)(2) when using certain types of third-party instruments shall establish a standby trust to enable the commission to be party to the financial responsibility agreement without the commission being the beneficiary of any funds; a 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; (g)(3) when using a surety bond or cash bond to satisfy its financial responsibility requirements, shall be the principal on the bond and each surety bond must be executed by a responsible surety company authorized to transact business in this state;	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning Grammatical edit only for numbering and flow; no change to meaning. Alaska drafting style uses “shall” rather than “must” for the actions of a person. A storage facility is the same as a carbon storage project. The edits do not change the meaning and have no effect on stringency.
460.	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.	40 CFR §146.85(a)(6)(iv)	20 AAC 25.1200 (g) (4) may deposit money to an escrow account to cover financial responsibility requirements; this account must segregate funds sufficient to cover estimated costs for carbon storage financial responsibility from other accounts and uses.	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning. Alaska drafting style uses “shall” rather than “must” for the actions of a person. A storage facility is the same as a carbon storage project. The edits do not change the meaning and have no effect on stringency.

<p>461.</p>	<p>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</p> <p>. 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.</p>	<p>40 CFR §146.85(a)(6)(v)</p>	<p>20 AAC 25.1200 (h) A storage operator or the storage operator's guarantor may use self-insurance to demonstrate financial responsibility for a carbon-storage facility. To satisfy this requirement, the storage operator shall</p> <p>(1) meet a tangible net worth of an amount approved by the commission, (2) demonstrate 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, (3) 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 (4) submit a report of its bond rating and financial information annually.</p> <p>20 AAC 25.1200 The storage operator shall either</p> <p>(1) 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 (2) meet all of the following five financial ratio thresholds: (A) a ratio of total liabilities to net worth less than 2.0; (B) a ratio of current assets to current liabilities greater than 1.5; (C) a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; (D) a ratio of current assets minus current liabilities to total assets greater than -0.1; and (E) a net profit, revenues minus expenses, greater than 0.</p>	<p>No significant difference from federal rule and no concern for stringency.</p>	<p>Grammatical edit only for numbering and flow; no change to meaning. A storage facility is the same as a carbon storage project. The edits do not change the meaning and have no effect on stringency.</p> <p>Grammatical edit only for numbering and flow; no change to meaning. Alaska drafting style uses "shall" rather than "must" for the actions of a person. A storage facility is the same as a carbon storage project. The edits do not change the meaning and have no effect on stringency.</p> <p>20 AAC 25.1200 (i), Alaska drafting style requires "shall" for actions of actor. Edit for clarity, no change to substance.</p>
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462.	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.	40 CFR §146.85(a)(6)(vi)	20 AAC 25.1200 (j) A storage operator that is unable to meet corporate financial test criteria in this section may arrange a corporate guarantee by demonstrating to the commission 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 storage operator.	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning. Alaska drafting style uses "shall" rather than "must" for the actions of a person. A storage operator is the permit holder and may be the owner or operator. The edits do not change the meaning and have no effect on stringency.
463.	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.	40 CFR §146.85(a)(6)(vii)	20 AAC 25.1200 (k) If a storage operator uses an insurance policy other than a self-insurance policy that meets the requirements of this section to meet its financial responsibility requirements under this section, the insurance policy must be obtained from a third-party provider.	No significant difference from federal rule and no concern for stringency.	A storage operator is the permit holder and may be the owner or operator. The edits do not change the meaning and have no effect on stringency.
464.	The requirement to maintain adequate financial responsibility and resources is directly enforceable regardless of whether the requirement is a condition of the permit.	40 CFR §146.85(b)	20 AAC 25.1200 (l) The requirement to maintain adequate financial responsibility and resources is directly enforceable regardless of whether the requirement is a condition of a storage facility permit under 20 AAC 25.1130.	No significant difference from federal rule and no concern for stringency.	
465.	The owner or operator must maintain financial responsibility and resources until:	40 CFR §146.85(b)(1)	20 AAC 25.1200 (l) <i>continues</i> The storage operator shall maintain financial responsibility and resources until the commission issues a certificate of completion under 20 AAC 25.1320, although a storage operator may be released from certain financial instruments under (m) of this section.	No significant difference from federal rule and no concern for stringency.	A storage operator is the permit holder and may be the owner or operator. Alaska drafting style uses "shall" rather than "must" for the actions of a person. The edits do not change the meaning and have no effect on stringency. Under Alaska law, the commission will issue a certificate of completion at approving all parts of project completion.

466.	The Director receives and approves the completed post-injection site care and site closure plan; and	40 CFR §146.85(b)(1)(i)	20 AAC 25.1200 (l) The requirement to maintain adequate financial responsibility and resources is directly enforceable regardless of whether the requirement is a condition of a storage facility permit under 20 AAC 25.1130. The storage operator shall maintain financial responsibility and resources until the commission issues a certificate of completion under 20 AAC 25.1320, although a storage operator may be released from certain financial instruments under (m) of this section.	No significant difference from federal rule and no concern for stringency.	See crosswalk rows 463 and 464.
467.	The Director approves site closure.	40 CFR §146.85(b)(1)(ii)	20 AAC 25.1200 (l) The requirement to maintain adequate financial responsibility and resources is directly enforceable regardless of whether the requirement is a condition of a storage facility permit under 20 AAC 25.1130. The storage operator shall maintain financial responsibility and resources until the commission issues a certificate of completion under 20 AAC 25.1320, although a storage operator may be released from certain financial instruments under (m) of this section.	No significant difference from federal rule and no concern for stringency.	See crosswalk rows 463 and 464.
468.	The owner or operator may be released from a financial instrument in the following circumstances:	40 CFR §146.85(b)(2)	20 AAC 25.1200 (m) The storage operator may be released from a financial instrument if	No significant difference from federal rule and no concern for stringency.	
469.	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	40 CFR §146.85(b)(2)(i)	20 AAC 25.1200 (m) (1) the storage operator has completed the phase of the storage facility for which the financial instrument was required and has fulfilled all its financial obligations as determined by the commission, including obtaining financial responsibility for the next phase of the storage facility, if required; or	No significant difference from federal rule and no concern for stringency.	Grammatical edit only for numbering and flow; no change to meaning. A storage facility is the same as a carbon storage project. The edits do not change the meaning and have no effect on stringency.

470.	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.	40 CFR §146.85(b)(2)(ii)	20 AAC 25.1200 (m) (2) the storage operator has submitted a replacement financial instrument and received written approval from the commission accepting the new financial instrument and releasing the storage operator from the previous financial instrument; or (3) the commission issues a certificate of completion under 20 AAC 25.1320.	No significant difference from federal rule and no concern for stringency.	A storage operator is the permit holder and may be the owner or operator. Alaska drafting style uses “shall” rather than “must” for the actions of a person. The edits do not change the meaning and have no effect on stringency.
471.	The owner or operator must have a detailed written estimate, in current dollars, of the cost of performing corrective action on wells in the AOR, plugging the injection well(s), post-injection site care and site closure, and emergency and remedial response.	40 CFR §146.85(c)	20 AAC 25.1200 (n) The storage operator shall provide to the commission a detailed written estimate, in current dollars, of the cost of performing corrective action on wells in the area of review under 20 AAC 25.1070, plugging the Class VI well under 20 AAC 25.1300, post-injection site care and site closure under 20 AAC 25.1310, and the emergency and remedial response plan under 20 AAC 25.1260.	No significant difference from federal rule and no concern for stringency.	A storage operator is the permit holder and may be the owner or operator. Alaska drafting style uses “shall” rather than “must” for the actions of a person. The edits do not change the meaning and have no effect on stringency.
472.	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.	40 CFR §146.85(c)(1)	20 AAC 25.1200 (n) continued The cost estimate shall be performed for each phase of a storage facility separately; the cost estimate must be based on the costs to the commission of hiring a third party to perform the required activities. For the purposes of this subsection, a third party is a party who is not within the corporate structure of the storage operator.	No significant difference from federal rule and no concern for stringency.	A storage operator is the permit holder and may be the owner or operator. Alaska drafting style uses “shall” rather than “must” for the actions of a person. The edits do not change the meaning and have no effect on stringency.

473.	<p>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 (§146.84), the injection well plugging plan (§146.92), the post-injection site care and site closure plan (§146.93), and the emergency and remedial response plan (§146.94).</p>	40 CFR §146.85(c)(2)	<p>20 AAC 25.1200 (o) During the active life of the storage facility the storage operator must adjust the cost estimate for inflation within 60 days before the anniversary date of the establishment of the financial instrument used to comply with this section and provide this adjustment to the commission. The storage operator shall also provide to the commission written updates of adjustments to the cost estimate within 60 days of any amendments to the area of review and corrective action plan under 20 AAC 25.1070, the Class VI well plugging plan under 20 AAC 25.1300, the post-injection site care and site closure plan under 20 AAC 25.1310, and the emergency and remedial response plan under 20 AAC 25.1260. In adjusting for the cost on inflation, the storage operator shall use the consumer price index for urban consumers for urban Alaska, as determined by the United States Department of Labor, Bureau of Labor Statistics, without seasonal adjustment, for December of the proceeding calendar year.</p>	No significant difference from federal rule and no concern for stringency.	<p>A storage facility is used under Alaska law rather than carbon storage project. Under Alaska drafting conventions, “shall” is used for an actor like a storage operator. Class VI substituted for injection well as 20 AAC 25.1300 concerns Class VI wells. The edits do not change the meaning and have no effect on stringency.</p> <p>20 AAC 25.1070 implements 146.84, 20 AAC 25.1300 implements 146.92, 20 AAC 25.1310 implements 146.93, and 20 AAC 25.1260 implements 146.94.</p>
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474.	<p>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 (§146.84), the injection well plugging plan (§146.92), the post-injection site care and site closure plan (§146.93), and the emergency and response plan (§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.</p>	40 CFR §146.85(c)(3)	<p>20 AAC 25.1200 (p) The commission will approve any decrease or increase to the initial cost estimate under (n) of this section. During the active life of the storage facility, the storage operator shall revise the cost estimate not later than 60 days after the commission has approved a request to modify the area of review and corrective action plan under 20 AAC 25.1070, the Class VI well plugging plan under 20 AAC 25.1300, the post-injection site care and site closure plan under 20 AAC 25.1310, and the emergency and response plan under 20 AAC 25.1260, 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 commission. Any decrease to the value of the financial assurance instrument must first be approved by the commission. The revised cost estimate shall be adjusted for inflation as specified in (o) of this section .</p>	No significant difference from federal rule and no concern for stringency.	<p>A storage facility is used under Alaska law rather than carbon storage project. A storage operator is the permit holder and may be the owner or operator. Alaska drafting style uses “shall” rather than “must” for the actions of a person. The edits do not change the meaning and have no effect on stringency.</p> <p>Class VI well is substituted for injection well for clarity as 20 AAC 25.1300 concerns Class VI wells.</p>
475.	<p>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.</p>	40 CFR §146.85(c)(4)	<p>20 AAC 25.1200 (p) continues...Whenever the current cost estimate increases to an amount greater than the face amount of a financial instrument currently in use, the storage operator, within 60 days after the increase, shall 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 commission, 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 storage operator has received written approval from the commission.</p>	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” rather than “must” for the actions of a person. The edits do not change the meaning and have no effect on stringency.

476.	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.	40 CFR §146.85(d)	20 AAC 25.1200 (q) The storage operator shall notify the commission by certified mail or other trackable written delivery method of adverse financial conditions such as bankruptcy that may affect the ability to carry out its Class VI well plugging and post-injection site care and site closure under 20 AAC 25.1310. Notification shall occur	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” rather than “must” for the actions of a person. A storage operator is the permit holder and may be the owner or operator. The edits do not change the meaning and have no effect on stringency.
477.	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.	40 CFR §146.85(d)(1)	20 AAC 25.1200 (q)(1) in the event the storage operator or the third-party provider of a financial responsibility instrument is named as a debtor in a bankruptcy proceeding; the notice under this paragraph shall be made within 10 days after commencement of the bankruptcy proceeding;	No significant difference from federal rule and no concern for stringency.	A storage operator is the permit holder and may be the owner or operator. Alaska drafting style uses “shall” rather than “must” for the actions of a person. The edits do not change the meaning and have no effect on stringency.
478.	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.	40 CFR §146.85(d)(2)	20 AAC 25.1200 (q) (2) by a guarantor of a corporate guarantee if the guarantor is named as debtor, as required under the terms of the corporate guarantee.	No significant difference from federal rule and no concern for stringency.	
479.	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.	40 CFR §146.85(d)(3)	20 AAC 25.1200 (r) A storage 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 storage operator shall establish other financial assurance within 60 days after the event.	No significant difference from federal rule and no concern for stringency.	A storage operator is the permit holder and may be the owner or operator. Alaska drafting style uses “shall” rather than “must” for the actions of a person. The edits do not change the meaning and have no effect on stringency.

480.	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 §146.84), injection well plugging (as required by §146.92), post-injection site care and site closure (as required by §146.93), and emergency and remedial response (as required by §146.94).	40 CFR §146.85(e)	20 AAC 25.1200 (s) The storage operator shall provide an adjustment of the cost estimate this section, and any amended cost estimates, to the commission within 60 days of notification by the commission, if the commission determines during the annual evaluation of the qualifying financial responsibility instrument that the most recent demonstration is no longer adequate to cover the cost of corrective action required by 20 AAC 25.1070, Class VI well plugging as required by 20 AAC 25.1300, post-injection site care and site closure as required by 20 AAC 25.1310, and emergency and remedial response as required by 20 AAC 25.1260.	No significant difference from federal rule and no concern for stringency.	A storage operator is the permit holder and may be the owner or operator. Alaska drafting style uses “shall” rather than “must” for the actions of a person. The edits do not change the meaning and have no effect on stringency. Class VI well used instead of injection well since 20 AAC 25.1300 concerns Class VI wells. 20 AAC 25.1070 implements 246.84, 20 AAC 25.1300 implements 146.92, 20 AAC 1310 implements 246.93 and 20 AAC 1260 implements 146.94.
481.	The Director must approve the use and length of pay-in-periods for trust funds or escrow accounts.	40 CFR §146.85(f)	20 AAC 25.1200 (t) The commission must approve the use and length of pay-in-periods for trust funds or escrow accounts.	No significant difference from federal rule and no concern for stringency.	The commission will be the actor under state primacy.
482.	<i>General.</i> The owner or operator must ensure that all Class VI wells are constructed and completed to:	40 CFR §146.86(a)	20 AAC 25.1210 (a) A storage operator shall ensure and demonstrate to the commission that each Class VI well including a Class II well converted to a Class VI well to use for carbon storage, is constructed and completed to	No significant difference from federal rule and no concern for stringency.	
483.	Prevent the movement of fluids into or between USDWs or into any unauthorized zones;	40 CFR §146.86(a)(1)	20 AAC 25.1210 (a)(1) prevent the movement of fluid into or between underground sources of drinking water or outside the authorized storage reservoir	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, singular includes the plural unless specified otherwise, so “fluid” includes “fluids.” There is no change in meaning from the federal rule.
484.	Permit the use of appropriate testing devices and workover tools; and	40 CFR §146.86(a)(2)	20 AAC 25.1210 (a)(2) permit the use of appropriate testing devices and workover tools;	No difference from federal rule and no concern for stringency.	
485.	Permit continuous monitoring of the annulus space between the injection tubing and long string casing.	40 CFR §146.86(a)(3)	20 AAC 25.1210 (a)(3) permit continuous monitoring of the annulus space between the injection tubing and long string casing	No difference from federal rule and no concern for stringency.	

486.	<i>Casing and Cementing of Class VI Wells.</i>	40 CFR §146.86(b)	20 AAC 25.1210	No significant difference from federal rule and no concern for stringency.	
487.	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:	40 CFR §146.86(b)(1)	20 AAC 25.1210 (b) The 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 storage facility. 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 commission. The storage operator's casing and cementing program shall be designed to prevent the movement of fluids-into or between underground sources of drinking water. In order to allow the commission to determine and specify casing and cementing requirements for a Class VI well, the storage operator shall provide the following information:	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, singular includes the plural unless specified otherwise, so "fluid" includes "fluids." Alaska drafting style uses "shall" rather than "must" for the actions of the storage operator. The storage operator includes an owner or operator, whoever holds or is applying for the permit. There is no change to meaning from the federal rule
488.	Depth to the injection zone(s);	40 CFR §146.86(b)(1)(i)	20 AAC 25.1210 (b)(1) depth to the injection zone;	No difference from federal rule and no concern for stringency.	
489.	Injection pressure, external pressure, internal pressure, and axial loading;	40 CFR §146.86(b)(1)(ii)	20 AAC 25.1210 (b) (2) injection pressure, external pressure, internal pressure, and axial loading;	No difference from federal rule and no concern for stringency.	
490.	Hole size;	40 CFR §146.86(b)(1)(iii)	20 AAC 25.1210 (b) (3) hole size;	No difference from federal rule and no concern for stringency.	

491.	Size and grade of all casing strings (wall thickness, external diameter, nominal weight, length, joint specification, and construction material);	40 CFR §146.86(b)(1)(iv)	20 AAC 25.1210 (b) (4) size and grade of all casing strings, including wall thickness, external diameter, nominal weight, length, joint specification, and construction material	No significant difference from federal rule and no concern for stringency.	
492.	Corrosiveness of the carbon dioxide stream and formation fluids;	40 CFR §146.86(b)(1)(v)	20 AAC 25.1210 (b) (5) corrosiveness of the carbon dioxide stream and formation fluid;	No difference from federal rule and no concern for stringency.	Under Alaska drafting style, singular includes the plural unless specified otherwise, so “fluid” includes “fluids.” There is no change to meaning from the federal rule
493.	Down-hole temperatures;	40 CFR §146.86(b)(1)(vi)	20 AAC 25.1210 (b) 6) down-hole temperatures;	No difference from federal rule and no concern for stringency.	
494.	Lithology of injection and confining zone(s);	40 CFR §146.86(b)(1)(vii)	20 AAC 25.1210 (b)(7) lithology of injection and confining zone(s);	No significant difference from federal rule and no concern for stringency.	
495.	Type or grade of cement and cement additives; and	40 CFR §146.86(b)(1) (viii)	20 AAC 25.1210 (b) (8) type or grade of cement and cement additives; and	No difference from federal rule and no concern for stringency.	
496.	Quantity, chemical composition, and temperature of the carbon dioxide stream.	40 CFR §146.86(b)(1)(ix)	20 AAC 25.1210 (b) (9) quantity, chemical composition, and temperature of the carbon dioxide stream.	No difference from federal rule and no concern for stringency.	

497.	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.	40 CFR §146.86(b)(2)	20 AAC 25.1210(c)(1) In addition to the requirements of (b) of this section, the following requirements apply to the construction and mechanics of a Class VI well (1) the surface casing must extend through the base of the lowermost underground sources of drinking water and be cemented to the surface through the use of a single or multiple strings of casing and cement;	No significant difference from federal rule and no concern for stringency.	Some minor grammar changes for flow and reading ease, there is no change to meaning that would concern stringency.
498.	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.	40 CFR §146.86(b)(3)	20 AAC 25.1210 (c)(2) 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;	No difference from federal rule and no concern for stringency.	
499.	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.	40 CFR §146.86(b)(4)	20 AAC 25.1210 (c) (3) the circulation of cement may be accomplished by staging; the commission may approve an alternative method of cementing in cases where the cement cannot be recirculated to the surface, provided the storage operator can demonstrate by using logs that the cement does not allow fluid movement behind the well bore;	No difference from federal rule and no concern for stringency.	
500.	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.	40 CFR §146.86(b)(5)	20 AAC 25.1210 (c) (4) the 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 storage facility; in demonstrating this compatibility, the storage operator shall verify the integrity and location of the cement using technology capable of evaluating cement quality radially and identifying the location of channels to ensure that underground sources of drinking water are not endangered.	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, singular includes the plural unless specified otherwise, therefore "fluid" includes "fluids." There is no change in meaning from the federal rule. The Alaska regulations use "storage facility" rather than "carbon storage project." The meaning and scope is the same as the federal rule.

501.	<i>Tubing and packer.</i>	40 CFR §146.86(c)	20 AAC 25.1210	No significant difference from federal rule and no concern for stringency.	
502.	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.	40 CFR §146.86(c)(1)	20 AAC 25.1210 (d) A storage operator shall ensure that the tubing and packer materials used in the construction of each Class VI well are 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 commission.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” rather than “must” for the actions of a storage operator. The commission substitutes for the Director.
503.	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.	40 CFR §146.86(c)(2)	20 AAC 25.1210. (d) continues...Accordingly, each storage operator shall inject fluid into a Class VI well through tubing with a packer set at a depth opposite a cemented interval at the location approved by the commission	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, singular includes the plural unless specified otherwise. No change in meaning. Other edits for clarity, no change in meaning.
504.	In order for the Director to determine and specify requirements for tubing and packer, the owner or operator must submit the following information:	40 CFR §146.86(c)(3)	20 AAC 25.1210 (d) continues... To allow the commission to determine and specify requirements for tubing and packer, the storage operator shall submit the following information:	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” rather than “must” for the actions of a storage operator.
505.	Depth of setting;	40 CFR §146.86(c)(3)(i)	20 AAC 25.1210 (d) (1) depth of setting;	No difference from federal rule and no concern for stringency.	
506.	Characteristics of the carbon dioxide stream (chemical content, corrosiveness, temperature, and density) and formation fluids;	40 CFR §146.86(c)(3)(ii)	20 AAC 25.1210 (d) (2) characteristics of the carbon dioxide stream, chemical content corrosiveness, temperature, and density, and types of formation fluids;	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, singular includes the plural unless specified otherwise. So “fluid” includes “fluids.” There is no change to meaning.
507.	Maximum proposed injection pressure;	40 CFR §146.86(c)(3)(iii)	20 AAC 25.1210 (d) (3) maximum proposed injection pressure;	No difference from federal rule and no concern for stringency.	
508.	Maximum proposed annular pressure;	40 CFR §146.86(c)(3)(iv)	20 AAC 25.1210 (d) 4) maximum proposed annular pressure;	No difference from federal rule and no concern for stringency.	

509.	Proposed injection rate (intermittent or continuous) and volume and/or mass of the carbon dioxide stream;	40 CFR §146.86(c)(3)(v)	20 AAC 25.1210 (d) (5) proposed injection rate (intermittent or continuous) and volume and/or mass of the carbon dioxide stream;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or". Here "or" has the same meaning as the federal "and/or."
510.	Size of tubing and casing; and	40 CFR §146.86(c)(3)(vi)	20 AAC 25.1210 (d) (6) size of tubing and casing; and	No significant difference from federal rule and no concern for stringency.	
511.	Tubing tensile, burst, and collapse strengths.	40 CFR §146.86(c)(3)(vii)	20 AAC 25.1210 (d) (7) tubing tensile, burst, and collapse strengths.	No significant difference from federal rule and no concern for stringency.	
512.		40 C.F.R. 146.86(b) (see 146.81(c))	20 AAC 25.1210(e) Notwithstanding (b) – (d) of this section, if the commission determines that that a well previously used for enhanced oil or gas recovery and related well activities and that is converted for use as a Class VI well under AS 41.06.185 and this chapter will not endanger underground sources of drinking water, the commission may exempt the storage operator from complying with the casing and cementing requirements of (b)(1) – (9) and (c) of this section and from the logging, sampling, and testing requirements of 20 AAC 25 .1220.	No significant difference from federal rule and no concern for stringency.	To implement 40 C.F.R. 146.86(b) (see 146.81(c)). The Alaska regulation uses Class VI well rather than injection well.

513.	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 §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:	40 CFR §146.87(a)	20 AAC 25.1220 (a) During the drilling and construction of a Class VI well the storage operator shall 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 Class VI well construction requirements under 20 AAC 25.1210 and to establish accurate baseline data against which future measurements may be compared. The storage operator shall submit to the commission not more than 90 days after completion, a descriptive report prepared by a knowledgeable log analyst that includes an interpretation of the results of such logs and tests. At a minimum, logs and tests under this section must include:	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, “shall” is used in this context rather than must. There is no change to meaning. 20 AAC 25.1210 concerns Class VI well, so substituted Class VI well for injection well. 20 AAC 25.1210 implements the standards of 146.86.
514.	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	40 CFR §146.87(a)(1)	20 AAC 25.1220 (a) (1) deviation checks during drilling on all holes constructed by drilling a pilot hole which is enlarged by reaming or another method; the 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	No difference from federal rule and no concern for stringency.	
515.	Before and upon installation of the surface casing:	40 CFR §146.87(a)(2)	20 AAC 25.1220 (a) (2) before and upon installation of the surface casing:	No difference from federal rule and no concern for stringency.	
516.	Resistivity, spontaneous potential, and caliper logs before the casing is installed; and	40 CFR §146.87(a)(2)(i)	20 AAC 25.1220 (a) (2) (A) resistivity, spontaneous potential, and caliper logs before the casing is installed; and	No difference from federal rule and no concern for stringency.	
517.	A cement bond and variable density log to evaluate cement quality radially, and a temperature log after the casing is set and cemented.	40 CFR §146.87(a)(2)(ii)	20 AAC 25.1220 (a) (2) (B) a cement bond and variable density log to evaluate cement quality radially, and a temperature log after the casing is set and cemented.	No difference from federal rule and no concern for stringency.	

518.	Before and upon installation of the long string casing;	40 CFR §146.87(a)(3)	20 AAC 25.1220 (a) (3) before and upon installation of the long string casing;	No difference from federal rule and no concern for stringency.	
519.	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	40 CFR §146.87(a)(3)(i)	20 AAC 25.1220 (a) (3) (A) resistivity, spontaneous potential, porosity, caliper, gamma ray, fracture finder logs, and any other logs the commission requires for the given geology before the casing is installed; and	No significant difference from federal rule and no concern for stringency.	The commission acts here as primary enforcement authority rather than the Director.
520.	A cement bond and variable density log, and a temperature log after the casing is set and cemented.	40 CFR §146.87(a)(3)(ii)	20 AAC 25.1220 (a) (3) (B) a cement bond and variable density log, and a temperature log after the casing is set and cemented;	No difference from federal rule and no concern for stringency.	
521.	A series of tests designed to demonstrate the internal and external mechanical integrity of injection wells, which may include:	40 CFR §146.87(a)(4)	20 AAC 25.1220 (a)(4) a series of tests designed to demonstrate the internal and external mechanical integrity of injection wells, which may include:	No difference from federal rule and no concern for stringency.	
522.	A pressure test with liquid or gas;	40 CFR §146.87(a)(4)(i)	20 AAC 25.1220 (a) (4) (A) a pressure test with liquid or gas;	No difference from federal rule and no concern for stringency.	
523.	A tracer survey such as oxygen-activation logging;	40 CFR §146.87(a)(4)(ii)	20 AAC 25.1220 (a) (4) (B) a tracer survey such as oxygen-activation logging;	No difference from federal rule and no concern for stringency.	
524.	A temperature or noise log;	40 CFR §146.87(a)(4)(iii)	20 AAC 25.1220 (a) (4) (C) a temperature or noise log;	No difference from federal rule and no concern for stringency.	
525.	A casing inspection log; and	40 CFR §146.87(a)(4)(iv)	20 AAC 25.1220 (a) (4) (D) a casing inspection log; and	No difference from federal rule and no concern for stringency.	
526.	Any alternative methods that provide equivalent or better information and that are required by and/or approved of by the Director.	40 CFR §146.87(a)(5)	20 AAC 25.1220 (a) (5) any alternative methods that provide equivalent or better information than would be provided by the tests in (a) (1) – (4) of this subsection and that are required by or approved by the commission.	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or". Here "or" has the same meaning as the federal "and/or."

527.	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.	40 CFR §146.87(b)	20 AAC 25.1220 (b) The storage operator shall take whole cores or sidewall cores of the injection zone and confining system and formation fluid samples from the injection zone, and shall submit to the commission a detailed report prepared by a log analyst that includes well log analyses, including well logs, core analyses, and formation fluid sample information. The commission may accept information on cores from nearby wells if the storage operator demonstrates that core retrieval is not possible and that such cores are representative of conditions at the well. The commission may require the storage operator to core other formations in the borehole.	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, “shall” is used in the context of actions of a storage operator rather than must. There is no change in meaning. The material is submitted to the commission rather than the Director.
528.	The owner or operator must record the fluid temperature, pH, conductivity, reservoir pressure, and static fluid level of the injection zone(s).	40 CFR §146.87(c)	20 AAC 25.1220 (c) The storage operator shall record the fluid temperature, pH, conductivity, reservoir pressure, and static fluid level of the injection zone.	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, “shall” is used in this context rather than must. The storage operator is the applicant or permit holder and may be the owner or operator. There is no change in meaning.
529.	At a minimum, the owner or operator must determine or calculate the following information concerning the injection and confining zone(s):	40 CFR §146.87(d)	20 AAC 25.1220 (d) At a minimum, the storage operator shall determine or calculate the following information concerning the injection and confining zone:	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, “shall” is used in this context rather than must. A confining zone includes the plural confining zones. here is no change in meaning
530.	Fracture pressure;	40 CFR §146.87(d)(1)	20 AAC 25.1220 (d) (1) fracture pressure;	No difference from federal rule and no concern for stringency.	
531.	Other physical and chemical characteristics of the injection and confining zone(s); and	40 CFR §146.87(d)(2)	20 AAC 25.1220 (d) (2) other physical and chemical characteristics of the injection and confining zone; and	No significant difference from federal rule and no concern for stringency.	The singular “confining zone” includes the plural “confining zones” under Alaska drafting style. There is no change in meaning.
532.	Physical and chemical characteristics of the formation fluids in the injection zone(s).	40 CFR §146.87(d)(3)	20 AAC 25.120 (d) (3) physical and chemical characteristics of the formation fluids-in the injection zone.	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, singular includes the plural unless specified otherwise, so “fluid” includes “fluids.” There is no change in meaning.

533.	Upon completion, but prior to operation, the owner or operator must conduct the following tests to verify hydrogeologic characteristics of the injection zone(s):	40 CFR §146.87(e)	20 AAC 25.1220 (e) To verify hydrogeologic characteristics of the injection zone, upon completion of the Class VI well, but before operation, the storage operator shall conduct a pressure fall-off test and	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, “shall” is used in this context rather than must. The Alaska regulation differs slightly from the federal rule for style and flow, but there is no change in meaning from the federal rule.
534.	A pressure fall-off test; and,	40 CFR §146.87(e)(1)	20 AAC 25.1220 (e) a pressure fall-off test; and,	No significant difference from federal rule and no concern for stringency.	
535.	A pump test; or	40 CFR §146.87(e)(2) (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): (1) A pressure fall-off test; and, (2) A pump test; or (3) Injectivity tests.	20 AAC 25.1220 (e) (1) a pump test; or	No difference from federal rule and no concern for stringency.	
536.	Injectivity tests.	40 CFR §146.87(e)(3) (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): (1) A pressure fall-off test; and, (2) A pump test; or (3) Injectivity tests.	20 AAC 25.1220 (e) (2) injectivity tests.	No difference from federal rule and no concern for stringency.	
537.	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.	40 CFR §146.87(f)	20 AAC 25.1220 (f) The storage operator shall provide the commission with the opportunity to witness all logging and testing required by this section. The storage operator shall submit a schedule of such activities to the commission not less than 30 days before conducting the first test and submit any changes to the schedule not less than 30 days before the next scheduled test.	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, “shall” is used in this context rather than must. The storage operator includes an applicant or permit holder, which can be the owner or operator. There is no change in meaning.

538.	<p>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.</p> <p>Pursuant to requirements at §146.82(a)(9), all stimulation programs must be approved by the Director as part of the permit application and incorporated into the permit.</p>	40 CFR §146.88(a)	<p>20 AAC 25.1230 (a) Except during stimulation, the storage operator shall ensure that injection pressure in a Class VI well does not exceed 90 percent of the fracture pressure of the injection zone so as to 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 or cause the movement of injection or formation fluid that endangers underground sources of drinking water. Under 20 AAC 25.1080 (a)(9).all stimulation programs must be approved by the commission as part of the storage facility permit application and incorporated into the permit.</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>20 AAC 25.1080 (a)(9) implements 40 C.F.R. 146.82(a)(9).</p>	<p>Under Alaska drafting style, “shall” is used in this context rather than must. There is no change to meaning.</p> <p>Other edits for clarity, including use of Class VI well since the regulation addresses Class VI wells.</p> <p>20 AAC 25.1080 (a)(9) implements 40 C.F.R. 146.82(a)(9).</p> <p>The regulation changes “fluids” to “fluid” because under Alaska drafting style, singular includes the plural unless specified otherwise.</p>
539.	Injection between the outermost casing protecting USDWs and the well bore is prohibited.	40 CFR §146.88(b)	20 AAC 25.1230(b) Injection between the outermost casing protecting underground sources of drinking water and the well bore is prohibited.	No difference from federal rule and no concern for stringency.	
540.	<p>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.</p> <p>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.</p>	40 CFR §146.88(c)	<p>20 AAC 25.1230(c) The storage operator shall fill the annulus between the tubing and the long string casing with a non-corrosive fluid approved by the commission.</p> <p>The storage operator shall maintain on the annulus a pressure that exceeds the operating injection pressure, unless the commission determines that such requirement might harm the integrity of the well or endanger underground sources of drinking water.</p>	No significant difference from federal rule and no concern for stringency.	<p>Under Alaska drafting style, “shall” is used in this context rather than must.</p> <p>The storage operator may be an applicant or permit holder, whether owner or operator.</p> <p>The commission is the body that will approve as required in 20 AAC 25.1230(c).</p> <p>There is no change in meaning.</p>

541.	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.	40 CFR §146.88(d)	20 AAC 25.1230(d) Other than during periods of well workover, including maintenance, approved by the commission in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the storage operator shall maintain mechanical integrity as required under 20 AAC 25.1240 of the Class VI well at all times.	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, "shall" is used in this context rather than must. There is no change in meaning. The Alaska regulation uses Class VI well as 1230 concerns Class VI wells.
542.	The owner or operator must install and use:	40 CFR §146.88(e)	20 AAC 25.1230(e) The storage operator shall install and use:	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, "shall" is used in this context rather than must. There is no change in meaning
543.	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	40 CFR §146.88(e)(1)	20 AAC 25.1230 (e) (1) continuous recording devices to monitor the injection pressure; the rate, volume 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	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" over the federal "and/or" does not change the meaning and has no effect on stringency.
544.	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	40 CFR §146.88(e)(2)	20 AAC 25.1230 (e) (2) alarms and automatic surface shut-off systems or, at the discretion of the commission, down-hole shut-off systems, including automatic shut-off, or check valves, for onshore wells or, other mechanical devices that provide equivalent protection; and	No significant difference from federal rule and no concern for stringency.	
545.	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.	40 CFR §146.88(e)(3)	20 AAC 25.1230 (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 or gradients specified in the storage facility permit .	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" over the federal "and/or" does not change the meaning and has no effect on stringency.

546.	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:	40 CFR §146.88(f)	20 AAC 25.1230 (f) If a shutdown, including a down-hole or surface shutdown, is triggered or a loss of mechanical integrity is discovered, the storage operator must immediately investigate and identify as expeditiously as possible the cause of the shutoff. If, upon investigation, the well appears to be lacking mechanical integrity, or if monitoring required under (e) of this section otherwise indicates that the well may be lacking mechanical integrity, the storage operator must:	No significant difference from federal rule and no concern for stringency.	
547.	Immediately cease injection;	40 CFR §146.88(f)(1)	20 AAC 25.1230 (f) (1) immediately cease injection;	No difference from federal rule and no concern for stringency.	
548.	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;	40 CFR §146.88(f)(2)	20 AAC 25.1230 (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;	No significant difference from federal rule and no concern for stringency.	The change of “fluids to “fluid” is because under Alaska drafting style, singular includes the plural unless specified otherwise. There is no change to meaning.
549.	Notify the Director within 24 hours;	40 CFR §146.88(f)(3)	20 AAC 25.1230 (f) (3) notify the Commission not more than 24 hours after making the finding that the well may be lacking mechanical integrity	No significant difference from federal rule and no concern for stringency.	The commission will be the actor here, no the Director.
550.	Restore and demonstrate mechanical integrity to the satisfaction of the Director prior to resuming injection; and	40 CFR §146.88(f)(4)	20 AAC 25.1230 (f) (4) restore and demonstrate mechanical integrity to the satisfaction of the commission before resuming injection; and	No significant difference from federal rule and no concern for stringency.	
551.	Notify the Director when injection can be expected to resume.	40 CFR §146.88(f)(5)	20 AAC 25.1230 (f) (5) notify the commission when the storage operator expects injection to resume	No significant difference from federal rule and no concern for stringency.	
552.	A Class VI well has mechanical integrity if:	40 CFR §146.89(a)	20 AAC 25.1240(a) A Class VI well has mechanical integrity if:	No difference from federal rule and no concern for stringency.	
553.	There is no significant leak in the casing, tubing, or packer; and	40 CFR §146.89(a)(1)	20 AAC 25.1240 (a) (1) there is no significant leak in the casing, tubing, or packer; and	No difference from federal rule and no concern for stringency.	

554.	There is no significant fluid movement into a USDW through channels adjacent to the injection well bore.	40 CFR §146.89(a)(2)	20 AAC 25.1240 (a)(2) there is no significant fluid movement into underground sources of drinking water through channels adjacent to the injection well bore.	No difference from federal rule and no concern for stringency.	
555.	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 §146.88 (e);	40 CFR §146.89(b)	20 AAC 25.1240 (b) To evaluate the absence of significant leaks under paragraph (a)(1) of this section, a storage operator shall 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 20 AAC 25.1230 (e);	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, “shall” is used in this context rather than “must.” There is no change in meaning. 20 AAC 25.1230(e) implements 146.88 (e).
556.	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:	40 CFR §146.89(c)	20 AAC 25.1240 (c) At least once each year, the storage operator use one of the following methods to determine the absence of significant fluid movement under paragraph (a)(2) of this section:	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, “shall” is used in this context rather than “must.” There is no change in meaning.
557.	An approved tracer survey such as an oxygen-activation log; or	40 CFR §146.89(c)(1)	20 AAC 25.1240 (c) (1) an approved tracer survey such as an oxygen-activation log; or	No difference from federal rule and no concern for stringency.	
558.	A temperature or noise log.	40 CFR §146.89(c)(2)	20 AAC 25.1240(c)(2) a temperature or noise log.	No difference from federal rule and no concern for stringency.	
559.	If required by the Director, at a frequency specified in the testing and monitoring plan required at §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.	40 CFR §146.89(d)	20 AAC 25.1240(d) If required by the commission, at a frequency specified in the testing and monitoring plan required under 20 AAC 25.1250, the storage operator must run a casing inspection log to determine the presence or absence of corrosion in the long-string casing.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1250 implements 146.90. The commission is the actor, not the Director.

560.	<p>The Director may require any other test to evaluate mechanical integrity under paragraphs (a)(1) or (a)(2) of this section.</p> <p>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.</p> <p>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 <i>Federal Register</i> 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.</p>	40 CFR §146.89(e)	<p>20 AAC 25.1240 (e) The commission may require any other test to evaluate mechanical integrity under paragraphs (a)(1) or (a)(2) of this section.</p> <p>In addition, the commission may allow the use of a test to demonstrate mechanical integrity other than those listed above with the written approval of the United States Environmental Protection Agency Administrator. To obtain approval for a new mechanical integrity test, the commission will submit a written request to the administrator setting forth the proposed test and all technical data supporting its use.</p>	No significant difference from federal rule and no concern for stringency.	<p>The commission is the actor, not the Director.</p> <p>The use of “will” instead of “must” to indicate commission action is required by Alaska drafting style. There is no change in meaning.</p> <p>The part about the Administrator approval is EPA-specific and not required to be in the Alaska regulation.</p>
561.	<p>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.</p> <p>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.</p> <p>In making his/her evaluation, the Director must review monitoring and other test data submitted since the previous evaluation.</p>	40 CFR §146.89(f)	<p>20 AAC 25.1240 (f) In conducting and evaluating the tests enumerated in this section or others to be allowed by the commission, the storage operator and the commission shall apply methods and standards generally accepted in the industry. When a storage operator reports the results of mechanical integrity tests to the commission, the storage operator shall include a description of the test and the method used. In making its evaluation, the commission will review monitoring and other test data submitted by the storage operator since the previous evaluation.</p>	No significant difference from federal rule and no concern for stringency.	<p>Under Alaska drafting style, use of “shall” over “must” is appropriate here. There is no change in meaning.</p> <p>The use of “will” instead of “must” to indicate commission action is required by Alaska drafting style. There is no change in meaning.</p>

562.	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.	40 CFR §146.89(g)	20 AAC 25.1240 (g) The commission may require additional or alternative tests if the results presented by the storage operator under paragraphs (a) through (d) of this section are not satisfactory to the commission 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 underground sources of drinking water resulting from the injection activity as stated in paragraphs (a)(1) and (2) of this section.	No significant difference from federal rule and no concern for stringency.	The commission is the actor, not the Director.
563.	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:	40 CFR §146.90	20 AAC 25.1250 (a) The storage operator of a Class VI well shall prepare, maintain, and comply with a testing and monitoring plan to verify that the carbon storage facility project is operating as permitted under this chapter and is not endangering underground sources of drinking water. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit. The storage operator shall submit the testing and monitoring plan with the permit application, for commission approval, and shall include a description of how the storage operator will meet the requirements of this section, including accessing sites for all necessary monitoring and testing during the life of the facility. Testing and monitoring associated with a storage facility must, at a minimum, include	No significant difference from federal rule and no concern for stringency.	<p>Minor edits for clarity and to remove passive voice. The commission is the actor, not the Director. The storage operator is the applicant or permit holder, whether the owner or operator.</p> <p>Alaska law uses storage facility over carbon storage project.</p> <p>Alaska drafting style requires “shall” over “must” for actions by an actor such as a storage operator.</p> <p>There is no change in meaning.</p>
564.	Analysis of the carbon dioxide stream with sufficient frequency to yield data representative of its chemical and physical characteristics;	40 CFR §146.90(a)	20 AAC 25.1250 (a) (1) an analysis of the carbon dioxide stream with sufficient frequency to yield data representative of its chemical and physical characteristics;	No difference from federal rule and no concern for stringency.	

565.	Installation and use, except during well workovers as defined in §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;	40 CFR §146.90(b)	20 AAC 25.1250 (a) (2) the installation and use, except during well workovers as defined in 20 AAC 25.1230 (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 ;	No difference from federal rule and no concern for stringency.	20 AAC 25.1230(d) implements 146.88 (d).
566.	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 §146.86(b), by:	40 CFR §146.90(c)	20 AAC 25.1250 (a) (3) the 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 20 AAC 25.1210 (b) , by:	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1210 (b) implements 40 C.F.R. 146.86 (b).
567.	Analyzing coupons of the well construction materials placed in contact with the carbon dioxide stream; or	40 CFR §146.90(c)(1)	20 AAC 25.1250 (a) (3) (A) analyzing coupons of the well construction materials placed in contact with the carbon dioxide stream;	No difference from federal rule and no concern for stringency.	
568.	Routing the carbon dioxide stream through a loop constructed with the material used in the well and inspecting the materials in the loop; or	40 CFR §146.90(c)(2)	20 AAC 25.1250 (a) (3) (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	No difference from federal rule and no concern for stringency.	
569.	Using an alternative method approved by the Director;	40 CFR §146.90(c)(3)	20 AAC 25.1250 (a) (3) (C) using an alternative method approved by the commission	No significant difference from federal rule and no concern for stringency.	The commission will approve alternative methods not the Director.
570.	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:	40 CFR §146.90(d)	20 AAC 25.1250 (a) (4) periodic monitoring of the ground water quality and geochemical changes above the confining zone that may be a result of carbon dioxide movement through the confining zone or additional identified zones including:	No significant difference from federal rule and no concern for stringency.	

571.	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	40 CFR §146.90(d)(1)	20 AAC 25.1250 (a) (4) (A) the location and number of monitoring wells based on specific information about the storage facility including injection rate and volume, geology, the presence of artificial penetrations, and other factors; and	No significant difference from federal rule and no concern for stringency.	The regulation substitutes “storage facility” for “geologic sequestration project” as Alaska term is storage facility, which is the same as the federal term. There is no change in meaning.
572.	The monitoring frequency and spatial distribution of monitoring wells based on baseline geochemical data that has been collected under §146.82(a)(6) and on any modeling results in the area of review evaluation required by §146.84(c).	40 CFR §146.90(d)(2)	20 AAC 25.1250 (a) (4) (B) the monitoring frequency and spatial distribution of monitoring wells based on baseline geochemical data that has been collected under 20 AAC 25.1080 and on any modeling results in the area of review evaluation required by 20 AAC 25.1070;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1080 implements 146.82 and 20 AAC 25.1070 implements 146.84.
573.	A demonstration of external mechanical integrity pursuant to §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 §146.89(d) at a frequency established in the testing and monitoring plan;	40 CFR §146.90(e)	20 AAC 25.1250 (a)(5) a demonstration of external mechanical integrity under 20 AAC 25.1240 at least once each year until the Class VI well is plugged; and, if required by the commission, a casing inspection log under 20 AAC 25.1240 at a frequency established in the testing and monitoring plan;	No significant difference from federal rule and no concern for stringency.	Use of Class VI well appropriate here, so substituted for injection well.
574.	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;	40 CFR §146.90(f)	20 AAC 25.1250 (a) (6) a pressure fall-off test at least once every five years unless more frequent testing is required by the commission based on site-specific information;	No difference from federal rule and no concern for stringency.	
575.	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:	40 CFR §146.90(g)	20 AAC 25.1250 (a)(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:	No significant difference from federal rule and no concern for stringency.	
576.	Direct methods in the injection zone(s); and,	40 CFR §146.90(g)(1)	20 AAC 25.1250 (a)(7) (A) direct methods in the injection zone; and	No significant difference from federal rule and no concern for stringency.	

577.	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;	40 CFR §146.90(g)(2)	20 AAC 25.1250 (a)(7) (B) indirect methods, including seismic, electrical, gravity, or electromagnetic surveys or down-hole carbon dioxide detection tools, unless the commission determines, based on site-specific geology, that such methods are not appropriate; (a)(8) any additional monitoring, as required by the commission, necessary to support, upgrade and improve computational modeling of the area of review evaluation required under 20 AAC 25.1070.	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" has the same meaning as "and/or."
578.	The Director may require surface air monitoring and/or soil gas monitoring to detect movement of carbon dioxide that could endanger a USDW.	40 CFR §146.90(h)	20 AAC 25.1250 (b) The commission may require surface air monitoring or soil gas monitoring to detect movement of carbon dioxide that could endanger underground sources of drinking water and to ensure that carbon dioxide does not escape from the storage facility. For the purposes of this subsection,	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" has the same meaning as "and/or."
579.	Design of Class VI surface air and/or soil gas monitoring must be based on potential risks to USDWs within the area of review;	40 CFR §146.90(h)(1)	20 AAC 25.1250 (b) (1) the design of Class VI well surface air or soil gas monitoring must be based on potential risks to underground sources of drinking water within the area of review;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" has the same meaning as "and/or."
580.	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 §144.12 of this chapter;	40 CFR §146.90(h)(2)	20 AAC 25.1250 (b) (2) the monitoring frequency and spatial distribution of surface air monitoring 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 under 20 AAC 25.1070	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" has the same meaning as "and/or."

581.	<p>If an owner or operator demonstrates that monitoring employed under §§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 §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.</p> <p>Compliance with §§98.440 to 98.449 of this chapter pursuant to this provision is considered a condition of the Class VI permit;</p>	40 CFR §146.90(h)(3)	<p>20 AAC 25.1250 (c) If a storage operator demonstrates to the commission that monitoring employed under 42 U.S.C 7410 and 40 C.F.R. 98.440 to 98.449, (the Clean Air Act) accomplishes the goals of paragraphs (c)(1) and (2) of this section, and meets the requirements of 20 AAC 25.1610 , a regulatory department that requires surface air or soil gas monitoring must approve the use of monitoring employed 40 C.F.R. 98.440 to 98.449. If the storage operator suggests, and the commission approves, of monitoring under this subsection, the commission will include compliance under this subsection as a condition of a storage facility permit and associated Class VI well. In the materials adopted by reference in this subsection, “geological sequestration” includes “carbon storage”.</p>	No significant difference from federal rule and no concern for stringency.	<p>The storage operator may be the owner or operator but will be the permit holder or applicant. The commission acts rather than the Director.</p> <p>20 AAC 25.1610 implements 146.91.</p>
582.	<p>Any additional monitoring, as required by the Director, necessary to support, upgrade, and improve computational modeling of the area of review evaluation required under §146.84(c) and to determine compliance with standards under §144.12 of this chapter;</p>	40 CFR §146.90(i)	<p>20 AAC 25.1250 (a)(8) any additional monitoring, as required by the commission, necessary to support, upgrade, and improve computational modeling of the area of review evaluation required under 20 AAC 25.1070.</p>	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1070 implements 146.84.

<p>583.</p>	<p>The owner or operator shall periodically review the testing and monitoring plan to incorporate monitoring data collected under this subpart, operational data collected under §146.88, and the most recent area of review reevaluation performed under §146.84(e).</p> <p>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.</p> <p>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 §§144.39 or 144.41 of this chapter, as appropriate.</p> <p>Amended plans or demonstrations shall be submitted to the Director as follows:</p>	<p>40 CFR §146.90(j)</p>	<p>20 AAC 25.1250 (d) A storage operator shall periodically review the testing and monitoring plan to incorporate monitoring data collected under this section, operational data collected under 20 AAC 25.1250, and the most recent area of review reevaluation performed under 20 AAC 25.1070.</p> <p>The storage operator shall review the testing and operating plan as required by the commission, but in no event not less than once every five years. Based on this review, the storage operator shall submit an amended testing and monitoring plan or demonstrate to the commission that no amendment to the testing and monitoring plan is needed.</p> <p>Any amendments to the testing and monitoring plan shall be approved by the commission, be incorporated into the permit, and are subject to the permit modification requirements at 20 AAC 25.1410 or 20 AAC 25.1430.</p> <p>An amended plan or demonstrations shall be submitted to the commission:</p>	<p>No significant difference from federal rule and no concern for stringency.</p>	<p>20 AAC 25.1410 implements 144.39 and 20 AAC 25.1430 implements 144.41.</p> <p>The commission will be the actor, not the Director.</p>
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584.	Within one year of an area of review reevaluation;	40 CFR §146.90(j)(1)	20 AAC 25.1250 (d) (1) not more than one year after an area of review reevaluation;	No difference from federal rule and no concern for stringency.	The commission will be the actor, not the Director.
585.	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	40 CFR §146.90(j)(2)	20 AAC 25.1250 (d) (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 commission; or	No difference from federal rule and no concern for stringency.	The commission will be the actor, not the Director.
586.	When required by the Director.	40 CFR §146.90(j)(3)	20 AAC 25.1250 (d) (3) when required by the commission.	No difference from federal rule and no concern for stringency.	The commission will be the actor, not the Director.
587.	A quality assurance and surveillance plan for all testing and monitoring requirements.	40 CFR §146.90(k)	20 AAC 25.1250 (g) A storage operator of a Class VI well must also maintain a quality assurance and surveillance plan for all testing and monitoring requirements of this section.	No significant difference from federal rule and no concern for stringency.	

588.	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:	40 CFR §146.91	20 AAC 25.1610 (a) A storage operator shall at a minimum, provide the reports identified in this section to the commission and the United States Environmental Protection Agency, for each permitted Class VI well as part of a storage facility permit. Reports required by this section, or a storage facility permit, or other information required by the commission shall be signed by a person authorized under 40 C.F.R. 144.32(b), adopted by reference.	No significant difference from federal rule and no concern for stringency.	Paragraph (e) of 40 C.F.R. 146.91 is 20 AAC 25.1610 (a) and requires EPA reports. "Shall" is appropriate for actions by storage operator. There is no change in meaning from "must" and no effect on stringency.
589.	Semi-annual reports containing:	40 CFR §146.91(a)	20 AAC 25.1610 (b) A storage operator shall provide semi-annual reports, on a date established by the commission, containing ‡	No significant difference from federal rule and no concern for stringency.	"Shall" is appropriate for actions by storage operator. There is no change in meaning from "must".
590.	Any changes to the physical, chemical, and other relevant characteristics of the carbon dioxide stream from the proposed operating data;	40 CFR §146.91(a)(1)	20 AAC 25.1610 (b) (1) any changes to the physical, chemical, and other relevant characteristics of the carbon dioxide stream from the proposed operating data;	No significant difference from federal rule and no concern for stringency.	
591.	Monthly average, maximum, and minimum values for injection pressure, flow rate and volume, and annular pressure;	40 CFR §146.91(a)(2)	20 AAC 25.1610 (b) (2) the monthly average, maximum, and minimum values for injection pressure, flow rate and volume, and annular pressure;	No significant difference from federal rule and no concern for stringency.	
592.	A description of any event that exceeds operating parameters for annulus pressure or injection pressure specified in the permit;	40 CFR §146.91(a)(3)	20 AAC 25.1610 (b) (3) a description of any event that exceeds operating parameters for annulus pressure or injection pressure specified in the permit;	No significant difference from federal rule and no concern for stringency.	
593.	A description of any event which triggers a shut-off device required pursuant to §146.88(e) and the response taken;	40 CFR §146.91(a)(4)	20 AAC 25.1610(b) (4) a description of any event which triggers a shut-off device required pursuant to 20 AAC 25.1230 and the response taken;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1230 implements 146.88.
594.	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;	40 CFR §146.91(a)(5)	20 AAC 25.1610 (b) (5) the monthly volume or mass of the carbon dioxide stream injected over the reporting period and the volume injected cumulatively over the life of the project;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." Use of "or" has the same meaning as the federal "and/or."

595.	Monthly annulus fluid volume added; and	40 CFR §146.91(a)(6)	20 AAC 25.1610 (b) (6) the monthly annulus fluid volume added; and	No significant difference from federal rule and no concern for stringency.	
596.	The results of monitoring prescribed under §146.90.	40 CFR §146.91(a)(7)	20 AAC 25.1610 (b) (7) the results of monitoring prescribed under 20 AAC 25.1250.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1250 implements 146.90.
597.	Report, within 30 days, the results of:	40 CFR §146.91(b)	20 AAC 25.1610 (c) A storage operator shall report, not later than 30 days after a test under this subsection, the results of:	No significant difference from federal rule and no concern for stringency.	“Shall” is appropriate for actions by storage operator and has no change in meaning from “must”.
598.	Periodic tests of mechanical integrity;	40 CFR §146.91(b)(1)	20 AAC 25.1610 (c) (1) periodic tests of mechanical integrity;	No significant difference from federal rule and no concern for stringency.	
599.	Any well workover; and,	40 CFR §146.91(b)(2)	20 AAC 25.1610 (c) (2) any well workover; and,	No significant difference from federal rule and no concern for stringency.	
600.	Any other test of the injection well conducted by the permittee if required by the Director.	40 CFR §146.91(b)(3)	20 AAC 25.1610(c) (3) any other test of the Class VI well conducted by the storage operator if required by the commission	No significant difference from federal rule and no concern for stringency.	The commission is the actor, not the Director.
601.	Report, within 24 hours:	40 CFR §146.91(c)	20 AAC 25.1610 (d) A storage operator shall report within 24 hours	No significant difference from federal rule and no concern for stringency.	“Shall” is appropriate for actions by storage operator and there is no change in meaning from “must.”
602.	Any evidence that the injected carbon dioxide stream or associated pressure front may cause an endangerment to a USDW;	40 CFR §146.91(c)(1)	20 AAC 25.1610 (d) (1) any evidence that the injected carbon dioxide stream or associated pressure front may endanger underground sources of drinking water;	No significant difference from federal rule and no concern for stringency.	Minor wording changes, such as use of “endanger” for “endangerment” that do not change meaning.

603.	Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs;	40 CFR §146.91(c)(2)	20 AAC 25.1610 (d) (2) any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between underground sources of drinking water;	No difference from federal rule and no concern for stringency.	
604.	Any triggering of a shut-off system (i.e., down-hole or at the surface);	40 CFR §146.91(c)(3)	20 AAC 25.1610 (d) (3) any triggering of a shut-off system, whether down-hole or at the surface;	No difference from federal rule and no concern for stringency.	
605.	Any failure to maintain mechanical integrity; or.	40 CFR §146.91(c)(4)	20 AAC 25.1610 (d) (4) any failure to maintain mechanical integrity under 20 AAC 25.1240; or.	No significant difference from federal rule and no concern for stringency.	
606.	Pursuant to compliance with the requirement at §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.	40 CFR §146.91(c)(5)	20 AAC 25.1610 (d) (5) pursuant to compliance with the requirement at 20 AAC 25.1250 for surface air and soil gas monitoring or other monitoring technologies, if required by the commission, any release of carbon dioxide to the atmosphere or biosphere.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.120 implements 146.90.
607.	Owners or operators must notify the Director in writing 30 days in advance of:	40 CFR §146.91(d)	20 AAC 25.1610 (e) A storage operator shall notify the commission in writing not less than 30 days in advance of	No significant difference from federal rule and no concern for stringency.	“Shall” is used for “must” for an actor like a storage operator under Alaska drafting rules. A storage operator includes an applicant or permit holder, whether an owner or operator.
608.	Any planned well workover;	40 CFR §146.91(d)(1)	20 AAC 25.1610 (e) (1) any planned well workover	No difference from federal rule and no concern for stringency.	
609.	Any planned stimulation activities, other than stimulation for formation testing conducted under §146.82; and	40 CFR §146.91(d)(2)	20 AAC 25.1610 (e) (2) any planned stimulation activities, other than stimulation for formation testing conducted under 20 AAC 25.1080, and	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1080 implements 146.82.
610.	Any other planned test of the injection well conducted by the permittee.	40 CFR §146.91(d)(3)	20 AAC 25.1610 (e)(3) any other planned test of the Class VI well conducted by the storage operator	No significant difference from federal rule and no concern for stringency.	Edit to refer to “Class VI” well rather than injection well for clarity.

611.	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.	40 CFR §146.91(e)	20 AAC 25.1610 (a) A storage operator must, at a minimum, provide the reports identified in this section to the commission and the United States Environmental Protection Agency, in electronic format for each permitted injection well as part of a storage facility permit. Reports required by this section, or a storage facility permit, or other information required by the commission shall be signed by a person authorized under 40 C.F.R. 144.32(b), adopted by reference.	No significant difference from federal rule and no concern for stringency.	Edit to clarify the report will be in an electronic format.
612.	Records shall be retained by the owner or operator as follows:	40 CFR §146.91(f)	20 AAC 25.1610 (g) A storage operator of a Class VI well shall retain	No significant difference from federal rule and no concern for stringency.	A storage operator includes an owner or operator, whoever holds the permit.
613.	All data collected under §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.	40 CFR §146.91(f)(1)	20 AAC 25.1610 (g) (1) all data collected under 20 AAC 25.1080 for a storage facility permit application throughout the life of the carbon storage project and for not less than 10 years following issuance of a certificate of completion under 20 AAC 25.1320;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1080 implements 146.82.
614.	Data on the nature and composition of all injected fluids collected pursuant to §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.	40 CFR §146.91(f)(2)	20 AAC 25.1610 (g) (2) data on the nature and composition of all injected fluids collected pursuant to 20 AAC 25.1250 for not less than 10 years following issuance of a certificate of completion; the commission may require the storage operator to deliver the records to the commission or other state agency at the conclusion of the retention period;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1250 implements 146.90.
615.	Monitoring data collected pursuant to §146.90(b) through (i) shall be retained for 10 years after it is collected.	40 CFR §146.91(f)(3)	20 AAC 25.1610 (g) (3) monitoring data collected pursuant to 20 AAC 25.1250 for not less than 10 years after it is collected.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1250 implements 146.90.

616.	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 §§146.93(f) and (h) shall be retained for 10 years following site closure.	40 CFR §146.91(f)(4)	20 AAC 25.1610 (g) (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 certificate of completion report collected pursuant to requirements at 20 AAC 25.1310 for 10 years following issuance of a certificate of completion under 20 AAC 25.1320.	No significant difference from federal rule and no concern for stringency.	Instead of using "site closure" term from federal rules, Alaska regulations will use certificate of completion as that is the final closure procedure under state law.
617.	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.	40 CFR §146.91(f)(5)	20 AAC 25.1610 (h) The commission has authority to require the storage operator to retain any records required in this section for longer than 10 years after issuance of a certificate of completion.	No significant difference from federal rule and no concern for stringency.	The commission is the actor, not the Director.
618.	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.	40 CFR §146.92(a)	20 AAC 25.1300 (a) The storage operator shall before plugging the Class VI well, flush the well with a buffer fluid, determine bottomhole reservoir pressure, and perform a final external mechanical integrity test.	No significant difference from federal rule and no concern for stringency.	A storage operator includes an owner or operator, whoever holds the permit. Alaska drafting style uses "shall" over "must" for an action by an actor, like a storage operator. Other minor edits are made for flow and to conform to Alaska drafting style.
619.	<i>Well Plugging Plan.</i> 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:	40 CFR §146.92(b)	20 AAC 25.1300 (b) The storage operator shall prepare, maintain, and comply with a well plugging plan that is acceptable to the commission. The requirement to maintain and implement a commission-approved plan is directly enforceable regardless of whether the requirement is a condition of the storage facility permit. The storage operator shall submit the well plugging plan as part of the permit application and shall include the following information	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses "shall" over "must" for an action by an actor, like a storage operator. A storage operator includes an owner or operator, whoever holds the permit.

620.	Appropriate tests or measures for determining bottomhole reservoir pressure;	40 CFR §146.92(b)(1)	20 AAC 25.1300 (b) (1) appropriate tests or measures for determining bottomhole reservoir pressure;	No difference from federal rule and no concern for stringency.	
621.	Appropriate testing methods to ensure external mechanical integrity as specified in §146.89;	40 CFR §146.92(b)(2)	20 AAC 25.1300 (b) (2) appropriate testing methods to ensure external mechanical integrity as specified in 20 AAC 25.1240	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1240 implements 146.89.
622.	The type and number of plugs to be used;	40 CFR §146.92(b)(3)	20 AAC 25.1300 (b) (3) the type and number of plugs to be used;	No difference from federal rule and no concern for stringency.	
623.	The placement of each plug, including the elevation of the top and bottom of each plug;	40 CFR §146.92(b)(4)	20 AAC 25.1300 (b) (4) the placement of each plug, including the elevation of the top and bottom of each plug;	No difference from federal rule and no concern for stringency.	
624.	The type, grade, and quantity of material to be used in plugging. The material must be compatible with the carbon dioxide stream; and	40 CFR §146.92(b)(5)	20 AAC 25.1300 (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	No difference from federal rule and no concern for stringency.	
625.	The method of placement of the plugs.	40 CFR §146.92(b)(6)	20 AAC 25.1300(b) (6) the method of placement of the plugs.	No difference from federal rule and no concern for stringency.	
626.	<i>Notice of intent to plug.</i> The owner or operator must notify the Director in writing pursuant to §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 §§144.39 or 144.41 of this chapter, as appropriate.	40 CFR §146.92(c)	20 AAC 25.1300 (c) The storage operator shall notify the commission in writing pursuant to 20 AAC 25.1610, at least 60 days before plugging a Class VI well , although the commission may allow for a shorter notice period. At the time of notification under this section, the storage operator shall, if any changes have been made to the original well plugging plan submitted as part of the storage facility permit application, provide the revised well plugging plan. Any amendments to the Class VI well plugging plan must be approved by the commission, must be incorporated into the storage facility permit, and are subject to the permit modification requirements at 20 AAC 25.1410 or 20 AAC 25.1430 as appropriate.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” over “must” for an action by an actor, like a storage operator. Substitute “Class VI” well for “injection well” for clarity as 1300 concerns Class VI wells. 20 AAC 25.1410 is major modification, 20 AAC 25.1430 is minor modification. Both track 40 C.F.R. 144.39 and 144.41 respectively.

627.	<i>Plugging report.</i> Within 60 days after plugging, the owner or operator must submit, pursuant to §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.	40 CFR §146.92(d)	20 AAC 25.1300 (d) Within 60 days after plugging, the storage operator shall submit, pursuant to 20 AAC 25.1610, a plugging report to the commission. The report shall be certified as accurate by the storage operator and by the person who performed the plugging operation if other than the storage operator. The storage operator shall retain the well plugging report for not less than 10 years following project completion. Upon project completion, the storage operator shall furnish the records under this subsection to the commission.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” over “must” for an action by an actor, like a storage operator. The commission is the actor, not the Director. The storage operator may be the owner or operator, whoever holds the permit. The differences do not change the meaning and raise no concern for stringency.
628.	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.	40 CFR §146.93(a)	20 AAC 25.1310. (a) A storage operator must prepare, maintain, and comply with a plan for post-injection site care and site closure that meets the requirements of this section and is acceptable to the commission. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the storage facility permit. The storage operator shall submit the post-injection and site care and site closure plan as part of a storage facility permit application under 20 AAC 25.1080.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style uses “shall” over “must” for an action by an actor, like a storage operator. The commission is the actor, not the Director. The storage operator may be the owner or operator, whoever holds the permit. The differences do not change the meaning and raise no concern for stringency.
629.	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.	40 CFR §146.93(a)(1)	20 AAC 25.1310 (a) above	No significant difference from federal rule and no concern for stringency.	
630.	The post-injection site care and site closure plan must include the following information:	40 CFR §146.93(a)(2)	20 AAC 25.1310 (b) The post-injection site care and site closure plan required under (a) of this section must include the following information	No difference from federal rule and no concern for stringency.	

631.	The pressure differential between pre-injection and predicted post-injection pressures in the injection zone(s);	40 CFR §146.93(a)(2)(i)	20 AAC 25.1310 (b) (1) the pressure differential between pre-injection and predicted post-injection pressures in the injection zone;	No significant difference from federal rule and no concern for stringency.	
632.	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 §146.84(c)(1);	40 CFR §146.93(a)(2)(ii)	20 AAC 25.1310 (b) (2) 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 20 AAC 25.1070(c)(1);	No significant difference from federal rule and no concern for stringency.	
633.	A description of post-injection monitoring location, methods, and proposed frequency;	40 CFR §146.93(a)(2)(iii)	20 AAC 25.1310 (b) (3) a description of post-injection monitoring location, methods, and proposed frequency;	No significant difference from federal rule and no concern for stringency.	
634.	A proposed schedule for submitting post-injection site care monitoring results to the Director pursuant to §146.91(e); and,	40 CFR §146.93(a)(2)(iv)	20 AAC 25.1310 (b) (4) a proposed schedule for submitting post-injection site care monitoring results to the commission pursuant to 20 AAC 25.1610; and,	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1610 implements 146.91.
635.	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.	40 CFR §146.93(a)(2)(v)	20 AAC 25.1310(b) (5) the duration of the post-injection site care timeframe and, if approved by the commission under AS 41.06.170(a)(3) and this section, the demonstration of the alternative post-injection site care timeframe that ensures non-endangerment of underground sources of drinking water.	No significant difference from federal rule and no concern for stringency.	

636.	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 §§144.39 or 144.41 of this chapter, as appropriate.	40 CFR §146.93(a)(3)	20 AAC 25.1310 (d) Upon cessation of injection of carbon dioxide into a storage reservoir, but before application for a certificate of completion, the storage operator must either submit an amended post-injection site care and site closure plan or demonstrate to the commission through monitoring data and modeling results that no amendment to the plan is needed. An amendment to the post-injection site care and site closure plan must be approved by the commission and be incorporated into the storage facility permit, and is subject to the permit modification requirements of 20 AAC 25.1410 or 20 AAC 25.1430, as appropriate.	No significant difference from federal rule and no concern for stringency.	Under Alaska drafting style, the singular includes the plural unless specified otherwise, so “an amendment” is the same as “any amendment.” The storage operator may be the owner or operator, whoever holds the permit. The differences do not change the meaning and raise no concern for stringency. 20 AAC 25.1410 is major modification, 20 AAC 25.1430 is minor modification. Both track 40 C.F.R. 144.39 and 144.41 respectively.
637.	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.	40 CFR §146.93(a)(4)	20 AAC 25.1310 (e) At any time during the life of the storage facility, the storage operator may modify and resubmit the post-injection site care and site closure plan for the commission’s approval not more than 30 days after the change.	No significant difference from federal rule and no concern for stringency.	Substitute “storage facility” for “carbon storage project” as “storage facility” is Alaska law term for carbon storage project. The storage operator may be the owner or operator, whoever holds the permit. The differences do not change the meaning and raise no concern for stringency.
638.	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.	40 CFR §146.93(b)	20 AAC 25.1310(f) Upon cessation of injection of carbon dioxide into a storage reservoir, and before a storage operator applies for a certificate of completion under 20 AAC 25.1320, the storage operator shall monitor the site to show the position of the carbon dioxide plume and pressure front and demonstrate, to the commission, that underground sources of drinking water are not being endangered.	No significant difference from federal rule and no concern for stringency.	The Alaska regulation uses “a” before storage operator “a” as this applies to all storage operators. The storage operator may be the owner or operator, whoever holds the permit. The differences do not change the meaning and raise no concern for stringency.

639.	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.	40 CFR §146.93(b)(1)	20 AAC 25.1310 (f) continues... Following the cessation of injection, the storage operator shall continue to conduct monitoring as specified in the commission-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 commission pursuant to requirements in (h) of this section, unless the storage operator makes a demonstration under and (g) of this section. A post-injection site care plan must require the storage operator to continue monitoring the storage facility until the-storage facility no longer poses a danger to underground sources of drinking water and the demonstration under (g) of this section is submitted by the storage operator and approved by the commission.	No significant difference from federal rule and no concern for stringency.	The Alaska regulation uses “storage facility” for “carbon storage project” as “storage facility” is Alaska law term for carbon storage project. The commission is the actor, not the Director. The regulation uses “a danger” rather than “endangerment.” The differences do not change the meaning and raise no concern for stringency.
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640.	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.	40 CFR §146.93(b)(2)	20 AAC 25.1310 (g) Notwithstanding (f) of this section, if the storage operator can demonstrates to the satisfaction of the commission before 50 years after cessation of carbon dioxide injections, or before to the end of the approved alternative timeframe based on monitoring and other site-specific data, that the storage facility no longer poses a danger to underground sources of drinking water, the commission 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 through a certificate of completion under 20 AAC 25.3120 before the end of the 50-year period or before the end of the approved alternative timeframe, if the commission finds substantial evidence that the storage facility no longer poses a risk of endangerment to underground sources of drinking water. If the commission does not approve the demonstration, the storage operator shall submit to the commission a plan to continue post-injection site care until a demonstration can be made and approved by the commission.		The regulation uses “storage facility” for “carbon storage project” as “storage facility” is Alaska law term for carbon storage project. The commission is the actor, not the Director. The regulation uses “a danger” rather than “endangerment.” The differences do not change the meaning and raise no concern for stringency. The language about approving the plan to meet 40 CFR 146.93(b)(4) is included here as it reads better in this section.
641.	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.	40 CFR §146.93(b)(3)	20 AAC 25.1320 (b) Before an authorization for a certificate of completion under AS 41.06.170 and under this section, the storage operator must submit to the commission for review and approval a demonstration, based on monitoring and other site-specific data, that no additional monitoring is needed to ensure that the carbon storage project does not pose an endangerment to underground sources of drinking water.	No significant difference from federal rule and no concern for stringency.	The commission is the actor not the Director.

642.	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.	40 CFR §146.93(b)(4)	<p>20 AAC 25.1310 (i) Not less than 120 days before expiration of the approved monitoring period under this section, the storage operator shall either apply to the commission for an additional monitoring period, or for a certificate of completion under AS 41.06.170 and 20 AAC 25.1320.</p> <p>20 AAC 25.1320 (d) After a hearing under this section, the commission may deny or approve a request for a certificate of completion. If the commission denies the request, it shall issue a decision stating the reasons for the denial, and the steps the storage operator must take to continue monitoring the storage facility or to re-apply for a certificate of completion.</p>	No significant difference from federal rule and no concern for stringency.	See 20 AAC 25.1310 (g), above at crosswalk row 634 for requirement that storage operator submit plans until a demonstration can be made of no danger to USDW.
643.	<i>Demonstration of alternative post-injection site care timeframe.</i> 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 §§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.	40 CFR §146.93(c)	20 AAC 25.1310(h) The commission may approve, in consultation with the United States Environmental Protection Agency, an alternative post-injection site care timeframe other than the 50-year default under AS 41.06.170(a)(3), if a storage operator demonstrates during the permitting process under 20 AAC 25.1080 that an alternative post-injection site care timeframe is appropriate and ensures non-endangerment of underground sources of drinking water. The demonstration must be based on significant, site-specific data and information including all data and information collected pursuant to 20 AAC 25.1080 and 20 AAC 25.1060 and must contain substantial evidence that the storage facility will no longer pose a risk to underground sources of drinking water at the end of the alternative post-injection site care timeframe	No significant difference from federal rule and no concern for stringency.	<p>Minor edits to change to active voice, such as “demonstrate” rather than “can demonstrate.” The commission is the actor, not the Director.</p> <p>The regulation changes carbon storage project to storage facility, which is the Alaska term for a carbon storage project.</p>

644.	A demonstration of an alternative post-injection site care timeframe must include consideration and documentation of:	40 CFR §146.93(c)(1)	20 AAC 25.1310 (h), cont. A demonstration of an alternative post-injection site care timeframe must include consideration and documentation of	No significant difference from federal rule and no concern for stringency.	
645.	The results of computational modeling performed pursuant to delineation of the area of review under §146.84;	40 CFR §146.93(c)(1)(i)	20 AAC 25.1310 (h)(1) the results of computational modeling performed pursuant to delineation of the area of review under 20 AAC 5.1070;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1070 implements 146.84.
646.	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;	40 CFR §146.93(c)(1)(ii)	20 AAC 25.1310 (h) (2) the predicted timeframe for pressure decline within the injection zone, and any other zones, such that formation fluids may not be forced into an an underground source of drinking water, the timeframe for pressure decline to pre-injection pressures;	No significant difference from federal rule and no concern for stringency.	In Alaska drafting style, the singular includes the plural unless otherwise specified. No change in meaning. No effect on stringency. See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" has the same meaning as "and/or" and makes no difference in meaning.
647.	The predicted rate of carbon dioxide plume migration within the injection zone, and the predicted timeframe for the cessation of migration;	40 CFR §146.93(c)(1)(iii)	20 AAC 25.1310 (h) (3) the predicted rate of carbon dioxide plume migration within the injection zone, and the predicted timeframe for the cessation of migration;	No difference from federal rule and no concern for stringency.	
648.	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;	40 CFR §146.93(c)(1)(iv)	20 AAC 25.1310 (h) (4) 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;	No difference from federal rule and no concern for stringency.	
649.	The predicted rate of carbon dioxide trapping in the immobile capillary phase, dissolved phase, and/or mineral phase;	40 CFR §146.93(c)(1)(v)	20 AAC 25.1310 (h) (5) the predicted rate of carbon dioxide trapping in the immobile capillary phase, dissolved phase, or mineral phase;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or."
650.	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;	40 CFR §146.93(c)(1)(vi)	20 AAC 25.1310 (h) (6) the results of laboratory analyses, research studies, or field or site-specific studies to verify the information required in paragraphs (4) and (5) of this section;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or."

651.	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;	40 CFR §146.93(c)(1)(vii)	20 AAC 25.1310 (h) (7) a characterization of the confining zone 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;	No significant difference from federal rule and no concern for stringency.	In Alaska drafting style, the singular includes the plural unless otherwise specified, so “fluid” includes “fluids.”
652.	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;	40 CFR §146.93(c)(1)(viii)	20 AAC 25.1310 (h) (8) the presence of potential conduits for fluid movement including planned injection wells and project monitoring wells associated with the proposed storage facility or any other projects in proximity to the predicted or modeled, final extent of the carbon dioxide plume and area of elevated pressure;	No significant difference from federal rule and no concern for stringency.	Edits for consistency from carbon storage project to storage facility, which is the Alaska term for a carbon storage project.
653.	A description of the well construction and an assessment of the quality of plugs of all abandoned wells within the area of review;	40 CFR §146.93(c)(1)(ix)	20 AAC 25.1310 (h) (9) a description of the well construction and an assessment of the quality of plugs of all abandoned wells within the area of review;	No difference from federal rule and no concern for stringency.	
654.	The distance between the injection zone and the nearest USDWs above and/or below the injection zone; and	40 CFR §146.93(c)(1)(x)	20 AAC 25.1310 (h) (10) the distance between the injection zone and the nearest underground sources of drinking water above or below the injection zone; an	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or"
655.	Any additional site-specific factors required by the Director.	40 CFR §146.93(c)(1)(xi)	20 AAC 25.1310 (h) (11) any additional site-specific factors required by the commission.	No difference from federal rule and no concern for stringency.	
656.	Information submitted to support the demonstration in paragraph (c)(1) of this section must meet the following criteria:	40 CFR §146.93(c)(2)	20 AAC 25.1310 (i) Information submitted to support the demonstration in subsection (h) must meet the following criteria:	No significant difference from federal rule and no concern for stringency.	
657.	All analyses and tests performed to support the demonstration must be accurate, reproducible, and performed in accordance with the established quality assurance standards;	40 CFR §146.93(c)(2)(i)	20 AAC 25.1310 (i) (1) all analyses and tests performed to support the demonstration must be accurate, reproducible, and performed in accordance with the established quality assurance standards;	No significant difference from federal rule and no concern for stringency.	

658.	Estimation techniques must be appropriate and EPA-certified test protocols must be used where available;	40 CFR §146.93(c)(2)(ii)	20 AAC 25.1310 (i) (2) estimation techniques must be appropriate and United States Environmental Protection Agency-certified test protocols must be used where available;	No significant difference from federal rule and no concern for stringency.	
659.	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;	40 CFR §146.93(c)(2)(iii)	20 AAC 25.1310 (i) (3) 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 storage facility;	No significant difference from federal rule and no concern for stringency.	Edits for consistency from carbon storage project to storage facility, which is the Alaska term for a carbon storage project.
660.	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;	40 CFR §146.93(c)(2)(iv)	20 AAC 25.1310 (i) (4) predictive models must be calibrated using existing information where sufficient data are available;	No significant difference from federal rule and no concern for stringency.	
661.	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;	40 CFR §146.93(c)(2)(v)	20 AAC 25.1310 (i) (5) reasonably conservative values and modeling assumptions must be used and disclosed to the commission whenever values are estimated on the basis of known, historical information instead of site-specific measurements	No significant difference from federal rule and no concern for stringency.	
662.	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.	40 CFR §146.93(c)(2)(vi)	20 AAC 25.1310 (i) (6) an analysis must be performed to identify and assess aspects of the alternative post-injection site care timeframe demonstration that contribute significantly to uncertainty; for the purpose of this paragraph, the storage operator must conduct sensitivity analyses to determine the effect that significant uncertainty may contribute to the modeling demonstration;	No significant difference from federal rule and no concern for stringency.	
663.	An approved quality assurance and quality control plan must address all aspects of the demonstration; and,	40 CFR §146.93(c)(2)(vii)	20 AAC 25.1310 (i) (7) an approved quality assurance and quality control plan must address all aspects of the demonstration; and,	No significant difference from federal rule and no concern for stringency.	
664.	Any additional criteria required by the Director.	40 CFR §146.93(c)(2)(viii)	20 AAC 25.1310 (i) (8) any additional criteria required by the commission.	No significant difference from federal rule and no concern for stringency.	

<p>665.</p>	<p><i>Notice of intent for site closure.</i> 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.</p>	<p>40 CFR §146.93(d)</p>	<p>20 AAC 25.1320 (a) After cessation of carbon dioxide injection and compliance with the post-injection site care and monitoring plan, or any amendments to the plan approved by the commission, a storage operator shall apply to the commission, in a format approved by the commission, for a certificate of completion under AS 41.06.170. If, at the time of application, any changes have been made to the original post-injection site care and site closure plan, the storage operator must also provide the revised plan. The storage operator shall apply for a certificate of completion not less than 120 days before its proposed final site closure date. An application under this section must demonstrate, based on monitoring and other site-specific data, that no additional monitoring is needed to ensure that the carbon storage-facility does not pose a danger to underground sources of drinking water or otherwise endanger human health, human safety, or the environment.</p>	<p>Yes, changes to the plan will be presented to the commission earlier in the monitoring period.</p>	<p>The regulation has edits for consistency to substitute carbon storage project for storage facility, which is the Alaska term for a carbon storage project.</p> <p>The storage operator is the permit holder, whether the owner or operator.</p> <p>Use of “a danger” rather than “endangerment” is not a significant difference from passive “an endangerment” and no effect on stringency.</p> <p>Alaska adds consideration of health and environmental risks beyond USDW to comply with AS 41.06. Possibly more stringent than federal requirements, so no concern for stringency.</p>
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666.	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.	40 CFR §146.93(e)	<p>20 AAC 25.1320 (b) Before an authorization for a certificate of completion under AS 41.06.170 and under this section, the storage operator shall submit to the commission for review and approval a demonstration, based on monitoring and other site-specific data, that no additional monitoring is needed to ensure that the storage_facility does not pose_a danger to human health, human safety, the environment, or to underground sources of drinking water .</p> <p>20 AAC 25.1320 (c) The commission may, before or after a hearing under this section, request information from the storage operator sufficient to allow the commission to consider the factors in AS 41.06.170(b).The commission will provide public notice and a hearing to consider an application for a certificate of completion. The commission will provide notice of the hearing in the same manner as a notice under AS 31.05.050(b) and shall provide notice to persons identified in AS 41.06.170(a)(2) and AS 41.06.125(b)(1) – (3). The commission shall provide not less than 30 days' notice of a hearing and shall provide not less than 30 days for public comment. In addition to specifying the date, time, and location of the hearing, and process to submit public comments, the notice under this section shall (1) identify the storage operator, storage facility permit, and storage facility; identification of the storage facility must include an accurate plat certified by a registered surveyor that includes the location of the Class VI well relative to permanently surveyed benchmarks; and (2) summarize the reasons for the request.</p>	No significant difference from federal rule and no concern for stringency.	<p>Edits for consistency from carbon storage project to storage facility, which is the Alaska term for a carbon storage project.</p> <p>Use of “a danger” is no significant difference from passive “an endangerment” and no effect on stringency.</p> <p>Alaska adds consideration of health and environmental risks beyond USDW to comply with AS 41.06. Possibly more stringent than federal requirements, so no concern for stringency.</p> <p>Under Alaska drafting style, the commission “will” perform actions. Same meaning as “shall” and no concern for stringency.</p> <p>The regulation is amended for clarity to refer to Class Vi well and to make clear both (1) and (2) must be complied with.</p>
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			<p>20 AAC 25.1320 (d) After a hearing under this section, the commission may deny or approve a request for a certificate of completion. If the commission denies the request, it will issue a decision stating the reasons for the denial, and the steps the storage operator has taken to continue monitoring the storage facility or to re-apply for a certificate of completion. To approve a request for a certificate of completion, the commission must find that all conditions of 20 AAC 25.1000 - 20 AAC 25.1320 and AS 41.06.170(b) have been met. No less than two commissioners must approve issuance of a certificate of completion. A certificate of completion must identify all actions the storage operator has taken for final site closure, including the plugging of all monitoring wells in a manner approved by the commission which will not allow movement of injection or formation fluid that endanger underground sources of drinking water.</p>		<p>In Alaska drafting style, the singular includes the plural unless otherwise specified. So “fluid” includes “fluids.”</p>
667.	<p>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:</p>	40 CFR §146.93(f)	<p>20 AAC 25.1320 (e) Not more than 90 days after the commission approves a certificate of completion, the storage operator shall submit a report to the commission. The report shall be retained at a location designated by the commission for not less than 10 years. The report must include:</p>	<p>No significant difference from federal rule and no concern for stringency.</p>	<p>Alaska drafting style requires “shall” over “must” for the actions of the storage operator who can be either the owner or operator. The commission is the actor not the Director.</p>

668.	Documentation of appropriate injection and monitoring well plugging as specified in §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;	40 CFR §146.93(f)(1)	20 AAC 25.1320 (e) (1) documentation of appropriate injection and monitoring well plugging as specified in 20 AAC 25.1300 and (d) of this section; 20 AAC 25.1320 (e) (2) documentation that a survey plat has been submitted to the state recorder's office; the plat must indicate the location of the Class VI well relative to permanently surveyed benchmarks, and the storage operator shall also submit a copy of the plat to the Regional Administrator of the appropriate United States Environmental Protection Agency Aegional officer;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1300 implements 146. Alaska drafting style requires “shall” over “must” for the actions of the storage operator who can be either the owner or operator. The regulation uses “Class VI” well over “injection well” for clarity.
669.	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	40 CFR §146.93(f)(2)	20 AAC 25.1320 (e) (3) documentation of appropriate notification and information to each State, local and Tribal authorities that have authority over drilling activities to allow the State, local, and Tribal authorities to impose appropriate conditions on subsequent drilling activities that may penetrate the injection and confining zone; and	No significant difference from federal rule and no concern for stringency.	
670.	Records reflecting the nature, composition, and volume of the carbon dioxide stream.	40 CFR §146.93(f)(3)	20 AAC 25.1320 (e) (4) records reflecting the nature, composition, and volume of the carbon dioxide stream.	No significant difference from federal rule and no concern for stringency.	
671.	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:	40 CFR §146.93(g)	20 AAC 25.1320 (f) Each owner or operator of a Class VI well identified in the certificate of completion issued by the commission shall record, before transfer of the storage facility to the Department of Natural Resources under AS 41.06.170 , 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:	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1300 implements 146. Alaska drafting style requires “shall” over “must” for the actions of the storage operator who can be either the owner or operator. The regulation uses “Class VI” well over “injection well” for clarity.

672.	The fact that land has been used to sequester carbon dioxide;	40 CFR §146.93(g)(1)	20 AAC 25.1320 (f) (1) the fact that land has been used to sequester carbon dioxide;	No difference from federal rule and no concern for stringency.	
673.	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	40 CFR §146.93(g)(2)	20 AAC 25.1320 (f) (2) the name of the department 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	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or"
674.	The volume of fluid injected, the injection zone or zones into which it was injected, and the period over which injection occurred.	40 CFR §146.93(g)(3)	20 AAC 25.1320 (f) (3) the volume of fluid injected, the injection zone or zones into which it was injected, and the period over which injection occurred.	No difference from federal rule and no concern for stringency.	

675.	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.	40 CFR §146.93(h)	<p>20 AAC 25.1320(g) The storage operator shall retain for 10 years following issuance of the certificate of completion, records collected during the post-injection site care period. The storage operator shall deliver the records to the Department of Natural Resources at the conclusion of the retention period, and the Department of Natural resources will maintain the records. The commission will be notified by the Department of Natural Resources when the records are delivered to the department.</p> <p>20 AAC 25.1320 (h) A certificate of completion issued under this section does not release a storage operator from liability arising from a knowing or intentional concealment or misrepresentation of material fact related to a storage facility, including the mechanical integrity of the storage facility, or the chemical composition of any injected carbon dioxide injected into the facility.</p>	No significant difference from federal rule and no concern for stringency.	<p>The regulation conforms to Alaska drafting style by using “shall” for an actor like a storage operator rather than must and “will” to indicate actions the commission must take. The storage operator may be an owner or operator and includes an applicant and a permit holder. The edits do not change the meaning.</p> <p>This requirement is in addition to the federal requirements to prevent release of liability upon a showing of fraud or misrepresentation from a storage operator.</p>
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676.	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.	40 CFR §146.94(a)	20 AAC 25.1260. Emergency and remedial response. (a) As part of a storage facility permit application under 20 AAC 25.1050, the storage operator shall provide the commission with an emergency and remedial response plan that describes actions the storage operator shall take to address movement of the injection or formation fluids that may endanger a underground source of drinking water during construction of a storage facility, including an associated Class VI well, operation of a storage facility, and the post-injection site care period under 20 AAC 25.1310. The requirement to maintain and implement an approved plan emergency and remedial is directly enforceable regardless of whether the requirement is a condition of the storage facility permit.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “shall” over “must” for actions of the commission. Other minor edits are made to use “endanger” rather than “endangerment” to assist in active voice. The regulation also refers to a Class VI well as the type of well covered. The storage operator may be an owner or operator and includes an applicant and a permit holder. The commission is the actor, not the Director. The edits do not change the meaning or effect stringency.
677.	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:	40 CFR §146.94(b)	20 AAC 25.1260 (b) If the storage operator obtains evidence that the injected carbon dioxide stream and associated pressure front may endanger underground sources of drinking water, the storage operator shall:	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “shall” over “must” for the actions of a storage operator. Other minor edits are made to use “endanger” rather than “endangerment” to assist in active voice. The storage operator may be an owner or operator and includes an applicant and a permit holder. The edits do not change the meaning or effect stringency.
678.	Immediately cease injection;	40 CFR §146.94(b)(1)	20 AAC 25.1260 (b) (1) immediately cease injection;	No difference from federal rule and no concern for stringency.	
679.	Take all steps reasonably necessary to identify and characterize any release;	40 CFR §146.94(b)(2)	20 AAC 25.1260 (b) (2) take all steps reasonably necessary to identify and characterize any release	No difference from federal rule and no concern for stringency.	
680.	Notify the Director within 24 hours; and	40 CFR §146.94(b)(3)	20 AAC 25.1260 (b) (3) notify the commission not more than 24 hours after discovery; and	No significant difference from federal rule and no concern for stringency.	The commission is the actor not the Director.

681.	Implement the emergency and remedial response plan approved by the Director.	40 CFR §146.94(b)(4)	20 AAC 25.1260 (b) (4) implement the emergency and remedial response plan approved by the commission.	No significant difference from federal rule and no concern for stringency.	The commission is the actor not the Director
682.	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.	40 CFR §146.94(c)	20 AAC 25.1260(c) The commission may allow the operator to resume injection before remediation if the storage operator demonstrates to the commission that the injection operation will not endanger underground sources of drinking water.	No significant difference from federal rule and no concern for stringency.	The commission is the actor not the Director
683.	<p>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.</p> <p>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 §§144.39 or 144.41 of this chapter, as appropriate. Amended plans or demonstrations shall be submitted to the Director as follows:</p>	40 CFR §146.94(d)	<p>20 AAC 25.1260 (d) The storage operator shall periodically review the emergency and remedial response plan developed under paragraph (a) of this section. In no case shall the storage operator review the emergency and remedial response plan less often than once every five years. Based on this review, the storage operator shall submit an amended emergency and remedial response plan or demonstrate to the commission that no amendment to the emergency and remedial response plan is needed.</p> <p>Any amendments to the emergency and remedial response plan must be approved by the commission, must be incorporated into the permit, and are subject to the permit modification requirements at 20 AAC 25.1410 or 20 AAC 25.1430, as appropriate. A storage operator shall submit an amended plan or demonstration that no amendment is needed</p>	<p>No significant difference from federal rule and no concern for stringency.</p> <p>No significant difference from federal rule and no concern for stringency.</p>	<p>The storage operator may be an owner or operator and includes an applicant and a permit holder.</p> <p>20 AAC 25.1410 implements 144.39 and 20 AAC 25.1430 implements 144.41.</p> <p>Alaska drafting style requires “shall” over “must” for the actions of the storage operator.</p> <p>There is no change in meaning and no effect on stringency.</p>
684.	Within one year of an area of review reevaluation;	40 CFR §146.94(d)(1)	20 AAC 25.1260 (d) (1) within one year after an area of review reevaluation under 20 AAC 25.1070;	No significant difference from federal rule and no concern for stringency.	

685.	Following any significant changes to the facility, such as addition of injection or monitoring wells, on a schedule determined by the Director; or	40 CFR §146.94(d)(2)	20 AAC 25.1260 (d) (2) following any significant changes to the facility, such as addition of injection or monitoring wells, on a schedule determined by the commission; or	No significant difference from federal rule and no concern for stringency.	
686.	When required by the Director.	40 CFR §146.94(d)(3)	20 AAC 25.1260 (d) (3) when required by the commission.	No significant difference from federal rule and no concern for stringency.	The commission is the actor not the Director
687.	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.	40 CFR §146.95	This is introductory language and does not require regulations.	No significant difference from federal rule and no concern for stringency.	
688.	In seeking a waiver of the requirement to inject below the lowermost USDW, the owner or operator must submit a supplemental report concurrent with permit application. The supplemental report must include the following,	40 CFR §146.95(a)	20 AAC 25.1270 (a) In seeking a waiver of the requirement to inject below the lowermost underground source of drinking water the storage operator shall submit to the commission a supplemental report concurrent with permit application under 20 AAC 25.1080. The supplemental report must	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “shall” over “must” for the actions of the storage operator. The storage operator may be an owner or operator and includes an applicant and a permit holder.
689.	A demonstration that the injection zone(s) is/are laterally continuous, is not a USDW, and is not hydraulically connected to USDWs; does not outcrop; has adequate injectivity, volume, and sufficient porosity to safely contain the injected carbon dioxide and formation fluids; and has appropriate geochemistry.	40 CFR §146.95(a)(1)	20 AAC 25.1270 (a) (1) a demonstrate that the injection zone is laterally continuous, is not an underground source of drinking water, and is not hydraulically connected to an underground source <u>s</u> of drinking water; does not outcrop; has adequate injectivity, volume, and sufficient porosity to safely contain the injected carbon dioxide and formation fluid <u>and</u> has appropriate geochemistry;	No significant difference from federal rule and no concern for stringency.	In Alaska drafting, the singular includes the plural unless otherwise specified, so “fluid” includes “fluids.” There is no change in meaning and no concern for stringency.

690.	A demonstration that the injection zone(s) is/are bounded by laterally continuous, impermeable confining units above and below the injection zone(s) adequate to prevent fluid movement and pressure buildup outside of the injection zone(s); and that the confining unit(s) is/are free of transmissive faults and fractures. The report shall further characterize the regional fracture properties and contain a demonstration that such fractures will not interfere with injection, serve as conduits, or endanger USDWs.	40 CFR §146.95(a)(2)	20 AAC 25.1270 (a) (2) demonstrate that the injection zone is bounded by laterally continuous, impermeable confining units above and below the injection zone adequate to prevent fluid movement and pressure buildup outside of the injection zone; and that the confining unit is free of transmissive faults and fractures; the report must further characterize the regional fracture properties and contain a demonstration that such fractures will not interfere with injection, serve as conduits, or endanger underground sources of drinking water;	No significant difference from federal rule and no concern for stringency.	
691.	A demonstration, using computational modeling, that USDWs above and below the injection zone will not be endangered as a result of fluid movement. This modeling should be conducted in conjunction with the area of review determination, as described in §146.84, and is subject to requirements, as described in §146.84(c), and periodic reevaluation, as described in §146.84(e).	40 CFR §146.95(a)(3)	20 AAC 25.1270 (a) (3) a demonstration, using computational modeling, that underground sources of drinking water above and below the injection zone will not be endangered as a result of fluid movement; this modeling should be conducted in conjunction with the area of review determination as described in 20 AAC 25.1070, and is subject to requirements under 20 AAC 25.1070 (C), and periodic reevaluation, as set forth in 20 AAC 25.1070 (e);	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1070 implements 146.84.
692.	A demonstration that well design and construction, in conjunction with the waiver, will ensure isolation of the injectate in lieu of requirements at 146.86(a)(1) and will meet well construction requirements in paragraph (f) of this section.	40 CFR §146.95(a)(4)	20 AAC 25.1.270 (a) (4) a demonstration of how well design and construction, in conjunction with the waiver, will ensure isolation of the injectate in lieu of requirements under 20 AAC 25.1210 (a)(1) and will meet well construction requirements under 20 AAC 25.1210;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1210 (a) (1) implements 146. (a) (1).
693.	A description of how the monitoring and testing and any additional plans will be tailored to the geologic sequestration project to ensure protection of USDWs above and below the injection zone(s), if a waiver is granted.	40 CFR §146.95(a)(5)	20 AAC 25.1270 (a)(5) a description of how the monitoring and testing and any additional plans will be tailored to the storage facility to ensure protection of underground sources of drinking water above and below the injection zone, if a waiver is granted;	No significant difference from federal rule and no concern for stringency.	The Alaska term “storage facility” covers geologic sequestration project. There is no change in meaning or scope and no concern for stringency.

694.	Information on the location of all the public water supplies affected, reasonably likely to be affected, or served by USDWs in the area of review.	40 CFR §146.95(a)(6)	20 AAC 25.1270 (a) (6) information on the location of all the public water supplies affected, reasonably likely to be affected, or served by underground sources of drinking water in the area of review; and	No significant difference from federal rule and no concern for stringency.	
695.	Any other information requested by the Director to inform the Regional Administrator's decision to issue a waiver.	40 CFR §146.95(a)(7)	20 AAC 25.1270 (a) (7) provide any other information requested by the commission that the United States Environmental Protection Agency's Regional Administrator requires to inform the regional Administrator's decision to issue a waiver.	No significant difference from federal rule and no concern for stringency.	
696.	To inform the Regional Administrator's decision on whether to grant a waiver of the injection depth requirements at §§144.6 of this chapter, 146.5(f), and 146.86(a)(1), the Director must submit, to the Regional Administrator, documentation of the following :	40 CFR §146.95(b)	20 AAC 25.1270 (b) To assist the United States Environmental Protection Agency's Regional Administrator's decision on whether to grant a waiver of the injection depth requirements, the commission will submit to the regional administrator, documentation of the following:	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires "will" for actions of the commission rather than "must." commission. There is no change in meaning and no concern for stringency.
697.	An evaluation of the following information as it relates to siting, construction, and operation of a geologic sequestration project with a waiver:	40 CFR §146.95(b)(1)	20 AAC 25.1270 (b) (1) an evaluation of the following information as it relates to siting, construction, and operation of a storage facility with a waiver; including	No significant difference from federal rule and no concern for stringency.	The Alaska term "storage facility" covers geologic sequestration project. There is no change in meaning or scope and no concern for stringency.
698.	The integrity of the upper and lower confining units;	40 CFR §146.95(b)(1)(i)	20 AAC 25.1270 (b)(1) (A) the integrity of the upper and lower confining units;	No difference from federal rule and no concern for stringency.	
699.	The suitability of the injection zone(s) (e.g., lateral continuity; lack of transmissive faults and fractures; knowledge of current or planned artificial penetrations into the injection zone(s) or formations below the injection zone);	40 CFR §146.95(b)(1)(ii)	20 AAC 25.1270 (b) (1) (B) the suitability of the injection zone, e.g., lateral continuity; lack of transmissive faults and fractures or knowledge of current or planned artificial penetrations into the injection zone or formations below the injection zone;	No significant difference from federal rule and no concern for stringency.	
700.	The potential capacity of the geologic formation(s) to sequester carbon dioxide, accounting for the availability of alternative injection sites;	40 CFR §146.95(b)(1)(iii)	20 AAC 25.1270 (b)(1) (C) the potential capacity of the geologic formation to sequester carbon dioxide, accounting for the availability of alternative injection sites;	No difference from federal rule and no concern for stringency.	

701.	All other site characterization data, the proposed emergency and remedial response plan, and a demonstration of financial responsibility;	40 CFR §146.95(b)(1)(iv)	20 AAC 25.1270 (b)(1) (D) all other site characterization data, the proposed emergency and remedial response plan, and a demonstration of financial responsibility;	No difference from federal rule and no concern for stringency.	
702.	Community needs, demands, and supply from drinking water resources;	40 CFR §146.95(b)(1)(v)	20 AAC 25.1270 (b)(1) (E) community needs, demands, and supply from drinking water resources;	No difference from federal rule and no concern for stringency.	
703.	Planned needs, potential and/or future use of USDWs and non-USDWs in the area;	40 CFR §146.95(b)(1)(vi)	20 AAC 25.1270 (b)(1) (F) planned needs, potential or future use of underground sources of drinking water and non-underground sources of drinking water in the area;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" rather than the federal "and/or" does not change the meaning.
704.	Planned or permitted water, hydrocarbon, or mineral resource exploitation potential of the proposed injection formation(s) and other formations both above and below the injection zone to determine if there are any plans to drill through the formation to access resources in or beneath the proposed injection zone(s)/formation(s);	40 CFR §146.95(b)(1)(vii)	20 AAC 25.1270 (b)(1)(G) planned or permitted water, hydrocarbon, or mineral resource exploitation potential of the proposed injection formation and other formations both above and below the injection zone to determine if there are any plans to drill through the formation to access resources in or beneath the proposed injection zone formation;	No significant difference from federal rule and no concern for stringency.	In Alaska drafting, the singular includes the plural unless otherwise specified, so "formation" includes "formations." There is no change in meaning or scope and no concern for stringency
705.	The proposed plan for securing alternative resources or treating USDW formation waters in the event of contamination related to the Class VI injection activity; and,	40 CFR §146.95(b)(1)(viii)	20 AAC 25.1270 (b)(1) (H) the proposed plan for securing alternative resources or treating underground sources of drinking water formation waters in the event of contamination related to the carbon storage injection activity; and,	No difference from federal rule and no concern for stringency.	

706.	Any other applicable considerations or information requested by the Director.	40 CFR §146.95(b)(1)(ix)	20 AAC 25.1270 (b)(1) (I) any other applicable considerations or information requested by the commission, and any written information submitted by the Commissioner of the Department of Environmental Conservation or Division of Air Quality; And also 20 AAC 25.1270(b)(3) any other applicable considerations or information requested by the commission.	No significant difference from federal rule and no concern for stringency.	
707.	Consultation with the Public Water System Supervision Directors of all States and Tribes having jurisdiction over lands within the area of review of a well for which a waiver is sought.	40 CFR §146.95(b)(2)	20 AAC 25.1270(b)(2) a summary of the commission's consultation with the Department of Environmental Conservation and any tribe having jurisdiction over lands within the area of review of a well for which a waiver is sought;	No significant difference from federal rule and no concern for stringency.	
708.	Any written waiver-related information submitted by the Public Water System Supervision Director(s) to the (UIC) Director.	40 CFR §146.95(b)(3)	20 AAC 25.1270 (b)(1) (I) (I) any other applicable considerations or information requested by the commission, and any written information submitted by the Commissioner of the Department of Environmental Conservation	No significant difference from federal rule and no concern for stringency.	
709.	Pursuant to requirements at §124.10 of this chapter and concurrent with the Class VI permit application notice process, the Director shall give public notice that a waiver application has been submitted. The notice shall clearly state:	40 CFR §146.95(c)	20 AAC 25.1270 (c) The commission will give public notice to the persons identified in 20 AAC 25.1150(c) that a waiver application has been submitted; The notice shall clearly state:	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” rather than “must” for actions of commission. 20 AAC25.1150 establishes the permit application notice process.
710.	The depth of the proposed injection zone(s);	40 CFR §146.95(c)(1)	20 AAC 25.1270 (c) (1) the depth of the proposed injection zone;	No significant difference from federal rule and no concern for stringency.	See note on page 2 regarding use of the singular in Alaska drafting style. Here, an injection zone includes “injection zone (s).” There is no change in meaning or scope and no concern for stringency
711.	The location of the injection well(s);	40 CFR §146.95(c)(2)	20 AAC 25.1270 (c)(2) the location of the Class VI well;	No significant difference from federal rule and no concern for stringency.	The Alaska regulation uses Class VI well rather than injection well.

712.	The name and depth of all USDWs within the area of review;	40 CFR §146.95(c)(3)	20 AAC 25.1270 (c) (3) the name and depth of all underground sources of drinking water within the area of review;	No difference from federal rule and no concern for stringency.	
713.	A map of the area of review;	40 CFR §146.95(c)(4)	20 AAC 25.1270 (c) (4) a map of the area of review; the map may be provided through an electronic link;	No significant difference from federal rule and no concern for stringency.	The Alaska regulation allows the map to be provided by an electronic link to be more accessible to interested parties.
714.	The names of any public water supplies affected, reasonably likely to be affected, or served by USDWs in the area of review; and,	40 CFR §146.95(c)(5)	20 AAC 25.1270 (c) (5) the names of any public water supplies affected, reasonably likely to be affected, or served by underground sources of drinking water in the area of review; and,	No difference from federal rule and no concern for stringency.	
715.	The results of UIC-Public Water System Supervision consultation required under paragraph (b)(2) of this section.	40 CFR §146.95(c)(6)	20 AAC 25.1270 (c) (6) the results of consultation with the Department of Environmental Conservation required under paragraph (b)(2) of this section.	No significant difference from federal rule and no concern for stringency.	
716.	Following public notice, the Director shall provide all information received through the waiver application process to the Regional Administrator. Based on the information provided, the Regional Administrator shall provide written concurrence or non-concurrence regarding waiver issuance.	40 CFR §146.95(d)	20 AAC 25.1270(d) Following public notice, the commission will provide all information received through the waiver application process to the United States Environmental Protection Agency Regional Administrator. Based on the information provided, the Regional Administrator shall provide written concurrence or non-concurrence regarding the waiver issuance.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” for actions of commission rather than “must.” The commission is the actor not the Director. There is no change in meaning and no concern for stringency.
717.	If the Regional Administrator determines that additional information is required to support a decision, the Director shall provide the information. At his or her discretion, the Regional Administrator may require that public notice of the new information be initiated.	40 CFR §146.95(d)(1)	20 AAC 25.1270(d) continued... If the Regional Administrator determines that additional information is required to support a decision, the commission will request that the storage facility permit applicant provide the information. The commission will publish public notice of the new information if requested by the Regional Administrator.	No significant difference from federal rule and no concern for stringency.	Alaska drafting style requires “will” for actions of commission rather than “must.” The commission is the actor not the Director. There is no change in meaning and no concern for stringency.
718.	In no case shall a Director of a State-approved program issue a waiver without receipt of written concurrence from the Regional Administrator.	40 CFR §146.95(d)(2)	20 AAC 25.1270 (d) The commission may not issue an injection depth waiver without receipt of written concurrence from the United States Environmental Protection Agency Regional Administrator.	No significant difference from federal rule and no concern for stringency.	

719.	If a waiver is issued, within 30 days of waiver issuance, EPA shall post the following information on the Office of Water's Web site:	40 CFR §146.95(e)	Applies to EPA not state.		
720.	The depth of the proposed injection zone(s);	40 CFR §146.95(e)(1)	Applies to EPA not state.		
721.	The location of the injection well(s);	40 CFR §146.95(e)(2)	Applies to EPA not state.		
722.	The name and depth of all USDWs within the area of review;	40 CFR §146.95(e)(3)	Applies to EPA not state.		
723.	A map of the area of review;	40 CFR §146.95(e)(4)	Applies to EPA not state.		
724.	The names of any public water supplies affected, reasonably likely to be affected, or served by USDWs in the area of review; and	40 CFR §146.95(e)(5)	Applies to EPA not state.		
725.	The date of waiver issuance.	40 CFR §146.95(e)(6)	Applies to EPA not state.		
726.	Upon receipt of a waiver of the requirement to inject below the lowermost USDW for geologic sequestration, the owner or operator of the Class VI well must comply with:	40 CFR §146.95(f)	20 AAC 25.1270 (e) Upon receipt of a waiver, the storage operator shall comply with:	No significant difference from federal rule and no concern for stringency.	Alaska drafting requires "shall" over "must" for the actions of a storage operator. The storage operator may be the owner or operator, whoever is the applicant or permit holder. There is no change to meaning and no concern for stringency.
727.	All requirements at §§146.84, 146.85, 146.87, 146.88, 146.89, 146.91, 146.92, and 146.94;	40 CFR §146.95(f)(1)	20 AAC 25.1270 (e) (1) all requirements at 20 AAC 25.1070, 20 AAC 25.1200, 20 AAC 25.1230, 20 AAC 25.1240, 20 AAC 25.1610, 20 AAC 25.1300 and 20 AAC 25.1260;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1070 implements 146.84, 20 AAC 25.1200 implements 146.85, 20 AAC 25.1230 implements 146.87, 20 AAC 25.1230 implements 146.88, 20 AAC 25.1240 implements 146.89, 20 AAC 25.1610 implements 146.91, 20 AAC 25.1300 implements 146.92, and 20 AAC 25.1260 146.94;
728.	All requirements at §146.86 with the following modified requirements:	40 CFR §146.95(f)(2)	20 AAC 25.1270 (e) (2) all requirements at 20 AAC 25.1210 with the following modified requirements;	No significant difference from federal rule and no concern for stringency	20 AAC 25.1210 implements 146.86
729.	The owner or operator must ensure that Class VI wells with a waiver are constructed and completed to prevent movement of fluids into any unauthorized zones including USDWs, in lieu of requirements at §146.86(a)(1).	40 CFR §146.95(f)(2)(i)	20 AAC 25.1270 (e) (2) (A) the storage operator must ensure that a Class VI well with an injection depth waiver is constructed and completed to prevent movement of fluids into any unauthorized zones including underground sources of drinking water;	No significant difference from federal rule and no concern for stringency.	The storage operator may be the owner or operator, whoever is the applicant or permit holder. There is no change to meaning and no concern for stringency.

730.	The casing and cementing program must be designed to prevent the movement of fluids into any unauthorized zones including USDWs in lieu of requirements at §146.86(b)(1).	40 CFR §146.95(f)(2)(ii)	20 AAC 25.1270 (e) (2) (B) the casing and cementing program shall be designed to prevent the movement of fluid into an unauthorized zone including underground sources of drinking water in lieu of the requirements of 20 AAC 25.1210;	No significant difference from federal rule and no concern for stringency.	Alaska drafting requires “shall” over “must” for indicating the design of the casing program. In Alaska drafting style, the singular includes the plural unless otherwise specified so “fluid” includes “fluids.” 20 AAC 25.1210 implements 146.86. There is no change in meaning and no concern for stringency.
731.	The surface casing must extend through the base of the nearest USDW directly above the injection zone and be cemented to the surface; or, at the Director’s discretion, another formation above the injection zone and below the nearest USDW above the injection zone.	40 CFR §146.95(f)(2)(iii)	20 AAC 25.1270 (e) (2) (C) the surface casing must extend through the base of the nearest underground source of drinking water directly above the injection zone and be cemented to the surface; or, at the commission's discretion, another formation above the injection zone and below the nearest underground source of drinking water above the injection zone;	No significant difference from federal rule and no concern for stringency.	The commission is substituted for the Director here.
732.	All requirements at §146.90 with the following modified requirements:	40 CFR §146.95(f)(3)	20 AAC 25.1270 (e) (3) all requirements at 20 AAC 25.1250, with the following modifications	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1250 implements 40 C.F.R 146.90.
733.	The owner or operator shall monitor the groundwater quality, geochemical changes, and pressure in the first USDWs immediately above and below the injection zone(s); and in any other formations at the discretion of the Director.	40 CFR §146.95(f)(3)(i)	20 AAC 25.1270 (e) (3) (A) the storage operator shall monitor the groundwater quality, geochemical changes, and pressure in the first underground sources of drinking water immediately above and below the injection zone; and in any other formations at the discretion of the commission;	No significant difference from federal rule and no concern for stringency.	The storage operator may be the owner or operator, whoever is the applicant or permit holder. Teh commission is the actor here not the Director. There is no change to meaning and no concern for stringency.

734.	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 direct methods to monitor for pressure changes in the injection zone(s); and, 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.	40 CFR §146.95(f)(3)(ii)	20 AAC 25.1270 (e) (3) (B) 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 direct methods to monitor for pressure changes in the injection zone; and, indirect methods, e.g., seismic, electrical, gravity, or electromagnetic surveys or down-hole carbon dioxide detection tools, unless the commission determines, based on site-specific geology, that such methods are not appropriate;	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" over the federal "and/or" does not change the meaning and raises no concern for stringency.
735.	All requirements at §146.93 with the following, modified post-injection site care monitoring requirements:	40 CFR §146.95(f)(4)	20 AAC 25.1270 (e) (4) all requirements under 20 AAC 25.1310 with the following, modified post-injection site care monitoring requirements;	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1310 implements 40 C.F.R 146.93.
736.	The owner or operator shall monitor the groundwater quality, geochemical changes and pressure in the first USDWs immediately above and below the injection zone; and in any other formations at the discretion of the Director.	40 CFR §146.95(f)(4)(i)	20 AAC 25.1270 (e) (4) (A) the storage operator shall monitor the groundwater quality, geochemical changes and pressure in the first underground sources of drinking water immediately above and below the injection zone; and in any other formations at the discretion of the commission;	No significant difference from federal rule and no concern for stringency.	The commission is substituted for the Director.
737.	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 direct methods in the injection zone(s); and 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;	40 CFR §146.95(f)(4)(ii)	20 AAC 25.1270 (e) (4) (B) 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 direct methods in the injection zone; and indirect methods ,e.g., seismic, electrical, gravity, or electromagnetic surveys or down-hole carbon dioxide detection tools, unless the commission determines based on site-specific geology, that such methods are not appropriate; and	No significant difference from federal rule and no concern for stringency.	See, note 2 on page 1 for an explanation of how "or" suffices for federal use of "and/or." The use of "or" rather than the federal "and/or" does not change the meaning and raises no concern for stringency.

738.	Any additional requirements requested by the Director designed to ensure protection of USDWs above and below the injection zone(s).	40 CFR §146.95(f)(5)	20 AAC 25.1270 (e) (5) any additional requirements requested by the commission designed to ensure protection of underground sources of drinking water above and below the injection zone.	No significant difference from federal rule and no concern for stringency.	
739.	40 C.F.R. 147.1 Purpose and Scope Class VI well operators must comply with 40 C.F.R. 146.91(e) notwithstanding any state program approvals.	40 C.F.R. 147.1(f)	20 AAC 25.1610 (a) A storage operator must, at a minimum, provide the reports identified in this section to the commission and the United States Environmental Protection Agency, for each permitted injection well as part of a storage facility permit. Reports required by this section, or a storage facility permit, or other information required by the commission shall be signed by a person authorized under 40 C.F.R. 144.32(b), adopted by reference.	No significant difference from federal rule and no concern for stringency.	20 AAC 25.1610 implements 146.91, and 20 AAC 25.1610 mirrors 146.91 (e).