

Notice of Intent to Adopt Rules

Revised October 2014

1. General Information						
a. Agency/Bo	oard Name					
b. Agency/Bo	oard Address		c. City		d. Zip Code	
e. Name of C	Contact Person		f. Contact Telephone Number	er		
g. Contact Er	mail Address					
h. Date of Public Notice i. Comment Period Ends						
j. Program						
2. Rule Ty	pe and Information	For each chapter listed, indicate if the rule is Nev	v, Amended, or Repealed.			
		umbers and years enacted:				
		Title, and Rule Type of Each Chapter being C				
	ne Additional Rule Informati Number:	ion form for more than 10 chapters, and attach it to Chapter Name:	inis certification.	New	Amended	Repealed
onaptor						
Chapter	Number:	Chapter Name:		New 🗌	Amended	Repealed
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Chapter	Number:	Chapter Name:		New	Amended	Repealed
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Chapter	Number:	Chapter Name:		New 🗌	Amended	Repealed
Chapter	Number:	Chapter Name:		New	Amended	Repealed
Chapter	Number:	Chapter Name:		New	Amended	Repealed
Chapter	Number:	Chapter Name:		New	Amended	Repealed
Chapter	Number:	Chapter Name:		New	Amended	Repealed
c. The Statement of Reasons is attached to this Notice and, in compliance with <i>Tri-State Generation and Transmission Association, Inc. v. Environmental Quality Council</i> , 590 P.2d 1324 (Wyo. 1979), includes a brief statement of the substance or terms of the rule and the basis and purpose of the rule.						
Complete all that apply: The following chapters <u>do not</u> differ from the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-103(j):						
(Drovido shanter numbere)						
(Provide chapter numbers) These chapters differ from the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-103(j) (see Statement of Reasons).						
■ N/A These rules are not impacted by the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-103(j).						
d. N/A In consultation with the Attorney General's Office, the Agency's Attorney General representative concurs that strike and underscore is not required						
e A convoft	as the proposed am he proposed rules* may	endments are pervasive (Section 5 of the Rul be obtained:	es un Ruies).			
B		at the physical and/or email address listed in a	Section 1 above.			
* If Item "d" abo	ove is not checked, the prop	osed rules shall be in strike and underscore format.				

3. Public Comments and Hearing Information				
a. A public hearing on the proposed rules has been scheduled. Yes No				
If "Yes:"	Date:	Time:	City:	Location:
🗌 By s	anner in which interested perso ubmitting written comments to t e following URL:	51	vs on the rulemaking action? al and/or email address listed in Section 1 ab	ove.
	A public hearing will be held if requested by 25 persons, a government subdivision, or by an association having not less than 25 members. Requests for a public hearing may be submitted: To the Agency at the physical and/or email address listed in Section 1 above. At the following URL:			
			he Agency to state its reasons for overruling	· · ·
Requests for an Section 1 above		e prior to, or within thirty	(30) days after adoption, of the rule, address	ed to the Agency and Contact Person listed in
4. Federal	Law Requirements			
a. These rules a	re created/amended/repealed to	comply with federal law	or regulatory requirements.] No
If "Yes:"	Applicable Federal Law or Re	gulation Citation:		
Indicate one (1): The proposed rules meet, but do not exceed, minimum federal requirements. The proposed rules exceed minimum federal requirements.				
Any person wishing to object to the accuracy of any information provided by the Agency under this item should submit their objections prior to final adoption to: To the Agency at the physical and/or email address listed in Section 1 above. At the following URL:				
5. State Statutory Requirements				
 a. Indicate one (1): The proposed rule change <i>MEETS</i> minimum substantive statutory requirements. The proposed rule change <i>EXCEEDS</i> minimum substantive statutory requirements. Please attach a statement explaining the reason that the rules exceed the requirements. 				
 b. Indicate one (1): The Agency has complied with the requirements of W.S. 9-5-304. A copy of the assessment used to evaluate the proposed rules may be obtained: By contacting the Agency at the physical and/or email address listed in Section 1 above. At the following URL:				
<u>6. Authorization</u>				
a. I certify that the foregoing information is correct.				
Printed Name of Authorized Individual				
Title of Authorize	Title of Authorized Individual			
Date of Authoriz	Date of Authorization			

Distribution List:

- Attorney General and LSO: Hard copy of Notice of Intent; Statement of Reasons; clean copy of the rules; and strike-through and underline version of rules (if applicable). Electronic copies (PDFs) of all items noted (in addition to hard copies) may be emailed to LSO at <u>Criss.Carlson@wyoleg.gov</u>.
- Secretary of State: Electronic version of Notice of Intent sent to <u>Rules@wyo.gov</u>.

BEFORE THE ENVIRONMENTAL QUALITY COUNCIL STATE OF WYOMING

IN THE MATTER OF REVISIONS TO)
WATER QUALITY RULES AND) STATEMENT OF
REGULATIONS: CHAPTER 8 QUALITY) PRINCIPAL REASONS
STANDARDS FOR WYOMING) FOR ADOPTION
GROUNDWATERS, SECTION 6,)
STANDARDS FOR THE UNDERGROUND)
MANAGEMENT OF HAZARDOUS OR TOXIC)
WASTES; CHAPTER 13 CLASS I HAZARDOUS)
WASTE AND NON- HAZARDOUS WASTE)
WELLS UNDERGROUND INJECTION	
CONTROL PROGRAM; CHAPTER)
16, CLASS V INJECTION WELLS AND)
FACILITIES UNDERGROUND INJECTION)
CONTROL PROGRAM; AND CHAPTER 27,	
UNDERGROUND INJECTION CONTROL	
PROGRAM CLASS I AND V WELLS)

INTRODUCTION

The Environmental Quality Council, pursuant to the authority vested in it by Wyoming Statute 35-11-112 (a)(i) has adopted revisions to the following chapters and sections of the Wyoming Water Quality Rules and Regulations: Chapter 8, Quality Standards For Wyoming Groundwaters, Section 6, Standards for the Underground Management of Hazardous or Toxic Wastes; Chapter 13, Class I Hazardous Waste and Non-Hazardous Waste Wells Underground Injection Control Program; Chapter 16, Class V Injection Wells and Facilities Underground Injection Control Program; and Chapter 27, Underground Injection Control Program Class I and V Wells.

Section 35-11-302 (a) of the Environmental Quality Act (Act) states that the administrator, after receiving public comment and after consultation with the advisory board, shall recommend to the director rules, regulations, standards and permit systems to promote the purposes of the Act. Such rules, regulations, standards and permit systems shall prescribe:

(iii) Standards for the issuance of permits for construction, installation, modification or operation of any public water supply and sewerage system, subdivision water supply, treatment works, disposal system or other facility, capable of causing or contributing to pollution.

(vi) In recommending any standards, rules, regulations, or permits, the administrator and advisory board shall consider all the facts and circumstances bearing upon the reasonableness of the pollution involved including:

(A) The character and degree of injury to or interference with the health and well being of the people, animals, wildlife, aquatic life and plant life affected;

- (B) The social and economic value of the source of pollution;
- (C) The priority of location in the area involved;
- (D) The technical practicability and economic reasonableness of reducing or eliminating the source of pollution; and
- (E) The effect upon the environment.

SUMMARY OF PROPOSED REVISIONS TO CHAPTER 8, SECTION 6

Chapter 8, Quality Standards for Wyoming Groundwaters, Section 6, Standards for the Underground Management of Toxic Wastes, was edited in paragraph (b)(iii) to change the reference to Class IV groundwater to Class VI groundwater. The original reference to Class IV was in error based on the original rulemaking transcripts and supporting documents. The passage now correctly refers to Class VI groundwater.

SUMMARY OF PROPOSED REVISIONS TO CHAPTER 13

The contents of Chapter 13, Class I Hazardous Waste and Non-Hazardous Waste Wells: Underground Injection Control Program, were moved to Chapter 27. Chapter 13 is now repealed.

SUMMARY OF PROPOSED REVISIONS TO CHAPTER 16

The contents of Chapter 16, Class V Injection Wells and Facilities were moved to Chapter 27. Chapter 16 is now repealed.

SUMMARY OF PROPOSED REVISIONS TO CHAPTER 27

As stated above, the contents of Chapter 13 and Chapter 16 were moved to the newly created Chapter 27.

Section 1. The references to promulgation authority were combined from Chapters 13 and 16.

Section 2. The definitions from Chapter 13, Section 2 and Chapter 16, Section 2 were merged together.

The definition of "Class IV well" from Chapter 13, Setion 2(j) was corrected. The final line of the definition previously stated "These wells are regulated as a class V well, type 5X26 under these regulations." The final line has been stricken to remove confusion, as the type 5X26 well is a federal class, not a state class.

Chapter 13 defined "Class V well" and Chapter 16 defined "Class V facility". Because the two definitions were duplicative, the definition of "Class V well" previously contained in Chapter 13 was stricken in favor of maintaining the more descriptive definition of "Class V facility" previously contained in Chapter 16. The cross references were updated.

Chapter 13 and Chapter 16 both defined "draft permit." The two definitions were merged and the extra, unnecessary language from the Chapter 13 definition was eliminated for clarity.

Chapter 13 and Chapter 16 both defined "hazardous waste." The definition in Chapter 13 cross referenced Wyoming Hazardous Waste Rules and Regulations for the full definition of the term. However, the Wyoming Hazardous Waste Rules and Regulations have recently adopted a change where the term of "hazardous waste" is no longer described, but is instead cross referenced to 40 CFR 261.3. Since this cross reference is already stated in the version previously contained in Chapter 16, the division elected to retain the reference to 40 CFR 261.3 and eliminate the reference to the Hazardous Waste Rules and Regulations.

Chapter 13 and Chapter 16 both defined "underground source of drinking water." The two definitions were merged and the extra language from Chapter 16, "which have a total dissolved solids content of less than 10,000 mg/L" was included.

Chapter 16 defined "vadose zone" in a less precise manner than Water Quality Rules and Regulations Chapter 9. The definition from Chapter 16 was stricken in favor of the more precise definition, which also appears in Chapter 8. The precise version of "vadose zone" allows for consistency with other chapters of the Water Quality Rules and Regulations and also clarifies that perched water is excluded from the vadose zone. This exclusion was requested by Water and Waste Advisory Board member Lorie Cahn.

Chapter 13 Chapter 16 both defined "well". Because the two definitions were duplicative, the definition of "well" previously contained in Chapter 16 was stricken in favor of maintaining the more descriptive definition of "well" previously located in Chapter 13.

Section 3. The applicability statements previously located in Chapter 13, Section 3 and Chapter 16, Section 16 were merged into Section 3 of Chapter 27. The cross reference to Appendix A was corrected to Appendix C.

Section 4. Language previously contained in Chapter 16, Section 4 was moved to Section 4 of Chapter 27. No edits were made.

Section 5. Language previously contained in Chapter 13, Section 4 was moved to Section 5 of Chapter 27. "Chapter VIII" was corrected to "Chapter 8" and "mg/l" was corrected to "mg/L".

Section 6. Language previously contained in Chapter 13, Sections 5 and 9 was merged with language previously contained in Chapter 16, Sections 5 and 9. This merge placed all of the permitting requirements together, instead of spreading them out as had been done in Chapters 13 and 16.

Redundant passages previously contained in Chapter 13, Section 9(c); Chapter 16, Section 5(a); Chapter 13, Section 9(d); Chapter 13, Section 10; Chapter 16, Section 9(d)(xv); Chapter 13, Section 9(d)(xxiv); Chapter 13, Section 9(d)(xxiv); and Chapter 13, Section 9(d)(xxix) were either stricken because the language is redundant to other requirements in Section 6, or they were reworded for clarity.

Cross references to other sections and appendices within Chapter 27 and references to Chapter 8 were updated.

Section 7. The permit processing procedures previously located in Chapter 13, Sections 6 and 8, and Chapter 16, Section 5 were merged together in Section of Chapter 27. This merge placed all of the processing procedures together, instead of spreading them out as had been done in Chapter 13.

Redundant passages previously contained in Chapter 16, Section 5(b)(iii); Chapter 13, Section 8(g); Chapter 13, Section 8(h); Chapter 16, Section 5(b); Chapter 13, Section 8(e); Chapter 16, Section 5(b)(vii); Chapter 13, Section 8(k)(i); Chapter 13, Section 8(j); and Caper 13, Section 8(l) were either stricken because the language is redundant to other requirements in Section 7, or they were reworded for clarity.

Instances of "Environmental Quality Act" were corrected to "Wyoming Environmental Quality Act." Additional edits included adding clarifying transition language to note which requirements pertain to Class I or Class V wells, and updating cross references.

Section 8. The records and reporting requirements previously located in Chapter 13, Sections 9 and 15, and Chapter 16, Section 5 were merged together in Section 8 of Chapter 27. This merge placed all of the record keeping and reporting requirements together, instead of spreading them out as had been done in Chapter 13.

Redundant passages previously contained in Chapter 16, Section 5(d); Chapter 13, Section 15(c); Chapter 13, Section 15(d); Chapter 16, Section 15(d)(ii)(A); and Chapter 13, Section 15(g) were either stricken because the language is redundant to other requirements in Section 8, or they were reworded for clarity.

Section 9. The requirements previously contained in Chapter 16, Section 6, regarding individual permits were moved to Section 9 of Chapter 27. Cross references were updated. A transition statement previously located in Chapter 16, Section 6(c)(xii) was updated for clarity and to inlude a newly added cross reference.

Section 10. The requirements previously contained in Chapter 16, Section 7, regarding general permits were moved to Section 10 of Chapter 27. Cross references were updated.

Section 11. The requirements previously contained in Chapter 16, Section 8, regarding permit by rule were moved to Section 11 of Chapter 27. Cross references were updated.

Section 12. The requirements previously contained in Chapter 13, Section 11, regarding Class I well construction standards were moved to Section 12 of Chapter 27. Cross references were updated.

Section 13. The requirements previously contained in Chapter 16, Section 10, regarding Class V well construction and operation standards were moved to Section 13 of Chapter 27. Cross references were updated.

Section 14. The requirements previously contained in Chapter 13, Section 12, regarding Class I well siting conditions were moved to Section 14 of Chapter 27. No additional edits were made.

Section 15. The monitoring requirements previously located in Chapter 13, Section 13 and Chapter 16, Section 11 were merged together in Section 15 of Chapter 27. This merge placed all of the monitoring program requirements together. Cross references were updated.

Section 16. The requirements previously located in Chapter 13, Section 14 were moved to Section 16 of Chapter 27. No additional edits were made.

Section 17. The requirements previously located in Chapter 13, Section 16 were moved to Section 17 of Chapter 27. Cross references were updated. "Region VIII" was changed to "Region 8."

Section 18. The requirements previously located in Chapter 16, Section 12 were moved to Section 18 of Chapter 27. "30" was corrected to "thirty (30)" for consistency with the rest of the chapter.

Section 19. The requirements previously located in Chapter 13, Section 17 were moved to Section 19 of Chapter 27. No additional edits were made.

Section 20. The prohibitions previously located in Chapter 13, Section 18 and Chapter 16, Section 9 were merged together in Section 20 of Chapter 27. This merge placed all of the prohibitions together.

Redundant passages previously contained in Chapter 13, Section 18(a); Chapter 13, Section 18(a)(i); Chapter 13, Section 18(a)(ii); Chapter 13, Section 18(a)(iii); and Chapter 13, Section (b) were either stricken because the language is redundant to other requirements in Section 20, or they were reworded for clarity. Additional edits included adding clarifying transition language and updating cross references.

Section 21. The public participation, public notice, and public hearing requirements previously located in Chapter 13, Section 19 and Chapter 16, Section 13 were moved to Section 21 of Chapter 27.

Redundant passages previously contained in Chapter 16, Section 13(a); Chapter 16, Section 13(c); Chapter 16, Section 13(d); Chapter 13, Section 19(d); Chapter 13, Section 19(d)(iii); Chapter 13, Section 19(j); Chapter 13, Section 19(k); Chapter 13, Section 19(n); and Chapter 13, Section 19(q) were either stricken because the language is redundant to other requirements in Section 21, or they were reworded for clarity. Additional edits included adding clarifying transition language and updating cross references.

Section 22. The language previously contained in Chapter 13, Section 20 was moved to Chapter 27, Section 22. The cross reference was updated.

Appendix A. The table previously located in Chapter 13, Appendix A was moved to Chapter 27, Appendix A. All instances of "mg/l" were updated to "mg/L" per standard notation practices.

Appendix B. The table previously located in Chapter 13, Appendix B was moved to Chapter 27, Appendix B. All instances of "PPB" were updated to "ppb" per standard notation practices.

Appendix C. The table previously located in Chapter 16, Appendix A was moved to Chapter 27, Appendix C. No additional edits were made.

Appendix D. The table previously located in Chapter 16, Appendix B was moved to Chapter 27, Appendix D. No additional edits were made.

The Council finds that these regulations are reasonable and necessary to accomplish the policy and purpose of the Act, as stated in W.S. 35-11-102, and that they have been promulgated in accordance with rulemaking provisions of the Wyoming Administrative Procedures Act.

Dated this ______ day of ______, 2015.

Hearing Examiner – *Printed Name* Wyoming Environmental Quality Council Hearing Examiner – **Signed Name** Wyoming Environmental Quality Council

CHAPTER 8

QUALITY STANDARDS FOR WYOMING GROUNDWATERS

Section 1. Authority. These regulations are promulgated pursuant to Sections 35-11-101 through 1104 of the Wyoming Statutes, specifically Section 35-11-302, and no person shall cause, threaten or allow violation of any water quality standard or provision contained herein.

Section 2. Definitions. The following definitions supplement those definitions contained in Section 35-11-103 of the Wyoming Environmental Quality Act.

(a) "Aquifer" means a zone, stratum or group of strata that can store and transmit water in sufficient quantities for a specific use.

(b) "Background" means the constituents or parameters and the concentrations or measurements which describe water quality and water quality variability prior to a subsurface discharge.

(c) "Below-Surface Receiver (Receiver)" means any zone, interval, formation or unit in the subsurface which can accept water or fluid from other sources.

(d) "Domestic Water" means a water which is suitable for uses, including but not limited to, drinking, gardening and other household uses, municipal uses and farmstead uses, including water used in the washing or hydro-cooling of farm products destined for human consumption on the farm, for sale on the fresh food market or for delivery to a processing plant for canning, freezing or other type of preparation prior to marketing. Classification of Domestic water does not mean that it meets the national drinking water standards.

(e) "Fluid" means any material which flows or moves whether semisolid liquid, sludge, gas or any other form or state.

(f) "Groundwater" means subsurface water that fills available openings in rock or soil materials such that they may be considered water saturated under hydrostatic pressure.

(g) "Groundwaters of the State" are all bodies of underground water which are wholly or partially within the boundaries of the State; Groundwaters of the State is synonymous with Groundwaters of Wyoming.

(h) "Hazardous Material (Substance)" means any matter of any description including petroleum related products and radioactive material (substance) which, when discharged into any waters of the State presents an imminent and substantial hazard to public health or welfare and shall include all materials (substances) so designated by the U.S. Environmental Protection Agency in the Federal Register for March 13, 1978 (Part III), Water Programs, Hazardous Substances. (i) "Milliequivalents Per Liter", abbreviated meq/L, used to report the Residual Sodium Carbonate concentration in water used for irrigation, is defined as 0.001 of the equivalent weight of the ion per liter volume.

(j) "Milligrams Per Liter", abbreviated mg/L, means milligrams of solute per liter of solution -- equivalent to parts per million assuming unit density of water.

(k) "Parameter" means one of a set of physical or chemical properties whose measured values determine the characteristics of a fluid.

(1) "pH" is a term to express the intensity of the acid or basic condition. A pH value of 7.0 at 25 degrees C is neutral, with pH's of less than 7.0 progressively more acid and pH's of greater than 7.0 progressively more basic.

(m) "Picocuries Per Liter", abbreviated pCi/L, is a measure of radioactivity of waters or fluids. A picocurie is equal to 10-12 curie; a curie is defined as 3.7 x 1010 disintegrations per second.

(n) "Residual Sodium Carbonate", abbreviated RSC, is defined as twice the concentration of carbonate or bicarbonate a water would contain after subtracting an amount equivalent to the calcium plus the magnesium, and is a measure of potential hazard which exists when waters high in carbonate and bicarbonate and relatively low in calcium and magnesium are used for irrigation.

(o) "Sodium Adsorption Ratio", abbreviated SAR, of a water is defined by the U.S. Department of Agriculture Laboratory (1954) as: where ion concentrations are expressed in milliequivalents per liter. The SAR predicts reasonably well the degree to which irrigation water tends to enter into cation-exchange reactions in soil.

(p) "Standard Unit", abbreviated s.u., is the unit of measurement used to describe the numerical pH of a solution, fluid or pollutant.

(q) "Subsurface Discharge" means a discharge to a below-surface receiver.

(r) "Total Dissolved Solids", abbreviated TDS, is the sum of the dissolved mineral constituents in water, expressed as mg/L.

(s) "Toxic Materials (Substances)" are those materials (substances) or combinations of materials (substances), including disease causing agents, which, after discharge and upon exposure, ingestion, inhalation or assimilation into any environmentally significant organism, either directly from the environment or indirectly by ingestion through food chains, may cause death, disease, behavioral abnormalities, cancer, genetic malfunctions, physiological malfunctions (including malfunctions in reproduction of offspring) or physical deformations in such organisms or their offspring; and includes all materials (substances) so designated as toxic by the U.S. Environmental Protection Agency in the Federal Register for December 24, 1975 (Part IV), Water Programs, National Interim Primary Drinking Water Regulations. (t) "Underground Water" means subsurface water, which is any body of water under the surface of the earth, including water in the vadose zone and groundwater.

(u) "Vadose Zone" means the unsaturated zone in the earth, between the land surface and the top of the first saturated aquifer which is not a perched water aquifer. The vadose zone characteristically contains liquid water under less than atmospheric pressure, and water vapor and air or other gases at atmospheric pressure. Perched water bodies exist within the vadose zone.

(v) "Virtually Free" means a concentration less than the concentration which is the lower limit of detection.

Section 3. Underground Water Protected.

(a) All waters, including groundwaters of the State, within the boundaries of the State of Wyoming are the property of the State; and control of the beneficial use of waters of the State resides with the Wyoming State Engineer.

(b) Nothing herein contained shall be construed so as to interfere with the right of any person to use water from any underground water source for any purpose identified in W.S. 35-11-102 and 35-11-103(c)(i); or to limit or interfere with the jurisdiction, duties or authorities of other Wyoming State agencies or officials.

(c) Protection shall be afforded all underground water bodies (including water in the vadose zone). Water being used for a purpose identified in W.S. 35-11-102 and 103(c)(i) shall be protected for its intended use and uses for which it is suitable. Water not being put to use shall be protected for all uses for which it is suitable.

Section 4. Quality Standards Prescribed; Groundwaters of the State Classified.

(a) Standards are prescribed to protect the natural quality of underground water:

(i) Receiving pollution or wastes directly from a subsurface discharge or by migrating water or fluid of a discharge;

(ii) Invaded by underground water of inferior quality as a result of well or exploration hole drilling or completion practices;

(iii) From pollution which may result from above-ground facilities capable of causing or contributing to pollution;

(iv) From pollution which may result from surface mining operations.

(b) Groundwaters of the State are classified in order to apply standards to protect water quality. Groundwaters of the State are classified by use, and by ambient water quality.

(c) Waters which are known sources of supply and appropriated for uses identified in W.S. 35-11-102 and 103(c)(i) are classified herein as: Domestic water; Water for fish and aquatic life; Water for agriculture; Water for livestock; and, Water for industry. A discharge or activity that impacts an underground source of water for existing uses identified in W.S. 35-11-102 and 103(c)(i) shall not make the affected water unsuitable for its intended use or uses, at any place or places of withdrawal or natural flow to the surface.

(d) Unappropriated waters are classified by ambient water quality.

(i) Class I Groundwater of the State - This water is suitable for domestic use. The ambient quality of underground water of this suitability does not have a concentration in excess of any of the standards for Class I Groundwater of the State (see Table I, page 9).

(ii) Class II Groundwater of the State - This water is suitable for agricultural use where soil conditions and other factors are adequate. The ambient quality of underground water of this suitability does not have a concentration in excess of any of the standards for Class II Groundwater of the State (see Table I, page 9).

(iii) Class III Groundwater of the State - This water is suitable for livestock. The ambient quality of underground water of this suitability does not have a concentration in excess of any of the standards for Class III Groundwater of the State (see Table I, page 9).

(iv) Class Special (A) Groundwater of the State -This water is suitable for fish and aquatic life. The ambient quality of underground water of this suitability does not have a concentration in excess of any of the standards for Class Special (A) Groundwater of the State (see Table I, page 10).

(v) Underground water of Class I, II, III or Special

(A) shall not contain biological, hazardous, toxic or potentially toxic materials or substances in concentrations or amounts which exceed maximum allowable concentrations based upon information of the EPA in the Federal Register for December 24, 1975 (Part IV), Water Programs, National Interim Primary Drinking Water Regulations; and in the Federal Register for March 13, 1978 (Part II), Water Programs, Hazardous Substances. In addition, underground water of Class I, II, III or Special (A) shall not contain any biological, hazardous, toxic or potentially toxic materials or substances in concentrations or amounts which, based upon the latest available scientific information and as determined by the Administrator, will impair this water for its use suitability or which may contribute to a condition in contravention of groundwater quality standards or to any toxic or hazardous effect on natural biota.

(vi) A discharge into an aquifer containing Class I, II, III or Special

(A) Groundwater of the State shall not result in variations in the range of any parameter, or concentrations of constituents in excess of the standards of these regulations at any place or places of withdrawal or natural flow to the surface. A discharge which results in concentrations in excess of standards shall be permitted if post-discharge water quality

can be returned to a quality of use equal to, or better than, and consistent with the uses for which the water was suitable prior to the operation.

(vii) Class IV Groundwater of the State - This water is suitable for industry. The quality requirements for industrial water supplies range widely and almost every industrial application has its own standards.

(A) Class IV (A) Groundwater of the State has a total dissolved solids concentration not in excess of 10,000 mg/L.

(B) Class IV (B) Groundwater of the State has a total dissolved solids concentration in excess of 10,000 mg/L.

(C) A discharge into an aquifer containing Class IV (A) or IV (B) Groundwater of the State shall not result in the water being unfit for its intended use.

(D) A discharge into an aquifer with Class IV (A) or IV (B) Groundwater of the State shall not result in oil and grease concentrations in excess of 10 mg/L or a lesser amount if a concentration in excess of the lesser amount is determined to be toxic; or oil and grease in excess of background concentrations of the underground water, whichever is greater, at any place or places of withdrawal or natural flow to the surface.

(E) A discharge into an aquifer with Class IV (A) or IV (B) Groundwater of the State shall not result in radioactivity concentrations or amounts which exceed the standards for Class I through III and Special (A) Groundwaters of the State; or in concentrations or amounts which exceed background concentrations of the underground water, whichever is greater, at any place or places of withdrawal or natural flow to the surface.

(F) A discharge into an aquifer with Class IV (A) or IV (B) Groundwater of the State shall not result in biological, hazardous, toxic or potentially toxic materials or substances including pesticides, insecticides or herbicides in concentrations or amounts which exceed maximum allowable concentrations, based upon information of the EPA in the Federal Register for December 24, 1975 (Part IV), <u>Water Programs, National Interim</u> <u>Primary Drinking Water Regulations</u>, and in the Federal Register for March 13, 1978 (Part II), <u>Water Programs, Hazardous Substances</u>; or which exceed background concentrations of the underground water, whichever is greater, at any place or places of withdrawal or natural flow to the surface.

In addition, a discharge shall not result in any biological, hazardous, toxic or potentially toxic materials or substances, in concentrations or amounts which, based on the latest available scientific information and as determined by the Administrator, will impair the quality of ambient groundwaters of the State of this Class; or which may contribute to a condition in contravention of groundwater quality standards or cause, allow or permit any deleterious effect on natural biota.

(viii) Groundwater of the State found closely associated with commercial deposits of hydrocarbons and/or other minerals, or which is considered a geothermal resource, is

Class V (Hydrocarbon Commercial), Class V (Mineral Commercial) or Class V (Geothermal) Groundwater of the State.

(A) A discharge into a Class V (Hydrocarbon Commercial) Groundwater of the State shall be for the purpose of the production of oil and gas and shall not result in the degradation or pollution or waste of other water resources.

(B) A discharge into a Class V (Mineral Commercial) Groundwater of the State shall be for the purpose of mineral production and shall not result in the degradation or pollution of the associated or other groundwater and, at a minimum, be returned to a condition and quality consistent with the pre-discharge use suitability of the water.

(C) A discharge into a Class V (Geothermal) Groundwater of the State shall be for the purpose of the production of geothermal resources and shall not result in the degradation or pollution or waste of other water resources.

(ix) Class VI Groundwater of the State may be unusable or unsuitable for use:

(A) Due to excessive concentration of total dissolved solids or specific constituents; or

(B) Is so contaminated that it would be economically or technologically impractical to make the water useable; or

(C) Is located in such a way, including depth below the surface, so as to make use economically and technologically impractical.

Section 5. Classification for Groundwater of the State Affected by a Discharge; Classification by Aquifer and Area.

(a) Classification of groundwaters of the State shall be based on the water quality standards of this chapter; excepting, a Class I Groundwater of the State shall be classified by ambient water quality and the technical practicability and economic reasonableness of treating ambient water quality to meet use suitability standards.

(b) Underground water quality shall be classified for an aquifer which is or may be affected by a subsurface discharge or other activity identified in Section 4.a. of these regulations.

(c) Classification shall be made:

(i) Whenever there is pollution or the threat of pollution to a groundwater of the State; or

(ii) The physical, chemical, radiological or biological properties of any groundwater of the State are or may be altered by man's action.

(d) Classification shall be for a water in a specified locally defined area by named and described aquifer or receiver. Any aquifer or receiver in its regional setting may have one or more classifications by defined area or areas.

- (i) The name shall be a recognized geologic name whenever possible;
- (ii) The description shall include a lithologic description.

(e) The lateral and vertical limits of an aquifer or receiver, for purposes of classification, shall be based on existing water use, ambient water quality and geologic and hydrologic characteristics of the aquifer or of the receiver.

(f) An underground water may be reclassified if new or additional data warrant reclassification.

	TABLE	Ι	
UNDERGROUND WATER	Ι	II	III
CLASS	Domestic*	Agriculture	Livestock
Use Suitability Constituent	Concentration**	Concent.**	Concent.**
or Parameter			
Aluminum (Al)		5.0	5.0
Ammonia (NH ₃ -N)	0.5^{7}		
Arsenic (AS)	0.05	0.1	0.2
Barium (Ba)	2.0		
Beryllium (Be)		0.1	
Boron (B)	0.75	0.75	5.0
Cadmium (Cd)	.005	0.01	0.05
Chloride (Cl)	250.0	100.0	2000.0
Chromium (Cr)	.10	0.1	0.05
Cobalt (Co)		0.05	1.0
Copper (Cu)	1.0	0.2	0.5
Cyanide (CN)	0.2		
Fluoride (F)	4.0		
Hydrogen Sulfide(H_2S)	0.05		
Iron (Fe)	0.3	5.0	
Lead (Pb)	.015	5.0	0.1
Lithium (Li)	.015	2.5	
Manganese (Mn)	0.05	0.2	
Mercury (Hg)	0.002		0.00005
Nickel (Ni)		0.2	
Nitrate (NO ₃ -N)	10.0	0.2	
Nitrite (NO ₂ -N)	1.0		10.0
$(NO_3+NO_2)-N$			100.0
Oil & Grease	Virtually Free	10.0	10.0
Phenol	0.001	10.0	10.0
Selenium (Se)	.05	0.02	0.05
Silver (Ag)	.10		0.05
Sulfate (SO ₄)	250.0	200.0	3000.0
Total Dissolved Solids	500.0	200.0	5000.0
	300.0	2000.0	5000.0
(TDS) Vanadium (V)		0.1	0.1
Vanadium (V)	5.0	0.1 2.0	0.1
Zinc (Zn)	5.0 6.5-8.5	2.0 4.5-9.0s.u.	25.0 6.5-8.5s.u
pH SAR		4. <i>3-9</i> .0s.u. 8	
RSC		0 1.25 meq/L	
CombinedTotal	 5nCi/I	•	 5 n C i /I
Radium 226 and	5pCi/L	5pCi/L	5pCi/L
Radium 228 ⁸			
Total Strontium 90	omC:∕I	onC:/I	°nC:/I
	8pCi/L	8pCi/L	8pCi/L
Gross alpha particle	15pCi/L	15pCi/L	15pCi/L
radioactivity (including Radium 226			
but excluding Radon and Uranium ⁸			
oes not include all constituents i	in the national drinkin	na watar standards	

TABLEI

* This list does not include all constituents in the national drinking water standards. ** mg/L, unless other wise indicated

STRIKE/UNDERLINE DRAFT 05/05/2015

TABLEI	
UNDERGROUND WATER	Special (A)
CLASS	Fish/Aquatic Life
Use Suitability Constituent or Parameter	Concentration*
Aluminum (Al)	0.1
Ammonia (NH ₃)	0.021
Arsenic (As)	0.05
Barium (Ba)	5.0
Beryllium (Be)	$0.011 - 1.3^3$
Boron (B)	
Cadmium(Cd)	$0.0004 - 0.015^3$
Chloride (Cl)	
Chromium (Cr)	0.05
Cobalt (Co)	
Copper (Cu)	$0.01-0.04^3$
Cyanide (CN)	0.005
Fluoride (F)	
Hydrogen Sulfide (H ₂ S)	0.0022
Iron (Fe)	0.5
Lead (Pb)	$0.004 - 0.15^3$
Lithium (Li)	
Manganese (Mn)	1.0
Mercury (Hg)	0.00005
Nickel (Ni)	$0.05-0.4^3$
Nitrate (NO ₃ -N)	
Nitrite (NO ₂ -N)	
(NO_3+NO_2-N)	
Oil & Grease	Virtually free
Phenol	0.001
Selenium(Se)	0.05
Silver(Ag)	$0.0001 - 0.00025^3$
Sulfate (SO ₄)	
TotalDissolvedSolids(TDS)	$500.0^4 - 1000.0^5 - 2000.0^6$
Uranium (U)	$0.03-1.4^3$
Vanadium (V)	
Zinc (Zn)	0.05-0.63
pH	6.5s.u9.0s.u.
Combined Total	
Radium 226 and	5-0:1
Radium 228 ⁸	5pCi/L
Total Strontium 90	8pCi/L
Gross alpha particle	
radioactivity (including	
Radium 226 but excluding Radon and Uranium ⁸	15-01/
	15pCi/L
*mg/L, unless other wise indicated	

TABLE I

Explanation for Superscripts Used in Table I

¹Unionized ammonia: When ammonia dissolves in water, some of the ammoniareacts with water to form ammonium ions. A chemical equilibrium is established whichcontains unionized ammonia (NH₃), ionized ammonia (NH₄+) and hydroxide ions (OH⁻). The toxicity of aqueous solutions of ammonia is attributed to NH₃; therefore, the standard is for unionized ammonia. (Note: 0.02 mg/L NH_3 is equivalent to 0.016 NH_3 as N.)

²Undissociated H2S: The toxicity of sulfides derives primarily from H2S, rather than from the dissociated (HS) or (S) ions; therefore, the standard is for the toxic undissociated H_2S .

³Dependent on hardness: The toxicity of metals in natural waters varies with the hardness of the water; generally, the limiting concentration is higher in hard water than in soft water.

⁴Egg hatching

⁵Fish rearing

⁶Fish and aquatic life

⁷Total ammonia nitrogen

⁸Requirements and procedures for the measurement and analysis of gross alpha particle activity, Radium 226 and Radium 228 shall be the same as requirements and procedures of the U.S. Environmental Protection Agency, National Interim Primary Drinking Water Regulations, EPA-570/9-76-003, effective June 24, 1977.

Section 6. Standards for the Underground Management of Hazardous or Toxic Wastes. The underground management of wastes includes the temporary storage and the ultimate disposal of all hazardous or toxic wastes in below-surface receivers. The following standards apply to any underground storage or disposal of hazardous or toxic wastes.

(a) The below-surface receiver:

(i) Is an extensive sedimentary rock stratum or strata free of complex faulting and folding and distant from any underground water recharge area;

(ii) Is adequately separated from aquifers both above and below;

(iii) Has normal or low formation pressure and is capable of accepting the discharge without necessitating excessive discharge or injection pressure;

(iv) Has slow movement of ambient formation fluid under the natural horizontal gradient and is not in an area of underground water discharge for the receiver;

(v) Is located areally and stratigraphically so that an escape of waste to useable water resources would not be anticipated due to:

- (A) Seismic risk;
- (B) Abandoned holes; or
- (C) Mineral exploration or other drilling, or mineral development.
- (b) The underground water in the receiver;
 - (i) Is not an economically available source of water or is unusable;
 - (ii) Is confined by strata overlying and underlying the receiver; and
 - (iii) Is classified as class- $\frac{IV}{VI}$ groundwater by this chapter.
- (c) The discharge or waste:

(i) Will not create or result in a hazard to health or impair existing rights, and is not prohibited from subsurface disposal by Federal or State law or regulation;

(ii) Will not degrade or decrease the availability of mineral resources, including oil and gas;

- (iii) Is compatible with the receiver and ambient water; and
- (iv) Can be controlled at all times.

Section 7. Testing Procedures.

(a) For determination of the parameters involved in the standards, analysis will be in accord with test procedures as defined pursuant to: Title 40, Code of Federal Regulations, Part 136, or any modifications thereto. For test procedures not listed in the Code of Federal Regulations, test procedures outlined in EPA Methods for Chemical Analysis of Water and Wastes (March, 1979); or Standard Methods for the Examination of Water and Wastewaters (1975); or, A.S.T.M. Standards, Part 31 (1979), Water shall be used.

(b) The analytical technique for total uranium (as U) shall be the fluorometric method as referenced in Methods for Determination of Radioactive Substances in Water and Fluvial Sediments, Techniques of Water - Resource Investigations of the U.S. Geological Survey, Book 5, Chapter A-5 (1977).

(c) Where standard methods of testing have not been established, the suitability of testing procedures shall be determined by the Department.

Section 8. <u>Limit of Detection</u>. Where the standard is below the lower limit of detection given in EPA Methods for Chemical Analysis of Water and Wastes (March, 1979), or Standard Methods for the Examination of Water and Wastewaters (1975), or, A.S.T.M. Standards, Part 31 (1979), Water, the standard shall be the lower limit of detection, unless otherwise provided by the Council.

CHAPTER 8 QUALITY STANDARDS FOR WYOMING GROUNDWATERS

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1	CHAPTER 8
2 3 4	QUALITY STANDARDS FOR WYOMING GROUNDWATERS
5	Section 1. Authority.
6	
7 8	These regulations are promulgated pursuant to Sections 35-11-101 through 1104 of the Wyoming
o 9	Statutes, specifically Section 35-11-302, and no person shall cause, threaten or allow violation of any water quality standard or provision contained herein.
10	
10 11 12	Section 2. Definitions.
13	The following definitions supplement those definitions contained in Section 35-11-103 of the
14	Wyoming Environmental Quality Act.
15	
16	(a) "Aquifer" means a zone, stratum or group of strata that can store and transmit
17	water in sufficient quantities for a specific use.
18	
19	(b) "Background" means the constituents or parameters and the concentrations or
20	measurements which describe water quality and water quality variability prior to a subsurface
21	discharge.
22	
23	(c) "Below-Surface Receiver (Receiver)" means any zone, interval, formation or
24	unit in the subsurface which can accept water or fluid from other sources.
25	*
26	(d) "Domestic Water" means a water which is suitable for uses, including but not
27	limited to, drinking, gardening and other household uses, municipal uses and farmstead uses,
28	including water used in the washing or hydro-cooling of farm products destined for human
29	consumption on the farm, for sale on the fresh food market or for delivery to a processing plant
30	for canning, freezing or other type of preparation prior to marketing. Classification of Domestic
31	water does not mean that it meets the national drinking water standards.
32	
33	(e) "Fluid" means any material which flows or moves whether semisolid liquid,
34	sludge, gas or any other form or state.
35	
36	(f) "Groundwater" means subsurface water that fills available openings in rock or
37	soil materials such that they may be considered water saturated under hydrostatic pressure.
38	
39	(g) "Groundwaters of the State" are all bodies of underground water which are
40	wholly or partially within the boundaries of the State; Groundwaters of the State is synonymous
41	with Groundwaters of Wyoming.
42	
43	(h) "Hazardous Material (Substance)" means any matter of any description
44	including petroleum related products and radioactive material (substance) which, when

45 discharged into any waters of the State presents an imminent and substantial hazard to public health or welfare and shall include all materials (substances) so designated by the U.S. 46 47 Environmental Protection Agency in the Federal Register for March 13, 1978 (Part III), Water 48 Programs, Hazardous Substances. 49 50 "Milliequivalents Per Liter", abbreviated meq/L, used to report the Residual (i) 51 Sodium Carbonate concentration in water used for irrigation, is defined as 0.001 of the equivalent 52 weight of the ion per liter volume. 53 54 "Milligrams Per Liter", abbreviated mg/L, means milligrams of solute per liter of (i) 55 solution -- equivalent to parts per million assuming unit density of water. 56 57 "Parameter" means one of a set of physical or chemical properties whose (k) 58 measured values determine the characteristics of a fluid. 59 60 (1)"pH" is a term to express the intensity of the acid or basic condition. A pH value 61 of 7.0 at 25 degrees C is neutral, with pH's of less than 7.0 progressively more acid and pH's of 62 greater than 7.0 progressively more basic. 63 64 "Picocuries Per Liter", abbreviated pCi/L, is a measure of radioactivity of waters (m) 65 or fluids. A picocurie is equal to 10-12 curie; a curie is defined as 3.7 x 1010 disintegrations per 66 second. 67 68 "Residual Sodium Carbonate", abbreviated RSC, is defined as twice the (n) 69 concentration of carbonate or bicarbonate a water would contain after subtracting an amount 70 equivalent to the calcium plus the magnesium, and is a measure of potential hazard which exists 71 when waters high in carbonate and bicarbonate and relatively low in calcium and magnesium are 72 used for irrigation. 73 74 "Sodium Adsorption Ratio", abbreviated SAR, of a water is defined by the (0)75 U.S. Department of Agriculture Laboratory (1954) as: where ion concentrations are expressed in 76 milliequivalents per liter. The SAR predicts reasonably well the degree to which irrigation water 77 tends to enter into cation-exchange reactions in soil. 78 79 "Standard Unit", abbreviated s.u., is the unit of measurement used to describe the (p) 80 numerical pH of a solution, fluid or pollutant. 81 82 (q) "Subsurface Discharge" means a discharge to a below-surface receiver. 83 84 "Total Dissolved Solids", abbreviated TDS, is the sum of the dissolved mineral (r) 85 constituents in water, expressed as mg/L. 86 87 "Toxic Materials (Substances)" are those materials (substances) or combinations (s) 88 of materials (substances), including disease causing agents, which, after discharge and upon 89 exposure, ingestion, inhalation or assimilation into any environmentally significant organism, 90 either directly from the environment or indirectly by ingestion through food chains, may cause

91 death, disease, behavioral abnormalities, cancer, genetic malfunctions, physiological 92 malfunctions (including malfunctions in reproduction of offspring) or physical deformations in 93 such organisms or their offspring; and includes all materials (substances) so designated as toxic 94 by the U.S. Environmental Protection Agency in the Federal Register for December 24, 1975 95 (Part IV), Water Programs, National Interim Primary Drinking Water Regulations. 96 97 (t) "Underground Water" means subsurface water, which is any body of water 98 under the surface of the earth, including water in the vadose zone and groundwater. 99 100 (u) "Vadose Zone" means the unsaturated zone in the earth, between the land 101 surface and the top of the first saturated aquifer which is not a perched water aquifer. The vadose 102 zone characteristically contains liquid water under less than atmospheric pressure, and water 103 vapor and air or other gases at atmospheric pressure. Perched water bodies exist within the vadose 104 zone. 105 106 "Virtually Free" means a concentration less than the concentration which is the (v) 107 lower limit of detection. 108 109 Section 3. **Underground Water Protected.** 110 111 (a) All waters, including groundwaters of the State, within the boundaries of the 112 State of Wyoming are the property of the State; and control of the beneficial use of waters of the 113 State resides with the Wyoming State Engineer. 114 115 Nothing herein contained shall be construed so as to interfere with the right of (b) 116 any person to use water from any underground water source for any purpose identified in W.S. 117 35-11-102 and 35-11-103(c)(i); or to limit or interfere with the jurisdiction, duties or authorities 118 of other Wyoming State agencies or officials. 119 120 Protection shall be afforded all underground water bodies (including water in the (c) vadose zone). Water being used for a purpose identified in W.S. 35-11-102 and 103(c)(i) shall be 121 122 protected for its intended use and uses for which it is suitable. Water not being put to use shall be 123 protected for all uses for which it is suitable. 124 125 Section 4. Quality Standards Prescribed; Groundwaters of the State Classified. 126 127 (a) Standards are prescribed to protect the natural quality of underground water: 128 129 Receiving pollution or wastes directly from a subsurface discharge or by (i) 130 migrating water or fluid of a discharge; 131 132 Invaded by underground water of inferior quality as a result of well or (ii) 133 exploration hole drilling or completion practices; 134

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135 (iii) From pollution which may result from above-ground facilities capable of causing or contributing to pollution; 136 137 138 (iv) From pollution which may result from surface mining operations. 139 140 Groundwaters of the State are classified in order to apply standards to protect (b) 141 water quality. Groundwaters of the State are classified by use, and by ambient water quality. 142 143 Waters which are known sources of supply and appropriated for uses identified in (c) W.S. 35-11-102 and 103(c)(i) are classified herein as: Domestic water; Water for fish and aquatic 144 145 life; Water for agriculture; Water for livestock; and, Water for industry. A discharge or activity 146 that impacts an underground source of water for existing uses identified in W.S. 35-11-102 and 147 103(c)(i) shall not make the affected water unsuitable for its intended use or uses, at any place or places of withdrawal or natural flow to the surface. 148 149 150 (d) Unappropriated waters are classified by ambient water quality. 151 152 Class I Groundwater of the State - This water is suitable for domestic (i) 153 use. The ambient quality of underground water of this suitability does not have a concentration in 154 excess of any of the standards for Class I Groundwater of the State (see Table I, page 9). 155 156 Class II Groundwater of the State - This water is suitable for agricultural (ii) 157 use where soil conditions and other factors are adequate. The ambient quality of underground 158 water of this suitability does not have a concentration in excess of any of the standards for Class 159 II Groundwater of the State (see Table I, page 9). 160 161 (iii) Class III Groundwater of the State - This water is suitable for livestock. 162 The ambient quality of underground water of this suitability does not have a concentration in 163 excess of any of the standards for Class III Groundwater of the State (see Table I, page 9). 164 165 (iv) Class Special (A) Groundwater of the State -This water is suitable for fish and aquatic life. The ambient quality of underground water of this suitability does not have a 166 concentration in excess of any of the standards for Class Special (A) Groundwater of the State 167 168 (see Table I, page 10). 169 170 Underground water of Class I, II, III or Special (v) 171 172 (A) shall not contain biological, hazardous, toxic or potentially toxic 173 materials or substances in concentrations or amounts which exceed maximum allowable 174 concentrations based upon information of the EPA in the Federal Register for December 24, 1975 175 (Part IV), Water Programs, National Interim Primary Drinking Water Regulations; and in the 176 Federal Register for March 13, 1978 (Part II), Water Programs, Hazardous Substances. In 177 addition, underground water of Class I, II, III or Special (A) shall not contain any biological, 178 hazardous, toxic or potentially toxic materials or substances in concentrations or amounts which, 179 based upon the latest available scientific information and as determined by the Administrator, will 180 impair this water for its use suitability or which may contribute to a condition in contravention of groundwater quality standards or to any toxic or hazardous effect on natural biota. 181 182 183 (vi) A discharge into an aquifer containing Class I, II, III or Special 184 185 Groundwater of the State shall not result in variations in the (A) 186 range of any parameter, or concentrations of constituents in excess of the standards of these 187 regulations at any place or places of withdrawal or natural flow to the surface. A discharge which 188 results in concentrations in excess of standards shall be permitted if post-discharge water quality 189 can be returned to a quality of use equal to, or better than, and consistent with the uses for which 190 the water was suitable prior to the operation. 191 192 Class IV Groundwater of the State - This water is suitable for industry. (vii) 193 The quality requirements for industrial water supplies range widely and almost every industrial 194 application has its own standards. 195 196 (A) Class IV (A) Groundwater of the State has a total dissolved 197 solids concentration not in excess of 10,000 mg/L. 198 199 **(B)** Class IV (B) Groundwater of the State has a total dissolved 200 solids concentration in excess of 10,000 mg/L. 201 202 (C) A discharge into an aquifer containing Class IV (A) or 203 IV (B) Groundwater of the State shall not result in the water being unfit for its intended use. 204 205 (D) A discharge into an aquifer with Class IV (A) or IV (B) 206 Groundwater of the State shall not result in oil and grease concentrations in excess of 10 mg/L or 207 a lesser amount if a concentration in excess of the lesser amount is determined to be toxic; or oil 208 and grease in excess of background concentrations of the underground water, whichever is 209 greater, at any place or places of withdrawal or natural flow to the surface. 210 211 A discharge into an aquifer with Class IV (A) or IV (B) (E) 212 Groundwater of the State shall not result in radioactivity concentrations or amounts which exceed 213 the standards for Class I through III and Special (A) Groundwaters of the State; or in 214 concentrations or amounts which exceed background concentrations of the underground water, 215 whichever is greater, at any place or places of withdrawal or natural flow to the surface. 216 217 (F) A discharge into an aquifer with Class IV (A) or IV (B) 218 Groundwater of the State shall not result in biological, hazardous, toxic or potentially toxic 219 materials or substances including pesticides, insecticides or herbicides in concentrations or 220 amounts which exceed maximum allowable concentrations, based upon information of the EPA 221 in the Federal Register for December 24, 1975 (Part IV), Water Programs, National Interim 222 Primary Drinking Water Regulations, and in the Federal Register for March 13, 1978 (Part II), 223 Water Programs, Hazardous Substances; or which exceed background concentrations of the 224 underground water, whichever is greater, at any place or places of withdrawal or natural flow to 225 the surface.

226 In addition, a discharge shall not result in any biological, hazardous, toxic or potentially toxic materials or substances, in concentrations or amounts which, based on the latest available 227 228 scientific information and as determined by the Administrator, will impair the quality of ambient 229 groundwaters of the State of this Class; or which may contribute to a condition in contravention 230 of groundwater quality standards or cause, allow or permit any deleterious effect on natural biota. 231 232 Groundwater of the State found closely associated with commercial (viii) 233 deposits of hydrocarbons and/or other minerals, or which is considered a geothermal resource, is 234 Class V (Hydrocarbon Commercial), Class V (Mineral Commercial) or Class V (Geothermal) 235 Groundwater of the State. 236 237 (A) A discharge into a Class V (Hydrocarbon Commercial) 238 Groundwater of the State shall be for the purpose of the production of oil and gas and shall not 239 result in the degradation or pollution or waste of other water resources. 240 241 A discharge into a Class V (Mineral Commercial) **(B)** 242 Groundwater of the State shall be for the purpose of mineral production and shall not result in the 243 degradation or pollution of the associated or other groundwater and, at a minimum, be returned to 244 a condition and quality consistent with the pre-discharge use suitability of the water. 245 246 (C) A discharge into a Class V (Geothermal) Groundwater of the 247 State shall be for the purpose of the production of geothermal resources and shall not result in the 248 degradation or pollution or waste of other water resources. 249 250 (ix) Class VI Groundwater of the State may be unusable or unsuitable for 251 use: 252 253 (A) Due to excessive concentration of total dissolved solids or 254 specific constituents; or 255 256 **(B)** Is so contaminated that it would be economically or 257 technologically impractical to make the water useable; or 258 259 (C) Is located in such a way, including depth below the surface, so as 260 to make use economically and technologically impractical. 261 262 Section 5. **Classification for Groundwater of the State Affected by a Discharge;** 263 **Classification by Aquifer and Area.** 264 265 Classification of groundwaters of the State shall be based on the water quality (a) standards of this chapter; excepting, a Class I Groundwater of the State shall be classified by 266 267 ambient water quality and the technical practicability and economic reasonableness of treating 268 ambient water quality to meet use suitability standards. 269

270 (b) Underground water quality shall be classified for an aquifer which is or may be 271 affected by a subsurface discharge or other activity identified in Section 4.a. of these regulations. 272 273 (c) Classification shall be made: 274 275 (i) Whenever there is pollution or the threat of pollution to a groundwater of 276 the State; or 277 278 (ii) The physical, chemical, radiological or biological properties of any 279 groundwater of the State are or may be altered by man's action. 280 Classification shall be for a water in a specified locally defined area by named (d) 281 and described aquifer or receiver. Any aquifer or receiver in its regional setting 282 may have one or more classifications by defined area or areas. 283 284 The name shall be a recognized geologic name whenever possible; (i) 285 286 (ii) The description shall include a lithologic description. 287 288 The lateral and vertical limits of an aquifer or receiver, for purposes of (e) 289 classification, shall be based on existing water use, ambient water quality and geologic and 290 hydrologic characteristics of the aquifer or of the receiver. 291 292 (f) An underground water may be reclassified if new or additional data warrant 293 reclassification.

	TABLE	EI	
UNDERGROUND WATER	Ι	II	III
CLASS	Domestic*	Agriculture	Livestock
Use Suitability Constituent	Concentration**	Concent.**	Concent.**
or Parameter			
Aluminum (Al)		5.0	5.0
Ammonia (NH ₃ -N)	0.5^{7}		
Arsenic (AS)	0.05	0.1	0.2
Barium (Ba)	2.0		
Beryllium (Be)		0.1	
Boron (B)	0.75	0.75	5.0
Cadmium (Cd)	.005	0.01	0.05
Chloride (Cl)	250.0	100.0	2000.0
Chromium (Cr)	.10	0.1	0.05
Cobalt (Co)		0.05	1.0
Copper (Cu)	1.0	0.2	0.5
Cyanide (CN)	0.2		
Fluoride (F)	4.0		
Hydrogen Sulfide(H ₂ S)	0.05		
Iron (Fe)	0.3	5.0	
Lead (Pb)	.015	5.0	0.1
Lithium (Li)		2.5	
Manganese (Mn)	0.05	0.2	
Mercury (Hg)	0.002		0.00005
Nickel (Ni)		0.2	
Nitrate (NO ₃ -N)	10.0		
Nitrite (NO ₂ -N)	1.0		10.0
(NO ₃ +NO ₂)-N			100.0
Oil & Grease	Virtually Free	10.0	10.0
Phenol	0.001		
Selenium (Se)	.05	0.02	0.05
Silver (Ag)	.10		
Sulfate (SO ₄)	250.0	200.0	3000.0
Total Dissolved Solids	500.0	2000.0	5000.0
(TDS)			
Vanadium (V)		0.1	0.1
Zinc (Zn)	5.0	2.0	25.0
pH	6.5-8.5	4.5-9.0s.u.	6.5-8.5s.u
SAR		8	
RSC		1.25 meq/L	
CombinedTotal	5pCi/L	5pCi/L	5pCi/L
Radium 226 and			
Radium 228 ⁸			
Total Strontium 90	8pCi/L	8pCi/L	8pCi/L
Gross alpha particle	15pCi/L	15pCi/L	15pCi/L
radioactivity (including			
Radium 226			
but excluding			
Radon and Uranium ⁸ es not include all constituents i	n the notional drint-	na watar standarda	
		ILV WALEL MADUATON	

* This list does not include all constituents in the national drinking water standards.

** mg/L, unless other wise indicated

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TABLE I	

UNDERGROUND WATER	Special (A)
CLASS	Fish/Aquatic Life
Use Suitability Constituent or Parameter	Concentration*
Aluminum (Al)	0.1
Ammonia (NH ₃)	0.021
Arsenic (As)	0.05
Barium (Ba)	5.0
Beryllium (Be)	0.011-1.3 ³
Boron (B)	
Cadmium(Cd)	$0.0004 - 0.015^3$
Chloride (Cl)	
Chromium (Cr)	0.05
Cobalt (Co)	
Copper (Cu)	$0.01 - 0.04^3$
Cyanide (CN)	0.005
Fluoride (F)	
Hydrogen Sulfide (H ₂ S)	0.0022
Iron (Fe)	0.5
Lead (Pb)	$0.004 - 0.15^3$
Lithium (Li)	
Manganese (Mn)	1.0
Mercury (Hg)	0.00005
Nickel (Ni)	$0.05 - 0.4^3$
Nitrate (NO ₃ -N)	
Nitrite (NO ₂ -N)	
(NO_3+NO_2-N)	
Oil & Grease	Virtually free
Phenol	0.001
Selenium(Se)	0.05
Silver(Ag)	$0.0001 - 0.00025^3$
Sulfate (SO ₄)	
TotalDissolvedSolids(TDS)	500.0^4 -1000.0 ⁵ -2000.0 ⁶
Uranium (U)	$0.03 - 1.4^3$
Vanadium (V)	
Zinc (Zn)	$0.05 - 0.6^3$
pH	6.5s.u9.0s.u.
Combined Total	
Radium 226 and	
Radium 228 ⁸	5pCi/L
Total Strontium 90	8pCi/L
Gross alpha particle	•
radioactivity (including	
Radium 226 but excluding	
Radon and Uranium ⁸	15pCi/L
*mg/L, unless other wise indicated	1

TABLE I

Explanation for Superscripts Used in Table I

¹Unionized ammonia: When ammonia dissolves in water, some of the ammoniareacts with water to form ammonium ions. A chemical equilibrium is established whichcontains unionized ammonia (NH₃), ionized ammonia (NH₄+) and hydroxide ions (OH⁻). The toxicity of aqueous solutions of ammonia is attributed to NH₃; therefore, the standard is for unionized ammonia. (Note: 0.02 mg/L NH_3 is equivalent to 0.016 NH_3 as N.)

²Undissociated H2S: The toxicity of sulfides derives primarily from H2S, rather than from the dissociated (HS) or (S) ions; therefore, the standard is for the toxic undissociated H_2S .

³Dependent on hardness: The toxicity of metals in natural waters varies with the hardness of the water; generally, the limiting concentration is higher in hard water than in soft water.

⁴Egg hatching

⁵Fish rearing

⁶Fish and aquatic life

⁷Total ammonia nitrogen

⁸Requirements and procedures for the measurement and analysis of gross alpha particle activity, Radium 226 and Radium 228 shall be the same as requirements and procedures of the U.S. Environmental Protection Agency, National Interim Primary Drinking Water Regulations, EPA-570/9-76-003, effective June 24, 1977.

Section 6. Standards for the Underground Management of Hazardous or Toxic Wastes.

The underground management of wastes includes the temporary storage and the ultimate disposal of all hazardous or toxic wastes in below-surface receivers. The following standards apply to any underground storage or disposal of hazardous or toxic wastes.

(a) The below-surface receiver:

(i) Is an extensive sedimentary rock stratum or strata free of complex faulting and folding and distant from any underground water recharge area;

(ii) Is adequately separated from aquifers both above and below;

(iii) Has normal or low formation pressure and is capable of accepting the discharge without necessitating excessive discharge or injection pressure;

(iv) Has slow movement of ambient formation fluid under the natural horizontal gradient and is not in an area of underground water discharge for the receiver;

(v) Is located areally and stratigraphically so that an escape of waste to useable water resources would not be anticipated due to:

- (A) Seismic risk;
- (B) Abandoned holes; or
- (C) Mineral exploration or other drilling, or mineral development.
- (b) The underground water in the receiver;
 - (i) Is not an economically available source of water or is unusable;
 - (ii) Is confined by strata overlying and underlying the receiver; and
 - (iii) Is classified as class VI groundwater by this chapter.
- (c) The discharge or waste:

(i) Will not create or result in a hazard to health or impair existing rights, and is not prohibited from subsurface disposal by Federal or State law or regulation;

(ii) Will not degrade or decrease the availability of mineral resources, including oil and gas;

(iii) Is compatible with the receiver and ambient water; and

(iv) Can be controlled at all times.

Section 7. Testing Procedures.

(a) For determination of the parameters involved in the standards, analysis will be in accord with test procedures as defined pursuant to: Title 40, Code of Federal Regulations, Part 136, or any modifications thereto. For test procedures not listed in the Code of Federal Regulations, test procedures outlined in EPA Methods for Chemical Analysis of Water and Wastes (March, 1979); or Standard Methods for the Examination of Water and Wastewaters (1975); or, A.S.T.M. Standards, Part 31 (1979), Water shall be used.

(b) The analytical technique for total uranium (as U) shall be the fluorometric method as referenced in Methods for Determination of Radioactive Substances in Water and Fluvial Sediments, Techniques of Water - Resource Investigations of the U.S. Geological Survey, Book 5, Chapter A-5 (1977).

(c) Where standard methods of testing have not been established, the suitability of testing procedures shall be determined by the Department.

Section 8. Limit of Detection.

Where the standard is below the lower limit of detection given in EPA Methods for Chemical Analysis of Water and Wastes (March, 1979), or Standard Methods for the Examination of Water and Wastewaters (1975), or, A.S.T.M. Standards, Part 31 (1979), Water, the standard shall be the lower limit of detection, unless otherwise provided by the Council.

CHAPTER XIII CLASS I HAZARDOUS WASTE AND NON-HAZARDOUS WASTE WELLS UNDERGROUND INJECTION CONTROL PROGRAM

Section 1. Authority. These regulations are promulgated pursuant to W.S. 35-11-101 through 1413, specifically 302, and no person shall cause, threaten or allow violations of any provision contained herein.

Section 2. <u>Definitions</u>. The following definitions supplement those definitions contained in Section 35-11-103 of the Wyoming Environmental Quality Act.

(a) "Aquifer" means a zone, stratum or group of strata that can store and transmit water in sufficient quantities for a specific use.

(b) "Area of review" means the area for which information and analyses shall be submitted as part of an underground injection control permit application, and reviewed for issuance of a permit.

(c) "Background" means the constituents or parameters and the concentrations or measurements which describe water quality and water quality variability prior to the subsurface discharge.

(d) "Bore/casing annulus" means the space between the well bore and the well casing.

(e) "Casing/tubing annulus" means the space between the well casing and the tubing.

(f) "Cementing" means to seal the annular space around the outside of a casing string using a specially formulated portland cement mixture or other hydraulic cement mixture to hold the casing in place and prevent any movement of fluid in this annular space. Cementing also includes operations to seal the well at the time of abandonment.

(g) "Class I well" means a well used to inject hazardous or non-hazardous industrial, commercial or municipal waste beneath the lowermost formation containing, within onequarter (1/4) mile of the well bore, an underground source of drinking water. Class I wells are regulated under this chapter.

(h) "Class II well" means a well regulated by the Wyoming Oil and Gas Conservation Commission, other than a Class II commercial disposal well, which injects fluids: (i) Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production. Non-hazardous gas plant wastes may be disposed of in a class II well pending Environmental Protection Agency co-approval.

(ii) For enhanced recovery of oil or natural gas; and/or

(iii) For storage of hydrocarbons which are liquid at standard temperature and pressure; '

(i) "Class III well" means a well used for in situ mining which injects for extraction of minerals, or products, or recovers recovery fluids, minerals or products, including a well used in:

(i) Mining of sulfur by the Frasch process;

(ii) In situ mining of uranium or other metals; this category includes in situ production from ore bodies which have not been conventionally mined by means of an open pit or underground excavation.

(iii) In situ mining of salts, trona, or potash;

(iv) Underground coal gasification operations;

(v) Solution mining of open pits or underground excavations used for the production of minerals, such as stopes leaching;

(vi) Fossil fuel recovery including coal, lignite, oil shale, and tar sands; and

(vii) Experimental technologies, such as pilot scale in situ mining wells in previously unmined areas.

(j) "Class IV well" means a well used to dispose of hazardous waste or radioactive waste into or above a formation which contains, within one-quarter (1/4) mile of the well bore, an underground source of drinking water. Class IV wells are prohibited by Chapter XIII, Water Quality Rules and Regulations.

Except that a well is not class IV if it is used to inject contaminated groundwater that has been treated and reinjected into the same formation from which it is drawn for the purpose of aquifer remediation where the ultimate cleanup criteria is protective of groundwater standards of these regulations. These wells are regulated as a class V well, type 5X26 under these regulations. (k) "Class V well" means any injection well not included in Classes I, II, III, or IV.

(1) "Cone of influence" means that area around a well within which increased discharge zone pressures caused by the injection would be sufficient to force fluids into an underground source of drinking water.

(m) "Confining zone" means the zone in the well designated in the permit application to provide hydrologic separation between the receiver and any underground source of drinking water.

(n) "Draft permit" means a document indicating the tentative decision by the Department to issue or deny, modify, revoke, or terminate a permit or license. A notice of intent to terminate a permit and a notice of intent to deny a permit are types of draft permits. A denial of a request for modification, revocation and reissuance, or termination is not a draft permit. A draft permit for issuance shall contain all conditions and content, compliance schedules and monitoring requirements required by this Chapter.

(o) "Duly authorized representative" means a specific individual or a position having responsibility for the overall operation of the regulated facility or activity. The authorization shall be made in writing by a responsible corporate officer and shall be submitted to the administrator.

(p) "Endangerment" means exposure to actions or activities which could pollute groundwaters of the State.

(q) "Fact Sheet" means a document briefly setting forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. Fact sheets for class I wells are incorporated into the public notice.

(r) "Fluid" means any material which flows or moves, whether semisolid, liquid, sludge, gas or any other form or state.

(s) "Groundwater" means subsurface water that fills available openings in rock or soil materials such that they may be considered water saturated under hydrostatic pressure. (t) "Groundwaters of the State" are all bodies of underground water which are wholly or partially within the boundaries of the State.

(u) "Hazardous waste" means a hazardous waste as defined in 40 CFR 261.3.

(v) "Lithology" means the description of rocks on the basis of their physical and chemical characteristics.

(w) "Long string casing" means a casing which is continuous from at least the top of the injection interval to the surface and which is cemented in place.

(x) "Log" means to make a written record progressively describing the strata and geologic and hydrologic character thereof to include electrical, radioactivity, radioactive tracer, temperature, cement bond and similar surveys, a lithologic description of all cores, and test data.

(y) "Radioactive Waste" means any waste which contains radioactive material in concentrations which exceed those listed in 10 CFR Part 20, Appendix B, Table II, Column 2.

(z) "Mechanical integrity" means the sound and unimpaired condition of all components of the well or facility or system for control of a subsurface discharge and associated activities.

(aa) "Permit" means a Wyoming Underground Injection Control permit, unless otherwise specified.

(bb) "Permittee" means the named permit holder.

(cc) "Receiver" means any zone, interval, formation or unit in the subsurface into which fluids and pollutants are discharged.

(dd) "Responsible corporate officer" means 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.

(ee) "Subsurface discharge" means a discharge into a
receiver.

(ff) "Underground source of drinking water" means those aquifers or portions thereof that have been classified as either Class I, II, III, IV(a), or Special (A), pursuant to Chapter VIII, Quality Standards for Wyoming Groundwaters, Water Quality Rules and Regulations.

(gg) "Well" means an opening, excavation, shaft or hole in the ground allowing or used for an underground injection or for the purpose of extracting a fluid, mineral, product or pollutant from the subsurface or for monitoring.

(hh) "Workover" means to pull the tubing, packer, or any downhole hardware from the well and inspect, replace, or refurbish it prior to placing that hardware back in service, or to enter the hole with any drilling tool.

Section 3. Applicability. These regulations shall apply to all Class I, Class IV, commercial oil field waste disposal wells and those gas plant waste wells not regulated by the Wyoming Oil and Gas Conservation Commission.

Section 4. <u>Control of Class I well subsurface dis-</u> charges; permit required; aquifer exemptions.

(a) Class I wells shall be allowed only pursuant to the Wyoming Environmental Quality Act, Chapter VIII, Wyoming Water Quality Rules and Regulations, and this chapter.

(b) Discharges into or construction of Class I wells are prohibited unless a permit has been obtained from the Department of Environmental Quality through the Water Quality Division.

(c) Injections from Class I wells shall be restricted to those receivers defined as Class VI groundwaters by the department pursuant to Chapter VIII, Quality Standards for Wyoming Groundwaters, Water Quality Rules and Regulations and receivers which have obtained an aquifer exemption pursuant to this section.

(d) Permits may be issued for individual wells or on an area basis except Class I hazardous waste wells, which shall have individual permits.

(e) The procedure for obtaining an aquifer exemption from the U.S. Environmental Protection Agency shall be as follows:

(i) Water Quality Division shall submit one complete copy of the application, the Draft Permit, and the public notice to the U.S. Environmental Protection Agency, Region VIII. This submission shall be made so that EPA receives the complete application at least twenty (20) days prior to the scheduled start of the public comment period. (ii) When the aquifer exemption request is for an aquifer containing 3,000 mg/l or more of total dissolved solids, the following procedure shall be used: Within forty five (45) days of EPA receipt of a complete aquifer exemption request, EPA shall provide the department a written interim determination of intention to issue or deny the aquifer exemption pending receipt and review of the results of the public participation process conducted by the department. The interim response will become final if there are no comments relating to the aquifer exemption request during the comment or hearing process. If comments are received during the public comment or hearing process, the interim response will become final if not modified by EPA in writing within thirty (30) days of receipt of all comments.

(iii) An aquifer exemption request for an aquifer containing less than 3,000 mg/l of total dissolved solids requires the aquifer exemption request to be processed as a program revision pursuant to 40 CFR 145.32.

Section 5. Permit application.

(a) It is the operator's responsibility to make application for and obtain a permit in accordance with these regulations. Each application must be submitted with all supporting data.

(b) A complete application for a Class I well shall include:

(i) A brief description of the nature of the business and the activities to be conducted that require the applicant to obtain a permit under this chapter.

(ii) The name, address and telephone number of the operator, and the operator's ownership status and status as a Federal, State, private, public or other entity.

(iii) The name address and telephone number of the facility. Additionally, the location of the facility shall be identified by section, township, range and county, and whether or not it is located on Indian lands.

(iv) A calculation of the area of review, which requires the calculation of the cone of influence and the area of the ultimate limit of emplaced waste.

(A) The formula for determining the cone of influence is:

$$r = 2.25 \text{ KHt}^{\frac{14}{4}}$$

$$s = 10^{\times} \text{ C}$$

$$where: x = W_{-\frac{1}{6}} + \frac{4PKH}{2.3Q}$$

r = Radius of the cone of influence of an injection well
(feet)

K = Hydraulic conductivity of the injection zone
(feet/day)

H = Thickness of the injection zone (feet)

t = Time of injection (days)

S = Storage coefficient (dimensionless)

Q = Injection rate (cubic feet/day)

B = Original hydrostatic head of injection zone (feet)
measured from the base of the injection zone

W = Hydrostatic head of underground source of drinking water (feet) measured from the base of the injection zone

G = Specific gravity of fluid in the injection zone
(dimensionless)

P = 3.142 (dimensionless)

(B) A volume calculation to determine the maximum area that the injected waste could occupy shall be submitted on all new Class I wells. This calculation determines the total amount of void space around the well and assumes that the injected fluid completely displaces the formation water.

(C) A Class I non-hazardous waste well's area of review shall never be less than one-quarter (1/4) mile, the cone of influence, or the area of emplaced waste, whichever is greatest.

(D) A Class I hazardous waste well's area of review shall never be less than two (2) miles, the cone of influence, or the area of emplaced waste, whichever is greatest.

(E) All Areas of Review shall be legally described by Township, Range and Section to the nearest 1/4 1/4 of a section.

(v) Information about the proposed facility, including:

(A) A description of the substances proposed to be discharged, including type, source, and chemical, physical, radiological and toxic characteristics; and (B) Construction and engineering details in accordance with Section 11 of this chapter.

(vi) Information, including the name, description, depth and geology of the receiver and confining zone and the hydrology, fluid chemistry, fluid pressure, temperature, fracture pressure and the total dissolved solids (TDS) in the receiver.

(vii) Water quality information, including background water quality data, which will facilitate the classification of any groundwaters which may be affected by the proposed discharge. This must include information necessary for the Water Quality Division to classify the receiver as class VI under Chapter VIII Section 4(d)(9) of the Wyoming Water Quality Rules and Regulations.

(viii) A topographic and other pertinent maps, extending at least one (1) mile beyond the property boundaries of the facility, but never less than the area of review, depicting:

(A) The facility and each of its intake and discharge structures;

(B) Each of its hazardous waste treatment, storage, or disposal facilities;

(C) Each well where fluids from the facility are injected underground;

(D) Other wells, springs, and surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within a minimum one-quarter (1/4) mile of the facility property boundary, or further, as the administrator may determine is necessary; and

(E) General geology and hydrogeology in

the area.

(ix) A list of other relevant permits, whether Federal or State, that the facility has been required to obtain, such as construction permits.

(x) A listing of all wells that penetrate the confining zone and are within the area of review, and records of plugging or completion, sufficient to satisfy the administrator as to the adequacy of the plugging or completion.

(A) For those wells that the administrator determines have not been adequately plugged, completed, or abandoned, or for wells which lack supporting information, the applicant shall also submit a plan to prevent movement of fluids into Underground Source of Drinking Waters through these wells, and this plan, after approval or modification by the administrator, shall be incorporated as a permit condition.

(xi) Detailed plans for:

(A) Monitoring volume and chemistry of the discharge, and water quality of water wells within the area of review;

(B) Monitoring injection and annular pressures in the well, to minimize the potential for fracturing of the confining zone and below the receiver; and

(C) Corrective action to cope with alarms, shut-downs, malfunctions or well failures, so as to prevent endangerment of groundwater.

(xii) Information sufficient to demonstrate mechanical integrity of the well, and compatibility between the proposed discharge and the well material.

(xiii) Information sufficient to demonstrate compliance with Sections 11, 12, 13, 14, 16 and 17 of this chapter.

(xiv) All applications for permits shall be signed by a responsible officer as follows:

(A) For a corporation - by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(1) 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 decisionmaking functions for the corporation; or

(2) 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.

(B) For a partnership or sole proprietorship -- by a general partner or the proprietor, respectively; (C) For a municipality, state, federal or other public agency -- by either the principal executive officer or ranking elected official.

(xv) The application shall contain the following certification by the person signing the application:

"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."

(c) All relevant data used to complete permit applications shall be kept for a minimum of three (3) years from the date of signing.

Section 6. Application processing procedures.

(a) The applicant shall file seven (7) copies of the permit application with the Water Quality Division.

(b) Within sixty (60) days of submission of the application, the administrator shall make an initial determination of completeness. An application shall be determined complete when the administrator receives an application and any supplemental information necessary to determine compliance with these regulations.

(c) An incomplete application will be processed in the following manner:

(i) For an extremely incomplete application, additional information shall be requested in detail or the application will be returned to the applicant. Incomplete permit applications will result in permit denial.

(ii) If an application is denied because of incompleteness necessitating a request for additional information, the applicant shall have a maximum of six months to comply with the requests. If the applicant fails to provide the requested information within that period, the entire incomplete application shall be returned. (iii) Resubmittal of information by an applicant on an incomplete application will begin the process described in subsection (b) of this section.

(d) During any sixty (60) day review period where an application is determined complete, the administrator shall take one of the following actions:

(i) Prepare a draft permit for issuance or denial, prepare a fact sheet on the proposed operation, and provide public notice pursuant to Section 19; or

(ii) Provide the applicant notice that the permit is deficient and state the deficiencies in the application.

(e) Determinations of deficiency by the Department are appealable by the applicant to the Environmental Quality Council. Requests for appeal must be in writing, state the reasons for appeal, and be made to both the Director and the Chairman of the Environmental Quality Council. A deficient application is considered a permit denial but is not subject to the public notice requirements of Section 19 unless a hearing is requested by the applicant. Resubmittal of information for a deficient application will start the sixty (60) day review period again.

(f) Denials of permit applications will be pursuant to procedures outlined in Section 7 of this chapter.

(g) All draft permits for Class I wells require public notice pursuant to Section 19 of this chapter.

Section 7. Permit denial.

(a) The administrator may deny a permit for any of the following reasons:

(i) The application is incomplete; or

(ii) Other justifiable reasons necessary to carry out the provisions of the Environmental Quality Act.

(iii) If the applicant has been and continues to be in violation of the provisions of the Wyoming Environmental Quality Act.

(b) The administrator shall deny a permit for any of the following reasons:

(i) The project, if constructed and/or operated, will cause violation of applicable state surface or groundwater standards;

(ii) The application contains a proposed construction or operation which does not meet the requirements of this chapter; or

(iii) The application does not provide documentation to comply with financial responsibility requirements of section 17.

(c) The administrator shall deny any permit for which the U.S. Environmental Protection Agency has denied an aquifer exemption.

(d) When the department intends to deny a permit for any reason other than an incomplete or deficient application, a draft permit shall be prepared and public notice issued pursuant to section 19.

Section 8. <u>Permit modification, revocation, termina-</u> tion or transfer.

(a) Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee or licensee) or upon the administrator's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in this section. All requests shall be in writing and shall contain facts or reasons supporting the request.

(b) If the administrator decides the request is not justified, he or she shall send the requester a brief written response giving the reason for the decision. A request for modification, revocation and reissuance, or termination shall be considered denied if the Administrator takes no action within 60 days after receiving the written request. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice and comment. Denials by the administrator may be appealed for hearing to the Environmental Quality Council by a letter briefly setting forth the relevant facts.

(c) The administrator shall modify a permit or license when:

(i) Any material or substantial alterations or additions to the facility occur after permitting or licensing, which justify the application of permit conditions that are different or absent in the existing permit; or (ii) Any modification in the operation of the facility is capable of causing or increasing pollution in excess of applicable standards or permit conditions.

(iii) Information warranting modification is discovered after the operation has begun that would have justified the application of different permit conditions at the time of permit issuance;

(iv) Regulations or standards upon which the permit or license was based have changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;

(v) Cause exists for termination, as described in this section, but the department determines that modification is appropriate; or

(vi) Modification is necessary to comply with applicable statutes, standards or regulations.

(d) Minor modifications of permits may be performed with the consent of the permittee or licensee without following the public notice requirements applicable to other modifications. Minor modifications will become final twenty (20) days from the date of receipt of such notice. For the purposes of this chapter, minor modifications may only:

(i) Correct typographical errors;

(ii) Require more frequent monitoring or reporting by the permittee;

(iii) 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;

(iv) Allow for a change in ownership or operational control of a facility where the director determines that no other change in the permit or license is necessary, provided that a written agreement containing a specific date for transfer of permit or license responsibility, coverage, and liability between the current and new permittees has been submitted to the administrator;

(v) Change quantities or types of fluids injected which are within the capacity of the facility as permitted or licensed 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 or license and would not change its classification;

(vi) Change construction requirements approved by the director pursuant to department rules and regulations provided that any such alteration shall comply with the requirements of this chapter; or

(vii) Amend a plugging and abandonment plan.

(e) The administrator may revoke a permit for the following reasons:

(i) noncompliance with terms and conditions of the permit;

(ii) failure in the application or during the issuance process to disclose fully all relevant facts, or misrepresenting any relevant facts at any time; or

(iii) a determination that the activity endangers human health or the environment and can only be regulated to acceptable levels by a permit or license modification or termination.

(f) The administrator may modify a permit or license to resolve issues that could lead to the revocation or consider any of the reasons in Section (e) of this section as sufficient justification to terminate a permit or license. The administrator as part of any notification of intent to terminate a permit or license shall order the permittee or licensee to proceed with reclamation on a reasonable time period.

(g) If the administrator tentatively decides to modify or revoke and reissue a permit, he or she shall prepare a draft permit or license incorporating the proposed changes. The administrator 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 administrator shall require the submission of a new application.

(h) In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit or license 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 has 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 issued.

(i) Permits will be automatically terminated after closure and release of the financial responsibility requirements of Section 17 by the department.

(j) When a permit transfer occurs pursuant to this section, the past permit will automatically terminate.

(k) Transfer of a permit is allowed only upon approval by the administrator.

(i) The permit holder shall apply in writing as though he was the original applicant for the permit and shall further agree to be bound by all of the terms and conditions of the permit and provide the necessary bonds;

(ii) The potential transferee shall file a statement of qualifications to hold a permit with the administrator; and

(iii) Transfer will not be allowed if the permittee is in noncompliance with any term and conditions of the permit, unless the transferee agrees to bring the facility back into compliance with the permit.

(iv) When a permit transfer occurs, the administrator may modify a permit pursuant to this section. The administrator shall provide public notice pursuant to Section 19 for any modification other than a minor modificationdefined by this section.

(1) Proposed modifications, revocations or terminations are subject to the public notice and hearing requirements outlined in Section 19 of this chapter.

Section 9. Permit conditions and contents.

(a) All permits issued under this chapter shall be for no more than ten (10) years duration.

(b) Each permit shall be reviewed at least once every five (5) years for continued validity of all permit conditions and contents.

(c) Permits that do not satisfy the review criteria are subject to modification, revocation and reissuance, or termination pursuant to Section 8 of this chapter. (d) All permits issued under this chapter shall contain the following conditions:

(i) A requirement that the permittee comply with all conditions of the permit, and any permit noncompliance constitutes a violation of these regulations and is grounds for enforcement action, permit termination, revocation, or modification.

(ii) A requirement that the injection pressure shall be limited to the fracture pressure of the receiver, except as necessary during well stimulation, and, within one (1) year of the issuance of the permit, the operator shall conduct a step-rate injection test to determine the actual fracture pressure of the receiver.

(iii) A requirement that if the permittee wishes to continue injection activity after the expiration of the permit, he must apply to the administrator for and obtain a new permit.

(iv) A stipulation that 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.

(v) A requirement that the permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

(vi) A requirement that the permittee properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes mechanical integrity of the well, effective performance, adequate funding and 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.

(vii) A requirement that mechanical integrity shall be maintained continuously and be reviewed at least every five (5) years. The test used to determine mechanical integrity shall be a two-part test approved by the administrator, who shall approve only those tests that have been approved first by the U.S. Environmental Protection Agency's Office of Drinking Water. (A) Part one of the mechanical integrity test shall demonstrate the absence of leaks through the packer, tubing, casing, and well head.

(B) Part two of the mechanical integrity test shall demonstrate the absence of fluid movement behind the casing.

(C) Proposed mechanical integrity tests that have not yet been approved shall be submitted to the administrator who shall forward the information to the U.S. Environmental Protection Agency's Office of Drinking Water along with a request for approval, if, in the administrator's opinion, it will adequately determine mechanical integrity of the well system. A previously unauthorized mechanical integrity test submitted for approval shall include:

(I) The proposed method for demonstrating the lack of significant leaks in the well;

(II) The proposed method for showing the absence of significant fluid movement; and

(III) Any technical data supporting

the use of this test.

(viii) A Class I well that cannot demonstrate mechanical integrity shall be shut down until such time as the mechanical integrity has been restored.

(ix) A stipulation that the filing of a request by the permittee, or at the instigation of the administrator, for a permit modification, revocation, termination, or notification of planned changes or anticipated non-compliance shall not stay any permit condition.

(x) A stipulation that this permit does not convey any property rights of any sort, or any exclusive privilege.

(xi) A stipulation that the permittee shall furnish to the administrator, within a specified time, any information which the administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. The permittee shall also furnish to the administrator, upon request, copies of records required to be kept by the permit.

(xii) A requirement that the permittee shall allow the administrator, or an authorized representative of the administrator, upon the presentation of credentials, during normal working hours, to enter the premises where a regulated facility is located, or where records are kept under the conditions of this permit, and inspect the discharge and related facilities, review and copy reports and records required by the permit, collect fluid samples for analysis, measure and record water levels, and perform any other function authorized by law or regulation.

(xiii) A requirement that the permittee furnish any information necessary to establish a monitoring program pursuant to Section 13 of this chapter.

(xiv) A requirement that all samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity, and records of all monitoring information be retained by the permittee. The monitoring information to be retained shall be that information stipulated in the monitoring program established pursuant to the criteria in Section 13 of this chapter.

(xv) A requirement that all applications, reports, and other information submitted to the administrator contain certifications as required in Section 5(c)(14) of this chapter, and be signed by either a responsible corporate officer or a duly authorized representative.

(xvi) A requirement that the permittee give advance notice to the administrator as soon as possible of any planned physical alteration or additions, other than authorized operation and maintenance, to the permitted facility and receive authorization prior to implementing the proposed alteration or addition.

(xvii) A requirement that any modification which may result in a violation of a permit condition shall be reported to the administrator, and any modification that will result in a violation of a permit condition shall be reported to the administrator through the submission of a new or amended permit application.

(xviii) A requirement that any transfer of a permit must first be approved by the administrator, and that no transfer will be approved if the facility is not in compliance with the existing permit unless the proposed permittee agrees to bring the facility into compliance.

(xix) A requirement that monitoring results shall be reported at the intervals specified elsewhere in this permit. (xx) A requirement that reports of compliance or non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule, if one is required by the administrator, shall be submitted no later than thirty (30) days following each schedule date.

(xxi) A requirement that confirmed noncompliance resulting in the migration of injected fluid into any zone outside of the permitted receiver must be orally reported to the administrator within twenty-four (24) hours, and a written submission shall be provided within five (5) days of the time the permittee becomes aware of the excursion. The written submission shall contain:

(A) A description of the noncompliance

and its cause;

(B) The period of noncompliance, including exact dates and times, and, if the noncompliance has not been controlled, the anticipated time it is expected to continue; and

(C) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(xxii) A requirement that the permittee report all instances of noncompliance not already required to be reported under paragraphs xix, xx and xxi of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph xxi(A) through (C) of this section.

(xxiii) A requirement that, in the situation 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 administrator, the permittee shall promptly submit such facts or information.

(xxiv) A requirement that the injection well meet construction requirements outlined in Section 11 of this chapter, and that the permittee submit notice of completion of construction to the administrator and allow for inspection of the well upon completion of construction, prior to commencing any injection activity.

(xxv) A requirement that the packer be set within five-hundred (500) feet of the top of the receiver, unless the administrator allows some other specific interval to be used to set the packer, but always within the zone covered by excellent cement bond as shown by the cement bond log. (xxvi) A requirement that the permittee notify the administrator at such times as the permit requires before conversion or abandonment of the well.

(xxvii) A requirement that a plugging and abandonment report, detailing the compliance abandonment procedures outlined the original permit application, or describing any deviations from the original plan, be submitted as soon as practicable after plugging and abandonment.

(xxviii) Monitoring results shall be reported in the annual reports unless otherwise specified.

(xxix) Injection into a well may not commence until construction is complete.

(e) In addition to the conditions required of all permits, the administrator may establish on a case-by-case basis, conditions as required for monitoring, schedules of compliance, and such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water.

Section 10. Special permit conditions for hazardous waste wells. All Class I hazardous waste wells permitted under this chapter shall be subject to the special permit conditions listed in this section in addition to the conditions applicable to all Class I well permits in Section 9 of this chapter.

(a) All hazardous waste injection permits issued under this chapter shall include the following conditions:

(i) A requirement that the operator shall maintain a casing/tubing annulus pressure that exceeds the operating injection pressure, unless the administrator determines that such a requirement might harm the integrity of the well. The fluid used in the casing/tubing annulus shall be noncorrosive, and shall contain a corrosion inhibitor.

(ii) A requirement that the operator shall follow special procedures when wastes have the potential to react with the injection formation or to generate gases either during or after injection. These procedures may take the form of special permit conditions that limit the temperature or pH of the injected waste and require the operator to follow procedures necessary to assure that pressure imbalances which might cause a backflow or blowout do not occur.

(iii) A requirement that the operator shall install, maintain, and use continuous recording devices to

monitor the injection pressure, flow rate, temperature, of injected fluids and pressure on the casing/tubing annulus, and shall install and use automatic alarm and shut-off systems designed to shut down the well when pressures, flow rates, and other parameters approved by the administrator exceed the range specified in the permit.

(iv) A requirement that the operator have a trained operator onsite at all times the well is operating.

(v) A requirement that if an automatic alarm or shutdown is triggered, the operator shall immediately investigate and identify as early as possible, the cause of the alarm or shutdown. If, upon such investigation, or if required monitoring indicates, that the well is lacking in mechanical integrity, the operator shall:

immediately;

(A) Cease all injections of waste fluids

(B) Take all necessary steps to determine the presence or absence of a leak; and

(C) Notify the administrator within twenty-four (24) hours after the alarm or shutdown, using procedures and criteria listed in paragraph 20 of Section 9(d)(xx) in this chapter.

(D) The operator shall restore and demonstrate, to the satisfaction of the administrator, mechanical integrity, prior to resuming injection activities.

(vi) A requirement that whenever the operator obtains evidence that there may have been a release of injected wastes into an unauthorized zone, regardless of whether or not an automatic alarm or shutdown was triggered, the operator shall:

(A) Immediately cease all injection

activities;

(B) Notify the administrator pursuant to the procedures outlined in paragraph 20 of Section 9 in this chapter. In addition to the information required by paragraph 20, the operator shall also include, as part of the written submission, a proposed remedial action plan, designed to minimize the adverse impact of the unauthorized release;

(C) Comply with the requirements of any remedial action plan approved by the administrator; and

(D) Where the unauthorized release is into a Class I aquifer, as classified under Chapter VIII, Quality Standards for Wyoming Groundwaters, Water Quality Rules and Regulations, which is currently serving as a water supply, the operator shall place a notice, describing the unauthorized release and the actions taken, in a newspaper of general circulation in the locality of the release.

(E) The administrator may allow the operator to resume injection prior to completion of cleanup operations if the operator demonstrates, to the satisfaction of the administrator, that the injection activity will not endanger any Underground Source of Drinking Waters.

(vii) A requirement that the operator notify the administrator and obtain his approval prior to conducting any well workover.

(viii) A requirement that the operator comply with the following federal regulations contained in 40 CFR 264 or applicable state hazardous waste regulations:

(A) Identification numbers;

(B) Recordkeeping and reporting for

manifested wastes;

(C) Manifest discrepancies;

(D) Operating record requirements;

(E) Annual reporting requirements and unmanifested waste reports; and

(F) Personnel training requirements.

(ix) When abandonment is completed, the operator must submit to the administrator certification by the operator and certification by an independent registered professional engineer that the facility has been closed in accordance with the specifications detailed in the closure plan in Section 16 of this chapter.

Section 11. Construction standards for Class I wells.

(a) All existing and new Class I wells shall be constructed to prevent the movement of fluids into any underground source of drinking water, permit the use of testing devices and workover tools, and permit continuous monitoring of injection tubing and long string casing, as required under Sections 9 and 10 of this chapter. (b) All well materials shall be compatible with the wastes that may be contacted. The applicant shall submit data necessary to document compatibility.

(c) Casing and cement used in the construction of each newly drilled well shall be designed for the life expectancy of the well. The applicant shall provide all information required to make a determination based on these factors:

(i) Depth to the injection zone;

(ii) Injection pressure, external pressure, internal pressure, and axial loading;

(iii) Hole size;

vals; and

(iv) Size and grade of all casing strings (wall thickness, diameter, nominal weight, length of joints, joint specifications and construction material);

(v) Corrosiveness of injected fluid, formation fluids, and temperatures;

(vi) Lithology of injection and confining inter-

(vii) Type or grade of cement.

(d) Construction requirements for Class I hazardous waste wells.

(i) For casing and cementing requirements, the applicant shall provide all information necessary to make a determination of adequacy based on quantity and chemical composition of injected fluids.

(ii) One surface casing string shall, at a minimum, extend into the confining zone below the lowest Underground Source of Drinking Water and be cemented by circulating cement from the base of the casing to the surface, using a minimum of one-hundred twenty percent (120%) of the calculated annular volume. The administrator may require more than onehundred twenty percent (120%) when the geology or other circumstances warrant a greater percentage.

(iii) At least one long string casing, using a sufficient number of centralizers, shall extend to the receiver and shall be cemented by circulating cement to the surface in one or more stages:

(A) Of sufficient quantity and quality to withstand the maximum operating pressure; and

(B) In a quantity no less than onehundred twenty percent (120%) of the calculated volume necessary to fill the annular space. The administrator may require more than one-hundred twenty percent (120%) when the geology or other circumstances warrant a greater percentage.

(iv) Circulation of cement may be accomplished by staging. The administrator may approve an alternative method of cementing in cases where the cement cannot be recirculated to the surface, provided the operator can demonstrate by logs that the cement is continuous and does not allow fluid movement behind the casing.

(v) Casings, including any casing connections, must be rated to have sufficient structural strength to withstand, for the life the well, the maximum burst and collapse pressures which may be experienced during the construction, operation, and closure of the well. Casings shall also be rated to withstand the maximum tensile stress which may be experienced at any point along the entire length of the casing during construction, operation, and closure of the well.

(vi) At a minimum, cement and cement additives shall be of sufficient quantity and quality to maintain mechanical integrity over the design life of the well.

(vii) For tubing and packer, the applicant shall provide all information necessary to make a determination of adequacy based on these factors:

(A) Depth of setting;

(B) Characteristics of the injection fluid, including chemical content, corrosiveness, temperature, and density;

(C) Injection pressure;

(D) Annular pressure;

(E) Rate (intermittent or continuous), temperature, and volume of injected fluid;

(F) Size of casing; and

(G) Tubing tensile, burst, and collapse

strengths.

(viii) During the drilling and construction of a Class I hazardous waste well, appropriate logs and tests shall be run to determine or verify the depth, thickness, porosity, permeability, and rock type of, and the salinity of any entrained fluids in all relevant geologic units to assure compliance with the performance standards of Section 14 of this chapter, and to compile baseline data against which future measurements may be compared. A descriptive report interpreting results of such logs and tests shall be prepared by the operator and submitted to the administrator. At a minimum, such logs shall include:

(A) Deviation checks made during drilling of all Class I hazardous waste wells. Such checks shall be done at sufficiently frequent intervals to determine the location of the borehole; and

(B) Such other logs and tests as may be needed after taking into account the availability of similar data in the area of the drilling site, the construction plan and the need for additional information that may arise as construction of the well progresses. At a minimum, the following logs shall be required:

(I) When installing the surface casing: resistivity, spontaneous potential, and caliper logs shall be run before the installation of the casing. A cement bond log and variable density log and temperature log are required after the surface casing is installed and before the well is deepened.

(II) When installing the long string casing: resistivity, spontaneous potential, porosity, caliper, gamma ray and fracture finder logs are required before the casing is installed. After the casing is installed and cemented, a cement bond log and variable density log are required before the well is completed.

(III) The administrator may allow the use of an alternative to the logs described above, when, in the administrator's opinion, the alternative will provide equivalent or better information.

(C) A mechanical integrity test as described in Section 9 of this chapter.

(D) Whole core or sidewall cores of the confining zone and receiver and formation fluid samples from the receiver shall be taken. The administrator may accept cores from nearby wells if the operator can demonstrate, to the administrator's satisfaction, that core retrieval is not

possible, and the other cores are representative of the conditions in the well. The administrator may require the operator to core other formations in the borehole.

(ix) The fluid temperature, pH, conductivity, pressure, and static fluid level of the discharge zone shall be recorded during construction.

(x) At a minimum, the following information about the injection and confining zones shall be calculated or determined during construction:

(A) The physical and chemical characteristics of the rock itself; and

(B) Physical and chemical characteristics of the formation fluids.

(C) Upon completion of construction, but still prior to operation, the operator shall conduct either pump tests or injectivity tests to verify the hydrogeologic characteristics of the discharge zone.

(e) Fluid seals are not allowed in place of a packer in any Class I well.

Section 12. Siting conditions for Class I wells.

(a) All Class I wells shall be situated such that they inject into a formation that is beneath the lowermost Underground Source of Drinking Water within one-quarter (1/4) mile of the well or within two (2) miles for Class I hazardous waste injection wells, and the discharge zone has sufficient permeability, porosity, thickness, and extends over a sufficient area to prevent migration of fluids into any underground source of drinking water.

(b) Class I wells shall be limited to areas that are determined by the administrator to be geologically suitable for the prevention of migration of fluids into underground source of drinking waters. In determining geological suitability, the administrator shall consider the following information submitted by the applicant:

(i) An analysis of the structural and stratigraphic geology, hydrogeology, and the seismicity of the region;

(ii) An analysis of the local geology and hydrogeology of the well site, including, at a minimum, detailed information regarding the stratigraphy, structure, and rock properties, aquifer hydrodynamics, and mineral resources; and

(iii) A determination that the geology of the area can be described confidently, and, for hazardous waste wells only, that the waste fate and transport can be accurately predicted through the use of models.

(c) The operator shall demonstrate to the satisfaction of the administrator that:

(i) The confining zone is free from faults or fractures over an area sufficient to prevent the migration of fluids into a underground source of drinking water, and contains at least one formation of sufficient thickness and characteristics capable of preventing vertical propagation of fractures; and

(ii) The confining zone is separated from the base of the lowermost underground source of drinking water by at least one (1) sequence of permeable and less permeable strata that will provide an added layer of protection in the event of fluid movement through an unlocated borehole or fault; or

(iii) Within the area of review, the piezometric surface of the fluid in the receiver is less than the piezometric surface of the lowermost underground source of drinking water considering density effects, injection pressures, and any significant pumping of the overlying aquifer; or

(iv) There are no underground source of drinking waters present.

(d) The administrator may approve a site which does not meet the above requirements, if the operator can demonstrate that because of the site's geology, nature of the waste, or other considerations, it would not cause endangerment to any underground source of drinking waters.

Section 13. Environmental monitoring program for groundwaters of the State.

(a) A monitoring program shall be required for all Class I wells that will be adequate to establish baseline data and ensure knowledge of migration and behavior of the discharge.

(i) Monitoring may be required for any circumstance where groundwaters of the State could be affected. (ii) The extent and design of a monitoring system shall be sufficient to deal with the pollution potential of the proposed discharge.

(b) The monitoring program shall consist of any or all of the following:

(i) Pre-discharge or pre-operational monitor-

ing;

(ii) Operational monitoring;

(iii) Post-discharge or post-operational monitor-

ing;

(iv) Recordkeeping and reporting;

(v) Such additional requirements established by the administrator to meet the purposes of the Wyoming Environmental Quality Act and these regulations.

(c) Each monitoring program shall include maps and cross-sections, where appropriate, showing the location, lithology, and screening interval of each monitoring site.

(d) The operator is responsible for properly installing, operating, maintaining and removing all necessary monitoring equipment.

(e) At a minimum, the permittee shall monitor the pressure in the injection zone annually, including at a minimum, a shut down of the well for a time sufficient to conduct a valid observation of the pressure falloff curve.

(f) When prescribing a monitoring system, the administrator may also require:

(i) Continuous monitoring for pressure changes in the first aquifer overlying the confining zone. When such a well is installed, the operator shall, on a quarterly basis, sample the aquifer and analyze for constituents specified by the administrator;

(ii) The use of indirect, geophysical techniques to determine the position of the waste front, the water quality in a formation designated by the administrator, or to provide other site specific data;

(iii) Periodic monitoring of the groundwater quality in the first aquifer overlying the receiver;

(iv) Periodic monitoring of the groundwater quality in the lowermost underground source of drinking water; and

(v) Any additional monitoring necessary to determine whether fluids are moving into or between any aquifers penetrated by the well.

(vi) The administrator may require seismicity monitoring when he has reason to believe that the injection activity may have the capacity to cause seismic disturbances.

(g) The operator shall develop and follow an approved written waste analysis plan that describes the procedures to be carried out to obtain detailed chemical and physical analyses of a representative sample of the waste, including quality assurance procedures used. At a minimum, the plan shall specify:

(i) The parameters for which the waste will be analyzed, the rationale for the selection of these parameters, and the test methods to be used to test for these parameters; and

(ii) The sampling method that will be used to obtain a representative sample of the waste.

(h) The operator shall repeat the analysis of the injected wastes in the manner and on the schedule described in the waste analysis plan, and when process or operating changes occur that may significantly alter the characteristics process, or operating changes occur that may significantly alter the characteristics of the waste stream.

(i) The operator shall conduct continuous or periodic monitoring of selected parameters as required by the administrator.

(j) The operator shall assure that the plan remains accurate and the analyses remain representative.

(k) Testing and monitoring requirements for all Class I hazardous waste wells shall include:

(i) Submission of information by the applicant demonstrating that the waste stream and its anticipated reaction products will not alter the permeability, thickness, or other relevant characteristics of the confining or discharge zones such that they would no longer meet the requirements specified when the area of review was calculated.

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(ii) Submission of information by the applicant demonstrating that the waste will be compatible with the well materials with which the waste is expected to come into contact and a description of the methodology used to make that determination. Compatibility for purposes of this requirement is established if contact with injected fluids will not cause the well materials to fail to satisfy any design requirement imposed under Section 11 of this chapter.

(iii) The administrator shall require continuous corrosion monitoring of the construction materials in the well for all wells where the pH of the injection fluid is less than two (2) or greater than eleven (11), and may require such monitoring of other wastes. This monitoring may be conducted by placing samples of the well construction materials in contact with the waste stream or routing the waste stream through a loop constructed of the same materials used in the well, or by using an alternative method approved by the administrator.

(iv) If a corrosion monitoring program is required, the test shall use identical materials to those used in the construction of the well, and such materials shall be continuously exposed to the operating pressures, temperatures, and flow rates of the injection operation as measured at the well head. The operator shall monitor the materials for loss of mass, thickness, pitting, and other signs of corrosion on a quarterly basis to ensure that the well components meet the minimum standards for material strength and performance set forth in Section 11 of this chapter.

(1) In addition to the above-mentioned requirements, operators of Class I hazardous waste wells shall also conduct mechanical integrity testing as follows:

(i) The long string casing, injection tubing, and annular seals shall be tested by means of an approved pressure test with liquid or gas on an annual basis and whenever there has been a well workover;

(ii) The bottom-hole cement shall be tested by means of an approved radioactive tracer survey annually;

(iii) An approved temperature, noise, or other approved log shall be run at least once every five (5) years to test for movement of fluid along the borehole. The administrator may require such tests whenever the well is worked over;

(iv) Casing inspection logs shall be run at least once every five (5) years, unless the administrator

waives this requirement due to well construction or other factor's which limit the test's reliability; and

(v) Any other test approved by the administrator may also be used. Procedures for approval of unauthorized mechanical integrity tests are outlined in Section 9(d) (7) of this chapter.

(vi) The administrator shall be given the opportunity to witness all logging and drill stem testing done by the operator at any time during the permitting of any well under this chapter. The operator shall submit a schedule of such planned logging and testing to the administrator at least thirty (30) days prior to the first test.

Section 14. Quality assurance and quality control for sample collection and analyses.

(a) Procedures and methods for sample collection and analyses shall be implemented by the permittee to ensure that the samples are representative of the groundwater, water, or wastes being sampled.

(b) Sample collection of groundwater shall be of such frequency and of such variety (season, time, location, depth, etc.,) to properly describe the groundwater, and shall be accomplished by the methods and procedures described in the U.S. Environmental Protection Agency manual <u>RCRA Groundwater</u> Monitoring Technical Enforcement Guidance Document, September, <u>1986</u>, unless alternate methods and procedures are approved by the administrator.

(c) Analysis of all samples shall be accomplished pursuant to Chapter VIII, Water Quality Rules and Regulations, Sections 7 and 8.

Section 15. Records and reports.

(a) Monitoring reports required by the permit shall be submitted to the administrator.

(b) The permittee shall submit a written report to the administrator of all remedial work concerning the failure of equipment or operational procedures which resulted in a violation of a permit condition, at the completion of the remedial work.

(c) Quarterly and annual reports required by the permit shall be submitted to the administrator within thirty

(30) days following the end of the period covered in the report. Reports shall include the following information:

(i) The average, maximum and minimum injection pressures for each month;

(ii) A complete description of any event where maximum annular or injection pressures, as specified in the permit, were exceeded;

(iii) A complete description of any event that triggered any alarm or shutdown the well, and the response taken;

(iv) An accounting of the total volume of fluid injected for the period covered by the report, the year to date, and the life of the well to date;

(v) An analysis of the physical, chemical and other relevant characteristics of the injected fluid; and

(vi) Any well workover.

(d) For any aborted or curtailed operation, in lieu of an annual report, a complete report shall be submitted within thirty (30) days of complete termination of the discharge or associated activity.

(e) Quarterly and annual reports for hazardous waste wells shall also include a description of any change in the volume of fluid in the casing/tubing annulus of the well, and an explanation of the temperature/volume relationships covering the fluid. Any addition or withdrawal of fluids from the casing/tubing annulus shall be noted.

(f) The results of any mechanical integrity test, or any other testing done on a well, shall be submitted to the administrator within thirty (30) days or with the next quarterly report, whichever comes later, following the completion of the test.

(g) The permittee shall retain all monitoring records required by permit for a period of three (3) years following well closure, at which time the operator shall deliver the records to the administrator.

Section 16. Closure of hazardous waste wells.

(a) The operator of a Class I hazardous waste well shall prepare, maintain, and comply with a plan for closure of the well and post-closure care of the well that meets the standards for well closure required in paragraph (d) of this section and post-closure care required in paragraph (e) of this section and is acceptable to the administrator. The obligation to implement the closure and post-closure plan survives the termination of a permit or the cessation of injection activities. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.

(i) The operator shall submit the plan as part of the permit application, and, upon approval by the administrator, the plan shall be incorporated as a condition of any permit issued.

(ii) The operator shall submit any proposed significant revision to the method of closure reflected in the plan for approval by the administrator no later than the date on which notice of closure is required under paragraph (b) of this section.

(iii) The plan shall assure financial responsibility as required in Section 17 of this chapter.

(iv) The closure plan shall include the following information:

(A) The type and number of plugs to be

used;

(B) The placement of each plug including the elevation of the top and bottom of each plug;

(C) The type and grade and quantity of material to be used in plugging;

(D) The method of placement of the plugs;

(E) Any proposed test or measure to be

made;

(F) The amount, size, and location (by depth) of casing and any other materials to be left in the well;

(G) The method and location where casing is to be parted, if applicable;

(H) The procedure to be used to meet the requirements of paragraph (d) (5) of this section;

(I) The estimated cost of closure; and

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(J) Any proposed test or measure to be

made.

(v) Post-closure plans shall include the following information:

(A) The pressure in the injection zone before injection began;

(B) The anticipated pressure in the injection zone at the time of closure;

(C) The predicted time until pressure in the injection zone decays to the point that the well's cone of influence no longer intersects the base of the lowermost Underground Source Drinking Water;

(D) Predicted position of the waste front at closure;

(E) The status of any required cleanups; and

(F) The estimated cost of proposed post-closure

care.

(vi) The administrator may modify a closure plan in accordance with the procedures outlined in Section 8 of this chapter governing modification of permits.

(vii) An operator of a Class I hazardous waste injection well who ceases injection temporarily, may keep the well open provided:

(A) He receives authorization from the administrator; and

(B) He has described actions or procedures, satisfactory to the administrator, that the operator will take to ensure that the well will not endanger Underground Source of Drinking Waters during the period of temporary disuse. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the administrator.

(viii) The operator of a well that has ceased operations for more than two years shall notify the administrator at least thirty (30) days prior to resuming operation of the well.

(b) The operator shall notify the administrator at least sixty (60) days prior to closure of a well. The adminis-

trator may allow a closure period of less than sixty (60) days.

(c) Within sixty (60) days after closure or at the time of the next quarterly report, whichever is less, except if the next quarterly report is due within fifteen (15) days, in which case the sixty (60) day requirement will be used, the operator shall submit a closure report to the administrator.

(i) Such report shall contain a certification by the operator and the person who performed the closure, if different from the operator, of the accuracy of the report, and:

(A) A statement that the well was closed in accordance with the closure plan previously submitted and approved by the administrator; or

(B) Where actual closure differed from the plan previously submitted, a written statement specifying the differences between the previous plan and the actual closure.

(d) Standards for well closure.

(i) Prior to well closure, the owner or operator shall observe and record the pressure decay for a time specified by the administrator, who shall then analyze the pressure decay and the transient pressure observations conducted to determine whether the injection activity has conformed with predicted values.

(ii) Prior to well closure, appropriate mechanical integrity testing shall be conducted to ensure the integrity of that portion of the long string casing and cement that will be left in the ground after closure. Testing methods shall be similar to the mechanical integrity tests required during the operating life of the well.

(iii) Prior to well closure, the well shall be flushed with a buffer fluid.

(iv) Upon closure, a Class I hazardous waste well shall be plugged with cement in a manner that will not allow the movement of fluids into or between any underground source of drinking water.

(v) Placement of the cement plugs shall be accomplished by circulating cement to the bottom of the well using a working string. The working string shall be removed as the cement is pumped. The cement used shall be of a variety such that the working string can be withdrawn while still allowing the well to be filled with cement.

(vi) Each plug used shall be appropriately tagged and tested for seal and stability before closure is completed.

(vii) The well to be closed shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method described by the administrator, prior to the placement of the cement plugs.

(e) Post-closure care.

(i) The operator shall continue and complete any required cleanup action.

(ii) The operator shall continue to conduct any groundwater monitoring required under the permit until pressure in the injection zone decays to the point that the well's cone of influence no longer intersects the base of the lowermost Underground Source of Drinking Water. The administrator may extend the period of post-closure monitoring if he determines that the well may endanger an Underground Source of Drinking Water.

(iii) The operator shall submit a survey plat to the local zoning authority designated by the administrator, indicating the location of the well relative to permanently surveyed benchmarks. A copy of the plat shall be submitted to the Regional administrator of the U.S. EPA Region VIII, the State Engineer's Office, and to the Wyoming Oil and Gas Conservation Commission.

(iv) The operator shall retain for a minimum of three (3) years following well closure, records reflecting the nature, composition and volume of all injected fluids. The administrator shall require the operator to deliver the records to the administrator at the conclusion of this retention period.

(f) Each owner of a Class I hazardous waste well, and the owner of the surface or subsurface property on or in which a Class I hazardous waste well is located, must record a notation on the deed to the facility property or on some other instrument which is normally examined during title search that will in perpetuity provide any potential purchaser of the property the following information: (i) The fact that the land in question has been used to manage hazardous waste;

(ii) The name of the State agency or local authority with which the plat was filed, as well as the address of the Environmental Protection Agency Region VIII to which it was submitted; and

(iii) The type and volume of waste injected, the injection interval or intervals into which it was injected, and the period over which injection occurred.

Section 17. Financial responsibility.

(a) The operator of any Class I well shall demonstrate and maintain financial responsibility and resources to close, plug, abandon and maintain post-closure care for the underground injection operation in a manner prescribed by the administrator. The permittee shall show evidence of such financial responsibility to the administrator by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the administrator.

(b) The amount of the funds available shall be no less than the amount identified as the estimated cost of plugging, abandoning, and post-closure care.

(c) The obligation to maintain financial responsibility survives the termination of a permit or the cessation of injection. The requirements to maintain financial responsibility is enforceable regardless of whether the requirement is a condition of the permit.

(d) After plugging operations are completed, the amount of the financial surety required may be reduced by the administrator to the estimated cost of post-closure care.

(c) The owner or operator of a well injecting hazardous waste must comply with the financial responsibility requirements of 40 CRF 144 Subpart F.

Section 18. Prohibitions.

(a) No person, except when authorized by a permit issued pursuant to the Wyoming Environmental Quality Act and this chapter, shall:

(i) Cause, threaten or allow the discharge of any pollution or wastes into any groundwaters of the State;

(ii) Alter the physical, chemical, radiological, biological or bacteriological properties of the waters of the state; or

(iii) Construct, install, or operate any discharge system capable of causing or contributing to pollution of groundwaters of the State.

(b) No person shall:

(i) Conduct any authorized injection activity in a manner that results in a violation of any permit condition or representations made in the application. A permit condition supersedes any application content;

(ii) Conduct any authorized injection activity in a manner that results in a movement of fluids out of the receiver, including, but not limited to:

(A) No zone or interval other than that represented as the discharge zone in the permit shall be used as a receiver for the discharge;

(B) No uncased hole may be used as a conduit for the discharge, excepting that portion of a hole in the discharge zone; or

(C) No annular space between the wall of the hole and casing in the hole may be used as a conduit for the discharge, excepting in that portion of a hole in the discharge zone; and

(iii) Construct, install, modify or improve an authorized injection facility except in compliance with the permit requirements.

(c) All Class IV wells are prohibited.

(d) No solvent wastes which are listed hazardous waste numbers F001, F002, F003, F004, or F005 under 40 CFR 261.31 shall be injected underground in any class I well unless those wastes are waste solvent mixtures that do not exceed or are treated to not exceed the standards listed in Appendix A.

(c) No dioxin containing wastes which are listed hazardous waste number F020, F021, F022, F023, F026, F027 or F028 under 40 CFR 261.31 shall be injected underground in any well unless those wastes do not exceed, or are treated to not exceed the standards listed in Appendix B. (f) Treatment to meet appendix A or B limitations shall be accomplished according to a state hazardous waste treatment permit issued by the department. Dilution is prohibited as a substitute for treatment of wastes listed in subsections (d) and (e) above.

(g) No person shall inject any hazardous waste which has been banned from land disposal pursuant to 40 CFR 268.41 or department regulations, as applicable, unless:

(i) The hazardous waste has first been treated to a concentration of less than the levels specified in 40 CFR 268.41 or 40 CFR 268 Appendix I, or department regulations, as applicable; or

(ii) An exemption petition has been submitted and approved by the U.S. Environmental Protection Agency under 40 CFR 148.20, or department regulations, as applicable. After approval of such a petition, the operator is required to comply with all conditions contained as part of the granting of the petition.

Section 19. Public information, public participation, public hearing.

(a) Public notice is not required for minor modifications or for a permit denial where the application is determined incomplete or deficient in accordance with Section 6. unless the permittee or applicant requests a hearing before the council pursuant to this section.

(b) The administrator shall give public notice for any of the following actions:

(i) The administrator has prepared a draft permit which is intended for issuance, denial or reissuance;

(ii) The administrator intends to modify a permit;

(iii) The administrator intends to revoke or terminate a permit; and

(iv) Any hearing held as a result of a request for hearing on above actions or department actions appealable to the council.

(c) The administrator shall include a thirty (30) day public comment period for any action on items (a)(i), (ii) or (iii) or thirty (30) days notice before any hearing date as

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part of the public notice. When two notices are required, they may be given at the same time.

(d) Public notice shall be given by the following methods:

(i) By mailing a copy of the notice to the following persons;

(A) The applicant, by certified or regis-

tered mail;

(B) The U.S. Environmental Protection

Agency;

(C) Wyoming Oil and Gas Conservation

Commission;

(D) Wyoming Game and Fish Department;

(E) Wyoming State Engineer;

(F) Land Quality Division;

(C) State Historical Preservation

Officer;

(II) Persons on the mailing list developed by including those who request in writing to be on the list and soliciting persons for "area lists" from participants in proceedings in that area; and

(I) Any unit of local government having jurisdiction over the area where the facility is proposed to be located.

(ii) Publication of a notice in a newspaper of general circulation in the location of the facility or operation; and

(iii) At the discretion of the administrator, posting in a post office, public place of the nearest municipality or near the entrance to the facility.

(c) All public notices issued under this chapter shall contain the following minimum information:

(i) Name, address of the department;

(ii) Name and address of permittee or permit applicant, and, if different, of the facility or activity regulated by the permit;

(iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit;

(iv) Name, address and telephone number of a person from who interested persons may obtain further information, including copies of the draft permit, as the case may be, statement of basis or fact sheet and the application;

(v) A brief description of comment procedures, procedures to request a hearing, and other procedures which the public may use to participate in the final permit decision; and

(vi) Any additional information considered necessary and proper.

(f) In addition to the information required in (e) of this section, any notice for public hearing shall contain the following:

(i) Reference to the date of previous public notices relating to the permit;

(ii) Date, time and place of hearing; and

(iii) A brief description of the nature and purpose of the hearing, including applicable rules and procedures.

(g) The department shall provide an opportunity for the applicant, permittee, or any interested person to submit written comments regarding any aspect of a permit including, but not limited to, permit issuance, denial, modification, revocation and reissuance, termination, or transfer and/or to request a public hearing.

(h) All information received on or with the permit application shall be made available to the public for inspection and copying except such information as has been determined to constitute trade secrets or confidential information pursuant to W.S. 35-11-1101. The department shall provide facilities for inspection and copying of all nonconfidential documents. Copying shall be at the expense of the person requesting copies. (i) Requests for public hearings on permit applications or modifications must be made in writing to the administrator and shall state the reasons for the request. Requests for public hearings on permit issuance, denial, revocation, termination, or any other department action appealable to the Council, shall be made in writing to the chairman of the council and the department and state the grounds for the request.

(i) Requests for public hearings based on contested issues may be filed at any stage of the permitting process; and

(ii) After notice is given for public comment, requests for public hearings must be filed within thirty (30) days after the last publication of the public notice.

(j) The administrator shall render a decision on the action within thirty (30) days after the completion of the comment period if no hearing is requested.

(k) The administrator shall hold a hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit. The administrator may hold a hearing at his or her discretion whenever such a hearing may clarify issues involved in a permit decision.

(1) The Council shall hold hearings pursuant to the department Rules of Practice and Procedure.

(m) Public hearings will be held in the geographic area wherein the proposed discharge is located, or as nearby as reasonable. Public hearings will be held pursuant to department rules of practice and procedure.

(n) The director shall make a decision on any department hearing as soon as practicable after receipt of the office transcript or after the expiration of the time set to receive written comments.

(o) At the time a final decision is issued, the department shall respond, in writing, to those comments received during the public comment period or comments received during the allotted time for a hearing held by the department. This response shall:

(i) Specify any changes that have been made to the permit; and

(ii) Briefly describe and respond to all comments voicing a legitimate regulatory concern that is within the authority of the department to regulate.

(p) The response to comments shall also be available to the public.

(q) All comments received on contested issues before the council will be responded to in accordance with department Rules of Practice and Procedures.

Section 20. Class I permits issued before the effective date of these regulations. Any class I well permitted before the effective date of these regulations shall be reviewed pursuant to Section 9 (b) and (c).

APPENDIX A

	MAXIMUM-
	ALLOWABLE
PARAMETER	CONCENTRATION
ACETONE	.05 MG/L
N-BUTYL ALCOHOL	5.00 MG/L
CARBON DISULFIDE	1.05 MG/L
CARBON TETRACHLORIDE	.05 MG/L
CHLOROBENZENE	.05 MG/L
CRESOLS AND CRESYLIC ACID	.75 MG/L
CYCLOHEXANONE	.125 MG/L
1,2-DICHLOROBENZENE	.65 MG/L
ETHYL ACETATE	.05 MG/L
ETHYL BENZENE	.05 MG/L
ETHYL ETHER	.05 MG/L
ISOBUTANOL	5.00 MG/L
METHANOL	.25 MG/L
METHYLENE CHLORIDE	.20 MG/L
METHYL ETHYL KETONE	.05 MG/L
METHYL ISOBUTYL KETONE	.05 MG/L
NITROBENZENE	.66 MG/L
PYRIDINE	.33 MG/L
TETRACHLOROETHYLENE	.05 MG/L
TOLUENE	.33 MG/L
1,1,1-TRICHLOROETHANE	.41 MG/L
1,2,2-TRICHLORO-1,2,2 TRIFLUOROETHANE	.96 MG/L
TRICHLOROETHYLENE	.062 MG/L
TRICHLOROFLUOROMETHANE	.05 MG/L
XYLENE	.05 MG/L
POLYCHLORINATED BIPHENOLS	<u>500.00 MC/L</u>

APPENDIX B

PARAMETER	MAXIMUM- ALLOWABLE - CONCENTRATION
HXCDD- ALL HEXACHLORODIBENZO-P-DIOXINS	1 PPB
HXCDF- ALL HEXACHLORODIBENZOFURANS	$\frac{1}{1}$ $\frac{1}{PPB}$
PECDD- ALL PENTACHLORODIBENZO-P-DIOXINS	$\frac{1}{1}$ $\frac{1}{PPB}$
PECDF- ALL PENTACHLORODIBENZOFURANS	$\frac{1}{1}$ PPB
TCDD- ALL TETRACHLORODIBENZO-P-DIOXINS	$\frac{1}{1}$ $\frac{1}{PPB}$
TCDF- ALL TETRACHLORODIBENZOFURANS	1 PPB
2,4,5 TRICHLOROPHENOL	50 PPB
2,4,6 TRICHLOROPHENOL	50 PPB
2,3,4,6 TETRACHLOROPHENOL	100 PPB
PENTACHLOROPHENOL	10 PPB

/jn CHAPTER XIII (Final) 30505.DOC Revised February 3, 1993

CHAPTER 13

Class I Hazardous Waste and Non-Hazardous Waste Wells Underground Injection Control Program

REPEALED

Class V Injection Wells and Facilities Underground Injection Control Program

CHAPTER 16

Section 1. Authority and Purpose. These regulations are promulgated pursuant to-W.S. 35-11-101 through 1413, specifically 302, and no person shall cause, threaten or allowviolations of any provision contained herein. These regulations fulfill Wyoming stateobligations under Section 1422 of the Federal Safe Drinking Water Act and Federal-Underground Injection Control regulations found in 40 CFR 124 and 40 CFR 144-148 (both asof December 7, 1999).

Section 2. Definitions. The following definitions supplement those definitions contained in Section 35-11-103 of the Wyoming Environmental Quality Act.

(a) "Aquifer" means a zone, stratum or group of strata that can store and transmitwater in sufficient quantities for a specific use.

(b) "Area of review" means the area for which information and analyses shall be submitted as part of an underground injection control permit application, and reviewed for issuance of a permit. The area of review must include all portions of an aquifer which will be affected in a measurable way within ten (10) years of the granting of a permit, assuming that the permit is complied with.

(c) "Background" means the constituents or parameters and the concentrations or measurements which describe water quality and water quality variability prior to the subsurfacedischarge.

(d) "Cesspool" means a drywell that receives solely untreated domestic sewage, and which sometimes has an open bottom and/or perforated sides.

(e) "Class V facility" means any property which contains an injection well, drywell, or subsurface fluid distribution system which is not defined as a Class I, II, III, or IV well in Chapter 13, Water Quality Rules and Regulations. The Class V facility includes all systems of collection, treatment, and control which are associated with the subsurface disposal. Appendix-A of this chapter contains a list of Class V facilities.

(f) "Domestic sewage" means liquids or solid wastes obtained from humans and domestic activities including wastewater from activities such as showers, toilets, human washbasins, food preparation, clothes washing, and dishwashers.

(g) "Draft permit" means a document indicating the tentative decision by the department to issue or deny, modify, revoke and reissue, or terminate a permit. A notice of intent to terminate a permit and a notice of intent to deny a permit are types of draft permits. A

denial of a request for modification, revocation and reissuance, or termination is not a draftpermit. A draft permit for issuance shall contain all conditions and content, compliance schedules and monitoring requirements required by this chapter.

(h) "Drywell" means a well, other than an improved sinkhole or subsurfacedistribution system, completed above the water table so that its bottom and sides are typicallydry, except when receiving fluids.

(i) "Duly authorized representative" means a specific individual or a position having responsibility for the overall operation of the regulated facility or activity. The authorization shall be made in writing by a responsible corporate officer and shall be submitted to the administrator.

(j) "Fact sheet" means a document briefly setting forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft-permit. Fact sheets for Class I wells are incorporated into the public notice.

(k) "Fluid" means any material which flows or moves, whether semisolid, liquid, sludge, gas or any other form or state.

(1) "General permit" means a permit issued to a class of operators, all of which inject similar types of fluids for similar purposes. General permits require less information to be submitted by the applicant than individual permits and do not require public notice for a facility to be included under the authorization of a general permit.

(m) "Groundwater" means subsurface water that fills available openings in rock or soil materials such that they may be considered water saturated under hydrostatic pressure.

(n) "Groundwaters of the state" are all bodies of underground water which are wholly or partially within the boundaries of the state.

(o) "Hazardous waste" means a hazardous waste as defined in Chapter 2, Section 1-(c), Wyoming Hazardous Waste Rules and Regulations.

(p) "Improved sinkhole" means a naturally occurring karst depression which has been modified by man for the purpose of directing and emplacing fluids into the subsurface.

(q) "Individual permit" means a permit issued for a specific facility operated by an individual operator, company, municipality, or agency. An individual permit may be established as an area permit and include multiple points of discharge that are all operated by the same person.

(r) "Injectate" means the wastewater being disposed of through any undergroundinjection facility after it has received whatever pretreatment is done.

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(s) "Lithology" means the description of rocks on the basis of their physical and chemical characteristics.

(t) "Permit" means a Wyoming Underground Injection Control permit, unlessotherwise specified.

(u) "Permit by rule" means an authorization included in these rules which does not require either an individual permit or a general permit. A facility which is permitted by rulemust meet the requirements found in this chapter, but is not required to apply for and obtain a permit to construct and operate the facility.

(v) "Permittee" means the named permit holder.

(w) "Point of compliance" means a point at which the permittee shall meet class of use standards for the receiver.

(x) "Point of injection" means the last accessible sampling point prior to waste fluids being released into the subsurface environment through a Class V injection well. For example the 'point of injection' of a Class V septic system might be the distribution box – the last accessible sampling point before the waste fluids drain into the underlying soils. For a dry well, it is likely to be the well bore itself.

(y) "Public hearing" means a non-adversary hearing held by the administrator or director of the department. The hearing is conducted pursuant to Chapter 3 of the Wyoming-Department of Environmental Quality Rules of Practice and Procedure.

(z) "Radioactive waste" means any waste which contains radioactive material in concentrations which exceed those listed in 10 CFR Part 20, Appendix B, Table II, Column 2 as of December 22, 1993.

(aa) "Receiver" means any zone, interval, formation or unit in the subsurface intowhich fluids and pollutants are discharged.

(bb) "Responsible corporate officer" means a president, secretary, treasurer, or vicepresident of the corporation in charge of a principal business function, or any other person whoperforms similar policy- or decision-making functions for the corporation.

(cc) "Secondarily affected aquifer" means any aquifer affected by migration of fluidsfrom an injection facility, when the aquifer is not directly discharged into.

(dd) "Septic system" means a facility that is used solely to emplace domestic sewagebelow the surface and is comprised of a septic tank and subsurface fluid distribution system. (ee) "Source water protection area" means the area delineated for the protection of ground and surface water sources for a public water supply under a department approved plandeveloped pursuant to Section 1453 of the Safe Drinking Water Act.

(ff) "Subsurface fluid distribution system" means an assemblage of perforated pipes or drain tiles used to distribute fluids below the surface of the ground. Subsurface fluiddistribution systems include but are not limited to drain fields, leach fields, mounded leachfields, leach lines, bed type distribution systems, and gravel less chamber type distributionsystems.

(gg) "Vadose Zone" means the unsaturated zone in the earth, between the land surface and the top of the first saturated aquifer. The vadose zone contains water at less than saturated conditions.

(hh) "Underground source of drinking water" means those aquifers or portions thereofwhich have a total dissolved solids content of less than 10,000 mg/l, and are classified as either Class I, II, III, IV (a), or Special (A), pursuant to Chapter 8, Quality Standards for Wyoming-Groundwaters, Water Quality Rules and Regulations.

(ii) "Water quality management area" means the area delineated for the protection of water quality under a department approved plan developed under Sections 303, 208 and/or 201-of the Federal Clean Water Act, as amended.

(jj) "Well" means a bored, drilled, or driven shaft; a hole dug whose depth is greater than the largest surface dimension; an improved sinkhole; or a subsurface fluid distribution-system.

(kk) "Wellhead protection area" means the area delineated for the protection of a public water supply utilizing a groundwater source under a department approved plan developed pursuant to Section 1428 of the federal Safe Drinking Water Act.

Section 3. Applicability. These regulations shall apply to any discharge to the subsurface, including the vadose zone, for all of the types of discharges listed in Appendix A of this chapter.

Section 4. Timing of Compliance with These Regulations. Any Class V permitissued under Chapters 9 or 16, Water Quality Rules and Regulations, prior to the effective date of these regulations shall remain in effect until replaced by an individual permit, a general permitor permit by rule pursuant to this chapter. Existing individual permits issued under Chapters 9or 16 will be reviewed on a five (5) year basis pursuant to Section 5 (a)(vii) of this chapter. Any individual permit issued pursuant to Chapters 9 or 16 prior to the effective date of theseregulations fulfills all of the requirements to obtain a permit under this chapter.

(a) All operators of existing systems which are required to obtain an individual

permit under these regulations shall obtain a permit by April 14, 2000.

(b) General permits.

(i) Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall:

(A) Apply for coverage under the general permit;

(B) Apply for an individual permit for the facility;

(C) Retain an existing permit issued under Chapter 9; or

(D) Cease discharging fluids to the subsurface.

(ii) All operators of facilities which are required to be covered by a general permit which are constructed after the effective date of these regulations shall apply for and obtain coverage prior to the construction of the facility.

(iii) Facilities will be covered by general permits as soon as the department has issued a written statement of acceptance to construct and operate the facility under the general permit. The department will issue a statement either accepting the operation for coverage under a general permit, or denying coverage under a general permit within 60 days of the date when the operator has requested coverage.

(c) Permit by rule.

(i) All operators of existing facilities permitted by rule shall submit inventory information to the department within one (1) year of the effective date of this chapter.

(ii) All operators of facilities permitted by rule which are to be constructed after the effective date of these regulations shall submit inventory information to the department prior to constructing the facility.

Section 5. Permits Required; Processing of Permits; and Requirements Applicable to All Permits.

(a) Permits required.

(i) Construction, installation, modifications or operation of Class V facilities shall be allowed only in accordance with these regulations.

(ii) Discharges into, or construction of, any Class V facility are prohibited unless permitted pursuant to this chapter.

(iii) Every facility shall be covered by one of the three types of permitting systems: individual; general; or permit by rule. The following sections of these regulationsdescribe the permitting method for and subclasses of facilities. The owner or operator of a facility which can be covered by a general permit or authorized under permit by rule may apply for and be permitted by an individual permit if the owner or operator desires. Operators who donot meet the requirements for a general permit or permit by rule must obtain an individual permitprior to installation or construction of the Class V facility.

(iv) Permits may be issued for individual facilities or they may be issued on an area basis for multiple points of discharge operated by the same person.

(v) A separate permit to construct is not required under Chapter 3, Water Quality Rules and Regulations for any Class V facility. Requirements of the Chapter 3 permit to construct will be included in the underground injection control permit issued under thischapter.

(vi) All permits issued under this chapter, whether individual permits, or general permits, shall be for no more than ten (10) years duration.

(vii) Each permit shall be reviewed by the department at least once every five (5) years for continued validity of all permit conditions and contents. Permits that do not satisfy the requirements of these regulations are subject to modification, revocation and reissuance, or termination pursuant to this chapter.

(viii) Sections of permit applications filed under this chapter which represent engineering work shall be sealed, signed, and dated by a licensed professional engineer as required by Wyoming Statutes, Title 33, Chapter 29.

(ix) Sections of permit applications filed under this chapter which representgeologic work shall be sealed, signed, and dated by a licensed professional geologist as requiredby Wyoming Statutes, Title 33, Chapter 41.

(b) Permit processing procedures applicable to all Class V facilities, individual and general permits.

(i) The director may deny an individual permit for any of the followingreasons:

(A) The application is incomplete;

(B) The project, if constructed and/or operated, will cause violation of applicable state surface or groundwater standards;

(C) The application contains a proposed construction or operation

which does not meet the requirements of this chapter;

(D) The permitted facility would be in conflict with or is in conflict with a state approved local wellhead protection plan, state approved local source water protectionplan, or state approved water quality management plan; or

(E) Other justifiable reasons necessary to carry out the provisions of the Environmental Quality Act.

(ii) If the director intends to deny an individual permit for any reason other than an incomplete or deficient application, a draft permit shall be prepared and public notice issued pursuant to Section 13 of this chapter.

(iii) Permits may be modified, revoked and reissued, or terminated either in response to a petition from any interested person (including the permittee) or upon the administrator's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in Section 5 (b) (vi) of this chapter. All requests shall be in-writing and shall contain facts or reasons supporting the request.

If the administrator decides the petition is not justified, the petitioner shall be sent a brief written response giving the reason for the decision. A request for modification, revocation and reissuance, or termination shall be considered denied if the administrator takes no action within 60 days after receiving the written request. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice and comment. Denials by the administrator may be appealed for hearing to the Environmental Quality Council by a letter-briefly setting forth the relevant facts.

(iv) The administrator may modify a permit when:

(A) Any material or substantial alterations or additions to the facilityoccur after permitting or licensing, which justify the application of permit conditions that are different or absent in the existing permit;

(B) Any modification in the operation of the facility is capable of causing or increasing pollution in excess of applicable standards or permit conditions;

(C) Information warranting modification is discovered after the operation has begun that would have justified the application of different permit conditions at the time of permit issuance;

(D) Regulations or standards upon which the permit was based have changed by promulgation of amended standards or regulations, or by judicial decision after the permit was issued;

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(E) Cause exists for termination, as described in this section, but the department determines that modification is appropriate; or

(F) Modification is necessary to comply with applicable statutes, standards or regulations.

(v) Minor modifications of permits may occur with the consent of the permittee without following the public notice requirements. Minor modifications will become final 20 days from the date of receipt of such notice. For the purposes of this chapter, minor modifications may only:

(A) Correct typographical errors;

(B) Require more frequent monitoring or reporting by the permittee;

(C) Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permitand does not interfere with attainment of the final compliance date requirement;

(D) Allow for a change in ownership or operational control of a facility where the administrator 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 have been submitted to the administrator;

(E) Change quantities or types of fluids injected which are within the capacity of the facility as permitted and, in the judgment of the administrator, would not interfere with the operation of the facility or its ability to meet conditions described in the permitand would not change its classification;

(F) Change construction requirements approved by the administratorpursuant to department rules and regulations provided that any such alteration shall comply withthe requirements of this chapter; or

(G) Amend an abandonment plan.

(vi) The administrator may revoke and reissue or terminate a permit for any of the following reasons:

(A) Noncompliance with terms and conditions of the permit;

(B) Failure in the application or during the issuance process to disclose fully all relevant facts, or misrepresenting any relevant facts at any time; or

(C) A determination that the activity endangers human health or the environment and can only be regulated to acceptable levels by a permit modification or termination.

(vii) The administrator may modify a permit to resolve issues that could lead to the revocation of the permit under Section 5 (b) (vi) of this chapter. The administrator, as part of any notification of intent to terminate a permit, shall order the permittee to proceed with reclamation on a reasonable time period.

If the administrator tentatively decides to modify or revoke and reissue a permit, a draftpermit incorporating the proposed changes shall be prepared. The administrator 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 administrator shall requirethe submission of a new application.

(viii) In a permit modification under Section 5 (b) (iv) of this chapter, 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 and the modified permit shall expire on the date when the original permit would have expired. When a permit is revoked and reissued under this section, the entire permit is reopened as if the permit has expired and is being reissued. When the entire permit is reopened, the modified permit shall be issued for no more than ten (10) years. During any revocation and reissuanceproceeding, the permittee shall comply with all conditions of the existing permit until a new finalpermit is issued.

(ix) Permit modifications, revocations or terminations shall be developed as a draft permit and are subject to the public notice and hearing requirements outlined in Section 13.

(x) Transfer of a permit is allowed only upon approval by the administrator. When a permit transfer occurs pursuant to this section, the permit rights of the previous permitteewill automatically terminate.

(A) The proposed permit holder shall apply in writing as though that person was the original applicant for the permit and shall further agree to be bound by all of the terms and conditions of the permit; and

(B) Transfer will not be allowed if the permittee is in noncompliance with any term and conditions of the permit, unless the transferee agrees to bring the facility back-into compliance with the permit.

(c) Permit conditions.

(i) All individual and general permits issued under this chapter shall containthe following conditions: (A) A requirement that the permittee comply with all conditions of the permit, and any permit noncompliance constitutes a violation of these regulations and is grounds for enforcement action, permit termination, revocation, or modification;

(B) A requirement that if the permittee wishes to continue injection activity after the expiration of the permit, the permittee must apply to the administrator for, and obtain, a new permit;

(C) A stipulation that 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;

(D) A requirement that the permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit;

(E) A requirement that the permittee properly operate and maintain allfacilities and systems of treatment and control which are installed or used by the permittee toachieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding and operator staffing and training, andadequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems onlywhen necessary to achieve compliance with the conditions of the permit;

(F) A stipulation that the filing of a request by the permittee, or at the instigation of the administrator, for a permit modification, revocation, termination, or notification of planned changes or anticipated non-compliance, shall not stay any permit condition;

(G) A stipulation that this permit does not convey any property rightsof any sort, or any exclusive privilege;

(H) A stipulation that the permittee shall furnish to the administrator, within a specified time, any information which the administrator may request to determinewhether cause exists for modifying, revoking and reissuing, or terminating the permit, or todetermine compliance with the permit. The permittee shall also furnish to the administrator, uponrequest, copies of records required to be kept by the permit;

(I) A requirement that the permittee shall allow the administrator, or an authorized representative of the administrator, upon the presentation of credentials, duringnormal working hours, to enter the premises where a regulated facility is located, or whererecords are kept under the conditions of this permit, and inspect the discharge and relatedfacilities, review and copy reports and records required by the permit, collect fluid samples foranalysis, measure and record water levels, and perform any other function authorized by law or regulation;

(J) A requirement that the permittee furnish any information necessary to establish a monitoring program pursuant to Section 11 of this chapter;

(K) A requirement that all samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity, and records of allmonitoring information be retained by the permittee. The monitoring information to be retainedshall be that information stipulated in the monitoring program established pursuant to the criteriain Section 11 of this chapter;

(L) A requirement that all applications, reports, and other information submitted to the administrator contain certifications as required in Section 6 (c) (xii) of this chapter, and be signed by a person who meets the requirements to sign permit applications found in Section 6 (c) (xi), or for routine reports, a duly authorized representative;

(M) A requirement that the permittee give advance notice to the administrator as soon as possible of any planned physical alteration or additions, other than authorized operation and maintenance, to the permitted facility and receive authorization prior to-implementing the proposed alteration or addition;

(N) A requirement that any modification which may result in a violation of a permit condition shall be reported to the administrator, and any modification that will result in a violation of a permit condition shall be reported to the administrator through the submission of a new or amended permit application;

(O) A requirement that any transfer of a permit must first be approved by the administrator, and that no transfer will be approved if the facility is not in compliancewith the existing permit unless the proposed permittee agrees to bring the facility intocompliance;

(P) A requirement that monitoring results shall be reported at the intervals specified elsewhere in the permit;

(Q) A requirement that reports of compliance or non-compliance with, or any progress reports on interim and final requirements contained in any compliance schedule, if one is required by the administrator, shall be submitted no later than 30 days following each schedule date;

(R) A requirement that confirmed noncompliance resulting in the migration of injected fluid into any zone outside of the permitted receiver must be orally reported to the administrator within 24 hours, and a written submission shall be provided within five (5) days of the time the permittee becomes aware of the excursion. The written submission shall

contain:

(I) A description of the noncompliance and its cause;

(II) The period of noncompliance, including exact dates and times, and, if the noncompliance has not been controlled, the anticipated time it is expected to continue; and

(III) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(S) A requirement that the permittee report all instances of noncompliance not already required to be reported under paragraphs (c) (i) (P) through (R) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (c) (i) (R) of this section;

(T) A requirement that in the situation where the permittee becomesaware that it failed to submit any relevant facts in a permit application, or submitted incorrectinformation in a permit application or in any report to the administrator, the permittee shallpromptly submit such facts or information;

(U) A requirement that the injection facility meet construction requirements outlined in Section 10 of this chapter, and that the permittee submit notice of completion of construction to the administrator and allow for inspection of the facility uponcompletion of construction, prior to commencing any injection activity;

(V) A requirement that the permittee notify the administrator at such times as the permit requires before conversion or abandonment of the facility;

(W) A requirement that an abandonment report, detailing the compliance abandonment procedures outlined the original permit application, or describing any deviations from the original plan, be submitted as soon as practicable after abandonment; and

(X) A requirement that injection may not commence until construction

is complete.

(ii) In addition to the conditions required of all permits, the administrator may establish, on a case by case basis, conditions as required for monitoring, schedules of compliance, and such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water.

(d) Records and reports required for general and individual permits.

(i) The permittee shall submit a written report to the administrator of allremedial work concerning the failure of equipment or operational procedures which resulted in aviolation of a permit condition, at the completion of the remedial work.

(ii) Routine periodic reports required by the permit shall be submitted to the administrator within 30 days following the end of the period covered in the report. Reports shall include the following information:

(A) If the permit requires, an accounting of the total volume of injectate for the period covered by the report, the year to date, and the life of the facility to date; and

(B) An analysis of the physical, chemical and other relevant characteristics of the injected fluid.

(iii) For any aborted or curtailed operation, in lieu of an annual report, a complete report shall be submitted within 30 days of complete termination of the discharge or associated activity.

(iv) The permittee shall retain all monitoring records required by the permit for a period of three (3) years following facility closure.

Section 6. Individual Permits.

(a) The operator shall submit an application and obtain a permit prior to the construction, installation, modification or operation of any facility in the following subclasses: 5A3; 5B3; 5B5; 5C1; 5C2; 5C3; 5D1; 5D3; 5D4; 5E3, 5E4 and 5F2 unless the facility is coveredby a general permit. In addition, any facility not authorized under Sections 7 and 8, and operatorsdirected by the administrator to obtain an individual permit, shall obtain an individual permitunder this section.

(b) The operator is responsible to make application for and obtain a permit. Each application must be submitted with all supporting data required in this chapter.

(c) A complete application for a Class V facility individual permit shall include:

(i) A brief description of the nature of the business and the activities to be conducted that require the applicant to obtain a permit under this chapter;

(ii) The name, address and telephone number of the operator, and the operator's ownership status and status as a federal, state, private, public or other entity;

(iii) The name address and telephone number of the facility. Additionally, the location of the facility shall be identified by section, township, range and county.

(iv) A calculation of the area of review, to include:

(A) A calculation to determine the maximum area affected by the injected waste for all Class V facilities constructed or modified after the effective date of these regulations. This calculation determines the total amount of void space around and down gradient from the point of injection and uses accepted groundwater theory to determine the extent of any affected groundwater around the facility.

(B) A Class V area of review shall never be less than the area of potentially impacted groundwater.

(C) All areas of review shall be legally described by township, range and section to the nearest ten (10) acres as described under the general land survey system.

(v) Information about the proposed facility including:

(A) A description of the substances proposed to be discharged, including type, source, and chemical, physical, radiological and toxic characteristics; and

(B) Construction and engineering details in accordance with Section 10 of this chapter and Chapter 11 Water Quality Rules and Regulations.

(vi) Information, including the name, description, depth, geologic structure, faulting, fracturing, lithology, hydrology, and fluid pressure of the receiver and any relevant confining zones. The fracture pressure of the receiver shall be submitted only if the injection isunder pressure into a confined aquifer.

(vii) Water quality information including background water quality data whichwill facilitate the classification of any groundwaters which may be affected by the proposeddischarge. This must include information necessary for the division to classify the receiver and any secondarily affected aquifers under Chapter 8, Wyoming Water Quality Rules and Regulations.

(viii) A topographic and other pertinent maps, extending at least one (1) milebeyond the property boundaries of the facility, but never less than the area of review, depicting:

(A) The facility and each of its intake and discharge structures;

(B) Each well, drywell or subsurface fluid distribution system where fluids from the facility are injected underground;

(C) Other wells, springs, and surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within the area of review; and

(D) Bedrock and surficial geology, geologic structure, and

hydrogeology in the area.

(ix) A list of other relevant permits, whether federal or state, that the facility has been required to obtain, such as construction permits. This includes a statement as to whether or not the facility is within a state approved water quality management plan area, a state approved wellhead protection area or a state approved source water protection area.

(x) Detailed plans for monitoring the volume and chemistry of the discharge, and water quality of selected water wells within the area of review in accordance with Section 11of this chapter;

(xi) All applications for permits, reports, or information to be submitted to the Administrator shall be signed by a responsible officer as follows:

(A) For a corporation - 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.

(B) For a partnership or sole proprietorship -- by a general partner or the proprietor, respectively;

(C) For a municipality, state, federal or other public agency by either the principal executive officer or ranking elected official.

(xii) The application shall contain the following certification by the personsigning the application:

"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."

(d) All data used to complete permit applications shall be kept by the applicant for a minimum of three (3) years from the date of signing.

(e) The applicant shall submit five (5) copies of the permit application to the division.

(f) Within 60 days of submission of the application, the administrator shall make an initial determination of completeness. An application shall be determined complete when the administrator receives an application and any supplemental information necessary to determine compliance with these regulations.

(g) Resubmittal of information by an applicant on an incomplete application will begin the process described in paragraph (f) of this section.

(h) During any 60 day review period where an application is determined complete, the administrator shall prepare a draft permit for issuance or denial, prepare a fact sheet on the proposed operation, and provide public notice pursuant to Section 13.

(i) A denial of the application by the department is appealable by the applicant to the Environmental Quality Council in accordance with the Rules of Practice and Procedure. Requests for appeal must be in writing, state the reasons for appeal, and be made to both the director and the chairman of the Environmental Quality Council.

Section 7. General Permits.

(a) The department may develop and issue general permits pursuant to theseregulations which cover Class V facilities for the following subclasses: 5A1, 5A2, 5B1, 5C4, 5C5, 5C6, 5D1, 5D2, 5E1, 5E3, and 5E5. The administrator may issue general permits in othercategories as the need arises. 5E3 facilities which were permitted as small wastewater systemsprior to April 14, 1998 are permitted by rule under Section 8 (c) (v) and are not covered by thissection. Facilities in these subclasses which have already been issued individual permits under-Chapter 9 or Chapter 16, Water Quality Rules and Regulations may continue under these permitsuntil they are terminated, revoked and reissued, or canceled at the request of the operator. Coverage shall not be extended to any facility if such a facility would be in violation of any stateapproved source water protection area. Facilities in these subclasses not presently covered by an individual permit will be authorized by permit by rule until the general permit for the specific subclass is issued. The operator of a facility listed in this section shall have two (2) years afterthe date of issuance of the general permit to:

(i) Obtain coverage under the issued general permit;

(ii) Submit an application and receive an individual permit under this chapter;

(iii) Continue to be covered by a permit issued pursuant to Chapter 9 of these regulations; or

(iv) Abandon the facility in accordance with Section 12.

(b) If a general permit has been issued by the department, an operator of a facility must register the facility with the department and sign a statement agreeing to be bound by the conditions of that permit. Failure to register for general permit coverage, when available, is the same as operation of a facility without a permit, unless an individual permit has been obtained.

(c) In order to be covered by a general permit, an operator must submit all information required in Section 6 (c) (i), (ii), and (iii), plus any additional information required to be submitted or reported in the issued general permit. The submittal requesting coverage by a general permit shall be signed by a person meeting the same signatory requirements of Section 6 (c) (xi) and shall be certified in accordance with Section 6 (c) (xii). Facilities will be covered by general permits as soon as the department has issued a written statement of acceptance to allow the construction and operation of the facility under the general permit. The department will issue an authorization accepting the operation for coverage under the general permit or denying coverage under the general permit, within 60 days of the date when the operator-requested coverage. Requests for coverage under a general permit, which do not meet the requirements for general permit pursuant to this chapter, may be denied by the administrator.

(d) Once issued, general permits must remain the same for all persons covered by the permit. A general permit may be modified in accordance with Section 5 (b) (iv). Any such modification must cover all persons covered by the permit.

(e) General permits shall also include:

(i) The permit conditions required in Section 5 (c) (i);

(ii) A requirement to submit information necessary for the department to make an assessment of the vulnerability of the environment and public health to the injection from the Class V well. Such information may include the depth to the groundwater table at the disposalfield, groundwater quality or existing available information on the lithology, geology, hydrogeology and the location of the following items within 1/4 mile of the Class V facility:

(A) All water supply wells and the uses of each respective well;

(B) All property boundaries and land uses;

(C) All surface water bodies or springs; and

(D) All known sources of groundwater contamination or pollution.

(E) All state approved source water protection areas, wellhead protection areas, 201 service areas, or water quality management plan areas.

(iii) Depth below the ground surface for the point of injection and for the wellscreening in all wells within the area of review;

(iv) A requirement for facilities constructed after April 14, 1998 that the operator certifies the facility will meet the design, construction, and operational performance requirements in Section 10 for the specific subclass of facility.

(v) A requirement that the operator submit the disposal capacity of the facilityin gallons per day as calculated using Table 1, Chapter 25. Some facilities may be required to monitor the volume of injectate actually disposed of, or the volume of water used in the areaserved by the Class V facility.

(f) The administrator may require any operator covered by a general permit to obtain an individual permit for the facility when a review of the information submitted under thissection indicates that the general permit would not be protective of groundwater in that specificcase. Any operator covered by a general permit may at any time apply for and obtain anindividual permit for the same facility. Once issued, an individual permit will replace coverageby the general permit for that facility.

(g) General permits will contain the subclass of injection facility covered, the geographic area covered, the general nature of the fluids to be discharged, and the location of the receiver where the discharge will be allowed. General permits will follow the public notice requirements of Section 13 of this chapter. During each five (5) year review of a general permit, a public notice shall be issued by the department stating that a five (5) year review has been done, listing the facilities covered by a general permit, and stating where the public may obtain a copy of the permit.

(h) Operators of new injection facilities who believe that their facility may be coveredby a general permit in class 5C6 facilities may apply for coverage under the general permit forthat subclass. If not accepted for coverage under this general permit, the operator shall apply for an individual permit under subclass 5C3.

(i) Operators of new injection facilities who believe that their facility may be covered by a general permit in class 5E5 facilities may apply for coverage under the general permit for that subclass. If not accepted for coverage under this general permit, the operator shall apply for an individual permit under subclass 5E3.

(j) In order to obtain coverage under the general permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility.

(k) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under thissection may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health.

(l) General permits for Class 5C5 coal bed methane injection facilities shall require that:

(i) Each operator provide background information showing that the class of use under Chapter 8 for each injection zone will not be violated by the injection of coal bedmethane produced water;

(ii) A valid pressure falloff curve be recorded for each well within one (1) year of the start of injection into that well; and

(iii) The pressure of injection be continuously recorded and that the pressure of injection be limited to no more than the fracture pressure of the receiving formation. This requirement can be met by assuming that the fracture gradient of the receiver is .70 psi/foot of depth and using the depth of the topmost perforation in making the calculation.

Section 8. Permit by Rule. The types of Class V facilities listed in this sectionrepresent minimal threats to pollute groundwater. The referenced facilities which meet the requirements of this section are permitted by rule. A permit by rule requires the owner or operator to submit information contained in this section before construction, installation or modification of a facility and to meet the performance standards contained in this section and in Section 10 of this Chapter. No facility shall be located within a state approved local wellhead protection area, state approved source water protection area or a state approved water quality management area which is in conflict with any of those plans.

(a) A facility permitted by rule under this section shall meet the following conditions:

(i) In addition to the information listed in Section 6 (c) (i), (ii) and (iii) of this chapter, the operator shall submit the following inventory information to the department prior to construction for facilities constructed after the effective date of these regulations and within one (1) year of the effective date of these regulations for existing facilities: (Facilities which are already registered with the Underground Injection Control Program, or which were issued a permit under Chapters 3, 9 or 16, need not send a new registration, but may be asked for updated information from time to time.)

(A) The location of the facility, either a complete legal description or

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latitude and longitude preferably within a (ten) 10 meter accuracy;

(B) Type and general description of the quality of the injected fluid;

(C) The disposal capacity of the facility in gallons per day;

(D) Depth of injection zone; and

(E) Whether or not the facility is operating, temporarily abandoned, or permanently abandoned.

(ii) The facility shall be designed, constructed and operated to protect groundwater standards contained in Chapter 8, Water Quality Rules and Regulations and performance standards found in this section and in Section 10 of this chapter;

(iii) Chemical, bacteriological, radiological additives, hazardous substances or toxic substances additives shall not be mixed in the injected fluid at any time during use of the water, prior to injection or during injection; and

(iv) Any violation of the requirements of these regulations by a Class V facility operator permitted by rule shall be reported to the department by telephone within twenty four (24) hours of the time when the operator becomes aware of the violation. A written report shall be filed by the operator with the department within seven (7) days detailing steps which have been taken and will be taken to eliminate the violation.

(b) All facilities, referenced in this section, which do not meet the requirements of subsection (a) shall obtain an individual permit under this chapter. For facilities constructed or modified after the effective date of these regulations requiring an individual permit, the owner or operator shall obtain the permit prior to any construction.

(c) The following classes of facilities are permitted by rule under this section:

(i) 5B2 facilities, except any facility which injects wastewater or containspolluted groundwater or surface water in concentrations above the receiver use standards contained in Chapter 8, Water Quality Rules and Regulations;

(ii) After the effective date of these regulations, coal bed methane operators cannot be covered by 5B2 aquifer recharge rule authorizations. All coal bed methane disposal-systems must be covered by a general permit or an individual permit under this chapter if they inject into a USDW, or a Class II permit issued by the Wyoming Oil and Gas Conservation-Commission if they inject into a Class VI aquifer;

(iii) 5B4 facilities, provided that the water injected will not cause a groundwater standards violation under Chapter 8, Water Quality Rules and Regulations;

(iv) 5B6 and 5B7 facilities;

(v) 5D5 facilities, except those facilities receiving water polluted above the receiving groundwater class of use standards contained in Chapter 8, Water Quality Rules and Regulations and facilities injecting swimming pool wastes into a Class I groundwater;

(vi) 5E3 facilities which were originally permitted under a small wastewatersystem permit issued by the Department of Environmental Quality or a local governmentdelegated the authority to issue small wastewater system permits, located within any five (5)acres of land where the cumulative maximum peak daily wastewater flow injected from othersmall wastewater system permitted facilities under the same ownership would exceed 2,000gallons per day; and

(vii) 5F1 facilities, provided that information contained in Section 10 (m) of this chapter is submitted.

(d) A permit by rule where the operator has provided the necessary information shallbe valid until the facility is properly closed pursuant to these regulations or until a permit has been issued or denied under this chapter.

(e) The administrator may request information from the owner or operator of a wellor facility permitted by rule to determine whether the facility may be causing a violation ofgroundwater use standards in Chapter 8, Water Quality Rules and Regulations, the constructionstandards found in this chapter and in Chapter 11, Water Quality Rules and Regulations, or anyother requirements of this chapter. Such information may include, but is not limited to:

(i) Analysis of injected fluids and periodic submission of reports of such monitoring;

(ii) Groundwater monitoring and periodic submission of reports of such

monitoring;

(iii) Description of receiving strata; and

(iv) Well locations and down gradient use of groundwater.

(f) Any request for information under this section shall be made in writing and include a brief statement of the reasons for requesting the information. An owner or operator-shall submit the information within the time frames provided in the request for information.

(g) The administrator may require any operator permitted by rule to obtain an individual permit for the facility when a review of the information submitted under Section 8 (e) of this chapter indicates that the permit by rule would not be protective of groundwater in that

specific case.

Section 9. Prohibitions.

(a) In addition to the requirements in W.S. 35-11-301 (a), no person shall:

(i) Conduct any authorized injection activity in a manner that results in a violation of any permit condition or representations made in the application, the request for coverage under the general permit, individual permit, or permit by rule. A permit condition supersedes any application content;

(ii) Discharge to any zone except the authorized discharge zone as described in the permit; or

(iii) Construct, install, modify or improve an authorized injection facility except in compliance with the permit requirements.

(b) The construction of any Class 5C4 facility after the effective date of these regulations is prohibited.

(c) No person shall inject any hazardous waste which has been banned from landdisposal pursuant to Chapter 13, Wyoming Hazardous Waste Rules and Regulations unless thedisposal conforms to that chapter.

(d) No drainage facility, subclass 5D1 through 5D5 shall be constructed so as todirectly receive any waste other than natural precipitation or natural groundwater unlesspermitted under an individual permit.

(e) No heating and cooling facility, subclass 5A1 through 5A3, shall be constructed so as to receive any waste other than cooling water. No corrosion inhibitors, scale inhibitors, biocides, antifreeze agents, salts, or refrigerants shall be added to the water prior to injection.

(f) No abandoned drinking water well shall be used as a disposal well unless it can be demonstrated that the waste being disposed of will leave the class of use of the affected groundwater unchanged. The class of use referred to is determined under Water Quality Rules and Regulations, Chapter 8 Quality Standards for Wyoming Ground Waters.

(g) No wastewater produced by electric power generation from geothermal fluidsshall be disposed of in any Class V injection facility. Such wells are Class I injection wells and are covered by Chapter 13, Water Quality Rules and Regulations.

(h) No wastewater produced by recovery of brines and extraction of halogens shall be disposed of in any Class V injection facility. Such wells are Class I injection wells and are covered by Chapter 13, Water Quality Rules and Regulations.

(i) No person shall construct and/or operate any cesspool after April 14, 1998. No Class V facility which receives domestic sewage shall be constructed and/or operated after April 14, 1998 unless the waste is first treated in a septic tank, or other pre-treatment device. Prior to closure of any cesspool, the operator shall notify the administrator 30 days in advance.

(j) The operation of any Class V septic system with liquid waste visible on the ground surface shall be considered a failure of the system and a violation of these regulations.

(k) An operator of a facility which is authorized by rule is prohibited from injectioninto the facility:

(i) Upon failure to submit inventory information prior to construction for facilities constructed after April 14, 1999; and

(ii) Upon failure to comply with a request for information under Section 8 (e) of this chapter.

(1) Pumping domestic sewage out of any Class V facility for any use other thandisposal to an approved facility is prohibited.

Section 10. Construction and Operation Standards for Class V Facilities.

(a) All Class V facilities must meet or exceed the design standards of these regulations including Part B of Chapter 11 and Chapter 26, Water Quality Rules and Regulations.

(b) All Class V facilities shall be constructed to permit the use of testing devices, and allow monitoring of injected fluid quality. Class V facilities shall be constructed to provide for metering of the injectate volume if the individual or general permit requires such metering.

(c) All heating and cooling facilities (5A1, 5A2 and 5A3) shall include:

(i) Provision for the use of non-toxic circulating medium in closed loopsystems or an operating system which cannot be made to operate with fluid leaking;

(ii) Provision for operations without the use of corrosion inhibitors, biocides, or other toxic additives in open loop systems;

(iii) Provisions to control the total dissolved solids of waters injected into openloop systems to the class of use standard;

(iv) Provisions for automatic shutdown of the system in the event of a fluid

loss from a closed loop system or a loss of any product to an open loop system;

(v) Provisions to ensure that injected water does not come to the surface or flood any subsurface structure in the immediate vicinity of the injection system; and

(vi) Provisions to ensure that known groundwater contamination is not spread by the direct injection of contaminated water or by movement of contamination from one zone toanother caused indirectly by the injection.

(d) All mining, sand and backfill facilities (5B1) shall include:

(i) Provision for insuring mechanical integrity of any well designed to remainin service for more than 60 days;

(ii) Provision for controlling the type of material injected and to insure that nohazardous waste is injected;

(iii) Provision for leak detection in all surface piping;

(iv) Provision for insuring that the backfill remains within the permitted area of injection; and

(v) Provision to insure that the injection does not cause a groundwater standards violation for the class of use of the receiver.

(e) All beneficial use injection facilities (5B2, 5B3, 5B4, 5B5, 5B6, and 5B7) shallinclude:

(i) Plans to insure that contaminants do not enter the injection stream;

(ii) Information to show that the injection will accomplish the desired goal stated in the application; and

(iii) Target restoration values for the groundwater in the affected area beingremediated for 5B5 facilities.

(f) All commercial and industrial Class V facilities (5C1, 5C2, 5C3 and 5C4) shall:

(i) Include a pre-treatment plan to insure that toxic materials (substances) are not discharged to the groundwater at concentrations higher than the class of use standards found in Chapter 8, Wyoming Water Quality Rules and Regulations or any primary drinking waterstandard found in 40 CFR 141 (as of June 6, 2001), whichever is more stringent;

(ii) Conform to applicable construction standards found in Chapter 25,

Wyoming Water Quality Rules and Regulations; and

(iii) Include, at a minimum, annual sampling of the waste injected as part of the monitoring plan for the facility.

(g) When a 5C3 facility receiving slaughter house wastes can demonstrate that noviolations of groundwater standards will occur, the facility shall be:

(i) Designed for the following minimum disposal capacities:

(A) 300 gallons per day for plant cleanup plus;

(B) 25 gallons per head of cattle slaughter capacity;

(C) 40 gallons per head of hog slaughter capacity;

(D) 35 gallons per head of sheep slaughter capacity; and

(E) Appropriate capacity for any other species slaughtered on a per

head basis.

(ii) Designed to prevent the disposal of blood and viscera into the septicsystem except as a small incidental portion of the total flow. Blood and viscera shall be sent toa rendering plant or other approved disposal or recycling system.

(iii) A grease trap shall be provided ahead of the septic system with a total capacity equal to one half of the total required capacity of the septic tank.

(h) All drainage facilities (those with the code number 5D on Appendix A) shall-include:

(i) A plan to preclude the inadvertent introduction of contaminants into the wastewater stream;

(ii) An operations and maintenance manual detailing maintenance required, reporting requirements for known spills affecting the facility, and steps to be taken to prevent the introduction of contaminants in the event of a spill within the area served by the facility; and

(iii) Maps showing the area where runoff will be transported to the drainage facility.

(i) All agricultural drainage facilities (5D1) injecting surface runoff from animalwaste piles, feedlots, or dairy operations for which a demonstration can be made that the groundwater standards can be met, shall be designed for treatment in a septic tank, lagoon, or other treatment technology prior to injection. The following requirements apply to thesesystems:

(i) The treatment facility shall be sized for the strength and solids content of the wastewater to be treated;

(ii) The flow capacity requirements shall include all runoff from operations within the collection area and all runoff from precipitation up to and including a 25 year, 24 hour design storm; and

(iii) The flow capacity requirements for drainage from a fully enclosed dairy or feeding operation shall be as follows:

(A) 20 gallons per day per animal up to 50 pounds;

(B) 100 gallons per day per animal up to 500 pounds; and

(C) 200 gallons per day per animal over 500 pounds.

(iv) The subsurface fluid distribution system shall be designed in accordancewith general design requirements found in Chapter 25.

(j) All sewage disposal (5E) facilities shall:

(i) Conform to applicable construction standards found in Chapter 25, Wyoming Water Quality Rules and Regulations;

(ii) Comply with applicable sections of Chapter 11, Parts B and C, Water Quality Rules and Regulations for all piping systems or storage facilities feeding existing or Class V facilities constructed after the effective date of these regulations; and

(iii) Be designed for the maximum daily peak flow determined from Table 1 of Chapter 25, Water Quality Rules and Regulations. In addition, whenever multiple points of discharge under one owner within any five (5) acres of land have a design capacity under Chapter 25 to inject more than a total of 2,000 gallons per day of domestic sewage, they shall be permitted under this chapter in the same manner that they would be permitted if all the wastewere delivered to a single point of discharge.

(k) All aquiculture return flow facilities (5E1) shall include pretreatment in a lagoon, septic tank, or oxidation ditch sized for the strength and volume of the wastes to be disposed of.

(1) All domestic wastewater treatment plant disposal facilities (5E4) shall also include:

(i) Provisions for filtering of the waste and disinfection of the injectate;

(ii) An environmental monitoring program, including pre-discharge, operational monitoring, and post discharge monitoring;

(iii) Monitoring of the injectate on at least a weekly basis for Nitrate as N, Ammonia as N, and coliform bacteria;

(iv) Design to prevent groundwater standards violations as defined by Chapter 8, Water Quality Rules and Regulations;

(v) The points of compliance shall be at down gradient monitor wells installed on land owned by the same utility that operates the treatment plant and injection facilitieswhenever the point of injection is not the point of compliance; and

(vi) Requirements for the submission, approval and conformance with an operational and maintenance manual.

(m) All cathodic protection facilities (5F1) shall include:

(i) A seal of sodium bentonite or sodium bentonite grout is required from the surface to a minimum depth of three (3) feet. A second sodium bentonite or sodium bentonite grout seal is required for a minimum thickness of three (3) feet, just above the top of the cokebreeze. After the sodium bentonite has been placed in the hole, it shall be hydrated to insure a proper seal. The remainder of the hole between these seals may be backfilled with cuttings. The above seals may be placed directly in the hole or may be placed outside of a surface pipe of sufficient length to reach down to the anodes. If a surface pipe is used, no seals are required inside the pipe except during final abandonment.

(ii) All aquifers encountered while drilling shall be isolated from one another using a bentonite seal of at least two (2) feet in vertical dimension.

(iii) The coke breeze shall be a high quality product containing a minimum of leachable metals or organic pollutants. The coke breeze shall not discharge any pollutant which will cause a groundwater standard violation.

(iv) Surface access to the anode shall be kept sealed and locked at all timeswhen the anode is not actually being serviced.

(v) Each separate aquifer penetrated shall require a separate breather pipe. Each aquifer shall remain in hydrologic isolation from each other if they were isolated prior toinstallation.

(vi) If it becomes necessary to wet any anode installed under this section, onlywater from a public water supply or water meeting all of the standards for Class I groundwater of the state shall be used unless the division is first supplied with an analyses of the water for approval.

(vii) Each 5F1 facility shall be marked in the field with a sign showing the name, address, and telephone number of the operator who installed the system. Upon-abandonment, such markers shall remain in place.

(viii) A 5F1 facility shall not be installed within 200 feet of any pipeline, wellhead, storage tank, mud pit or other potential source of pollution unless the operator's surface rights prevent this requirement from being met.

(n) Except for beneficial use facilities, Class V facilities shall not be located within 200 feet of any active public water supply well, regardless of whether or not the well is completed in the same aquifer. This minimum distance may increase or the existence of a Class-V facility may be prohibited within a state approved wellhead protection area, source water-protection area or water quality management plan area.

(o) Class 5C6 and 5E5 facilities shall meet the construction standards and separation distances appropriate for the design flow as shown in Chapter 25.

(p) Class 5C5 coal bed methane injection facilities shall:

basis.

(i) Provide for metering of water injected into each well;

(ii) Be constructed to insure that the water injected reaches the intended receiver and only the intended receiver. The intended receiver shall be identified by geologic-formation and/or member name as well as the depth of that receiver below ground surface;

(iii) Provide for disinfection of the water injected if analysis shows that coliform bacteria, sulfate reducing bacteria or iron fixing bacteria are present in the water as pumped from the coal seam. Treatment methods must be methods that would be appropriate for treating water in a public water supply system;

(iv) Provide for injection at a pressure of less than the fracture pressure of the receiver; and

(v) Provide for monitoring of the quality of the injected water on a periodic

(vi) Provide notification of the intent to obtain coverage under the general permit to all surface owners, mineral owners or water rights owners, oil and gas owners and the owners of coal leases within one-half mile of the proposed point of injection.

(vii) Provide for pressure testing of the casing before injection and at least once every five (5) years thereafter. The casing shall be pressure tested up to an indicated surface pressure of 700 psi and held for 15 minutes. A passing result is indicated if the casing still has 690 psi at the end of the 15 minute shut in time.

Section 11. Environmental Monitoring Program.

(a) The monitoring program shall be adequate to ensure knowledge of migration and behavior of the discharge in the receiver.

(i) Monitoring may be required for any circumstance where groundwaters of the state could be affected by a Class V facility.

(ii) The extent and design of a monitoring system shall be sufficient to dealwith the pollution potential of the proposed discharge.

(iii) Before construction or installation of a Class V facility, a monitoring program, when required, shall be adequate to establish baseline conditions of the receiver.

(b) The monitoring program shall consist of any or all of the following:

(i) Pre-discharge or pre-operational monitoring;

- (ii) Operational monitoring;
- (iii) Post-discharge or post-operational monitoring;
- (iv) Record keeping and reporting;

(v) Such additional requirements established by the administrator to meet the purposes of the Environmental Quality Act and these regulations.

(c) Each monitoring program shall include maps and cross-sections, where appropriate, showing the location, lithology, and screening interval of each monitoring site.

(d) The operator is responsible for properly installing, operating, maintaining and removing all necessary monitoring equipment.

(e) The operator shall develop and follow a written waste analysis plan that describesthe procedures to be carried out to obtain detailed chemical and physical analyses of arepresentative samples of the waste, including quality assurance procedures to be used. Onceapproved by the department, the operator shall not deviate from the plan without filing anamended plan and obtaining department approval for that amended plan. At a minimum, any plan shall include:

(i) The parameters for which the waste will be analyzed, the rationale for the

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selection of these parameters, and the test methods to be used to test for these parameters; and

(ii) The sampling method that will be used to obtain a representative sample of the waste.

(iii) The operator shall repeat the analysis of the injected wastes in the manner and on the schedule described in the waste analysis plan or when operating changes occur that may significantly alter the characteristics of the waste stream.

(f) All Class V permits shall contain a point of compliance. The point of compliance shall be the point of injection or specific monitor wells located down gradient of the injection facilities.

(i) For facilities where the point of compliance is the point of injection, the fluid to be injected shall be limited to the class of use standards for the receiver as found in Chapter 8 of these regulations or any primary drinking water standard found in 40 CFR 141, (as of June 6, 2001) whichever is more stringent. The permittee may be required to maintain monitor wells in the vicinity of the discharge for the purpose of monitoring flow direction and monitoring groundwater quality in the event of non-compliance with the permit.

(ii) For facilities where the point of compliance is at one or more downgradient monitor wells, the department shall establish permit limitations at the monitor well(s) consistent with the class of use of the receiver or any secondarily affected aquifer or surfacewater. Where necessary to protect existing or future uses, permit limitations may be establishedat the point of compliance which are more stringent than the class of use standard.

(iii) Facilities where subsurface treatment is anticipated may be required tomonitor the injected fluid at the point of injection. Permit limits may be established at the pointof injection which exceed the class of use standard for the affected aquifer, provided that a demonstration is made showing that a class of use standards violation will not occur at a point of compliance downgradient from the point of injection. Permit limits of this nature are intended to provide early warning of possible non-compliance at the point of compliance.

(g) Procedures and methods for sample collection and analyses shall be implemented by the permittee to ensure that the samples are representative of the groundwater, water, or wastes being sampled.

(h) Sample collection of groundwater shall be of such frequency and of such variety (season, time, location, depth, etc.) to properly describe the groundwater, and shall be accomplished by the methods and procedures described in the U.S. Environmental Protection Agencymanual <u>RCRA Groundwater Monitoring Technical Enforcement Guidance Document,</u> <u>September, 1986, unless alternate methods and procedures are approved by the administrator.</u>

(i) Analysis of all samples shall be accomplished pursuant to Chapter 8, Water

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Quality Rules and Regulations, Sections 7 and 8.

Section 12. Abandonment of Class V Facilities.

(a) After the effective date of these regulations, Class V facilities may be abandoned in place if the following conditions are met and if it can be demonstrated to the satisfaction of the administrator that:

(i) No hazardous waste has ever been discharged through the facility;

(ii) No radioactive waste has ever been discharged through the facility;

(iii) All piping allowing for the discharge has either been removed or the ends of the piping have been plugged in such a way that the plug is permanent and will not allow for a discharge; and

(iv) All accumulated sludges are removed from any septic tanks, holdingtanks, lift stations, or other waste handling structures prior to abandonment;

(b) Facilities which cannot demonstrate compliance with subsection (a) (i) or (a) (ii) of this section, may be abandoned in place if:

(i) Tests are run on sludges accumulated in the septic tanks, holding tanks, liftstations, or other waste handling structures which shows that none of these materials containcharacteristic hazardous waste or radioactive waste;

(ii) Monitoring of the groundwater in the immediate area of the facility showsthat there are no toxic materials (substances) present in the groundwater at levels higher than class of use standards, which are present as a result of the injection; or

(iii) Some other method is determined to be acceptable to the administratorwhich demonstrates compliance with Chapter 8 of these regulations and prevents the movementof fluid containing any contaminant into an underground source of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water standard foundin 40 CFR 141 (as of June 6, 2001).

(c) Facilities which cannot make the demonstrations required under either subsection (a) or (b) of this section shall be excavated to the point where contamination is no longer visible in the soil. At that point, samples shall be taken of the soil for all hazardous constituents which may have been discharged through the system. Materials excavated shall be removed from the site for disposal under approval of the Solid and Hazardous Waste Management Division.

(d) Cathodic protection (5F1) facilities will be considered to have made the demonstrations required under subsections (a) and (b) if no waste has been disposed of into the

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facility. After they have fulfilled their useful purpose, they shall be abandoned by filling allbreather pipes with an impervious material and removing all surface installations down to a depth of three (3) feet. All anodes where the construction included a surface casing shall alsohave the surface casing cut off three (3) feet below grade and a plug or cap shall be installed on the surface casing. It is not necessary to remove the coke breeze, anodes, and seals during abandonment. The administrator may approve other alternatives for abandonment if they provide adequate environmental protection.

(e) Prior to abandoning any class 5C4 automotive waste disposal facility, the operator shall provide 30 days notice to the administrator.

Section 13. Public Participation, Public Notice and Public Hearing Requirements.

(a) Public notice is not required for minor modifications as described by Section 5 (b) (v) of this chapter or for a permit denial where the application is determined incomplete.

(b) Public notice is not required for any facility permitted by rule or for any facility covered under general permit. The department shall issue one public notice creating the general permit and then notice at each subsequent five (5) year review.

(c) The administrator shall give public notice if a draft permit has been prepared or a hearing has been scheduled.

(d) Public notice of the preparation of a draft permit shall allow at least 30 days forpublic comment. 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 draftpermit and the two notices may be combined.

(e) Public notice shall be given by:

(i) Mailing a copy of the notice to the following persons:

(A) The applicant, by certified or registered mail. For general permitsthis includes all persons registered as operators of facilities which the department believes will be covered by the general permit;

(B) The U.S. Environmental Protection Agency;

(C) Wyoming Game and Fish Department;

(D) Wyoming State Engineer;

(E) State Historical Preservation Officer;

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(F) Persons on the mailing list developed by including those who request in writing to be on the list and soliciting persons for "area lists" from participants in proceedings in that area; and

(G) Any unit of local government having jurisdiction over the areawhere the facility is proposed to be located.

(ii) Publication of the notice in a newspaper of general circulation in the location of the facility or operation; and

(iii) At the discretion of the administrator, any other method reasonably expected 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.

(f) All public notices issued under this chapter shall contain the following minimum information:

(i) Name and address of the department;

(ii) Name and address of permittee or permit applicant, and, if different, of the facility or activity regulated by the permit. For general permits, this includes a list of existing facilities and the location of each facility which will be covered by the general permit. If new facilities may be covered under a general permit as they are constructed, then that fact will also be stated;

(iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit. For general permits a generic statement of the type of facility to be covered is all that is required;

(iv) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit, as the case may be, statement of basis or fact sheet, and the application;

(v) A brief description of comment procedures, procedures to request a hearing, and other procedures which the public may use to participate in the final permit decision; and

(vi) Any additional information considered necessary and proper.

(g) In addition to the information required in (f) of this section, any notice for publichearing shall contain the following:

(i) Reference to the date of previous public notices relating to the permit;

(ii) Date, time and place of hearing; and

(iii) A brief description of the nature and purpose of the hearing, includingapplicable rules and procedures.

(h) The department shall provide an opportunity for the applicant, permittee, or any interested person to submit written comments regarding any aspect of a permit or to request a public hearing.

(i) All information received on or with the permit application shall be made available to the public for inspection and copying except such information as has been determined to constitute trade secrets or confidential information pursuant to W.S. 35-11-1101.

(j) During the public comment period, any interested person may submit writtencomments on the draft permit and may request a public hearing. Requests for public hearingsmust be made in writing to the administrator and shall state the reasons for the request.

(k) The administrator shall hold a hearing whenever the administrator finds, on the basis of requests, a significant degree of public interest in a draft permit. The administrator has the discretion to hold a hearing whenever such a hearing may clarify issues involved in a permit-decision.

(1) The public comment period shall automatically extend to the close of any publichearing. The administrator may also extend the comment period by so stating at the publichearing.

(m) The director shall render a decision on the draft permit within 30 days after the completion of the comment period if no hearing is requested. If a hearing is held, the director shall make a decision on any department hearing as soon as practicable after receipt of the transcript or after the expiration of the time set to receive written comments.

(n) At the time a final decision is issued, the department shall respond, in writing, to those comments received during the public comment period or comments received during the allotted time for a hearing held by the department. This response shall:

(i) Specify any changes that have been made to the permit; and

(ii) Briefly describe and respond to all comments voicing a legitimate regulatory concern that is within the authority of the department to regulate.

(o) The response to comments shall also be available to the public.

(p) Requests for a contested case hearing on a permit issuance, denial, revocation,

termination, or any other final department action appealable to the Council, shall be made in writing to the chairman of the Environmental Quality Council and the director and state the grounds for the request pursuant to the Wyoming Department of Environmental Quality Rules of Practice and Procedure.

APPENDIX A SUBCLASSES OF CLASS V FACILITIES

SUBCLASS	DESCRIPTION
	HEATING AND COOLING FACILITIES
5A1	Direct Heat Reinjection Facilities - Reinject geothermal fluids used to- provide direct heat for large buildings, developments or aquiculture facilities.
5A2	Heat Pump/Air Conditioner Return Flow Facilities – Reinject groundwater used to heat or cool a building in a ground based heat pump system, or used to inject heat only using a closed loop heat pump system.
5A3	Cooling Water Return Flow Facilities - Receive non-contact cooling water from industrial processes, both open and closed loop processes.
	BENEFICIAL USE INJECTION FACILITIES
5B1	<u>Mining, Sand or Backfill Facilities - Used to inject a fluid mixture of</u> sand, cement, fly ash used as a pozzalin, or mill tailings into mined out portions of underground mines.
5B2	Aquifer Recharge Facilities – Receive water specifically for storage of water underground. – Must be coupled with the ability to withdraw-stored water at a later date for beneficial use. – Coal bed methane-operators cannot dispose of their produced water in class 5B2 injection wells after the effective date of these rules.
5B3	Saline Water Intrusion Barrier Facilities - Receive fresh water to- prevent the continued migration of saline water into a fresh water aquifer. Includes projects installed to control contaminant plumes by- injection of clean water.
5B4	Subsidence Control Facilities - Receive fresh water for the purpose of controlling subsidence caused by an overdraft of water, oil or natural gas.
5B5	Facilities which inject fluids and are used to prevent, control or remediate aquifer pollution, which are not owned or controlled by the Department of Environmental Quality. All 5B5 facilities are covered under Article 16 of the Environmental Quality Act.

SUBCLASS	DESCRIPTION
5B6	Department Controlled Facilities - Facilities which inject fluids and are
	used to prevent, control or remediate pollution, remediate subsiding
	mine sites, or produce other beneficial results which are owned or
	controlled by the Department of Environmental Quality. These
	facilities include but are not limited to, facilities under the supervision
	of Water Quality Division's Underground Storage Tank Program,
	facilities under the control and direction of the Abandoned Mined
	Lands Program, and facilities under the supervision of the Solid and
	Hazardous Waste Management Division. Control may be exercised
	through ownership, operation, or by administrative orders, stipulated
	settlements, consent decrees or other legal methods which result in
	control of a facility by the department.
5B7	Air sparging facilities - Facilities used to inject only air for the purpose
	of either encouraging microbial breakdown of hydrocarbons or
	removing of volatile chemicals by vapor extraction.
	COMMERCIAL AND INDUSTRIAL FACILITIES
5C1	Air Scrubber Waste Disposal Facilities - Inject wastes from air
	scrubbers used to remove sulphur, fly ash, or other contaminants.
5C2	Water Treatment Brine Disposal Facilities - Receive brine from water
	softening or other water treatment.
5C3	- Industrial Process Water and Waste Disposal Facilities - Receive
	wastes generated by industrial and commercial processes. Examples
	include but are not limited to wastes from car washing, taxidermy,
	metal plating, printing, silk screening, refining, slaughter houses, and
	chemical manufacturing companies.
5C 4	Automotive Waste Disposal Facilities Inject waste from floor drains
	or sinks where repair work is done on machinery of any description.
5C5	Coal Bed Methane Injection Facilities - Inject groundwater produced
	in the process of coal bed methane extraction into a receiving aquifer
	containing water of the same or lower class of use.
5C6	Small Commercial Disposal Systems - Inject wastewater which is of
	similar quality to domestic sewage which does not technically meet the
	definition of domestic sewage, in quantities of less than 2,000 gallons-
	per day.

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SUBCLASS	DESCRIPTION
	DRAINAGE FACILITIES
5D1	Agricultural Drainage Facilities Receive irrigation tailwaters, other field drainage, animal yard, feedlot, or dairy runoff, and other agricultural wastewater.
5D2	Storm Water Drainage Facilities - Receive storm water runoff from paved areas, including parking lots, streets, residential subdivisions, building roofs, highways, etc.
5D3	Improved Sinkholes – Receive storm water runoff from developments located in karst topographic areas.
5D4	 Industrial Drainage Facilities – Receive storm runoff from areas- susceptible to spills, leaks, and other chemical discharges.
5D5	Special Drainage Facilities - Receive water from sources other than direct precipitation. Examples of this type include landslide control- drainage facilities, potable water tank overflow drainage facilities, swimming pool drainage facilities, and lake level control drainage facilities.
	SEWAGE DISPOSAL FACILITIES
5E1	Aquaculture Return Flow Facilities - Receive injectate from aquaculture operations.
5E2	Untreated Domestic sewage Disposal Facilities – Receive untreated domestic sewage from single or multiple sources. – Does not include subsurface fluid distribution systems with septic tanks ahead of the subsurface fluid distribution system. – Includes all cesspools, regardless of capacity.
5E3	Domestic Subsurface Fluid Distribution Systems - Receive more than 2,000 gallons per day of domestic sewage with only primary treatment such as effluent from a septic tank. In addition, any facility injecting domestic sewage within any five (5) acres of land is a class 5E3 facility whenever multiple 5E facilities under one owner inject a cumulative maximum peak design flow of more than 2,000 gallons per day of domestic sewage.
5E4	- Domestic Wastewater Treatment Plant Disposal Facilities - Dispose of treated domestic waste after treatment to at least secondary treatment- standards.

SUBCLASS	DESCRIPTION		
5E5	Small Domestic Subsurface Fluid Distribution Systems - Receive less		
	than 2,000 gallons per day as an average of a typical week, of domestic-		
	sewage with only primary treatment in a septic tank. These systems		
	are designed to accept more than 2,000 gallons per day at a peak and		
	are not small wastewater systems. No class 5E5 system has a		
	required design capacity in excess of 5,000 gallons per day.		
	MISCELLANEOUS CLASS V FACILITIES		
5F1	Cathodic Protection Facilities - Facilities constructed with coke		
	breeze and dust control oil for use as a permanent anode in a cathodic-		
	protection system for a fluid conveyor system or fluid containment		
	system composed of metallic material.		
5F2	All other facilities that inject fluids into or above an underground		
	source of drinking water which do not fall into Classes I, II, III, or IV		
	injection facilities.		

APPENDIX B TYPES OF PERMITS REQUIRED TIMING OF COMPLIANCE

TYPE	DESCRIPTION	TYPE OF PERMIT	WHEN REQUIRED
5A1	Direct Heat Reinjection Facilities	General Permit	2 years after date of general permit
5A2	Heat Pump/Air Conditioner Return Flow Facilities	General Permit	2 years after date of general permit
5A3	Cooling Water Return Flow Facilities	— Individual Permit	April 14, 2000
5B1	Mining, Sand or Backfill Facilities	General Permit	- 2 years after date of general permit
5B2	Aquifer Recharge Facilities	Permit by Rule	register by April 14, 1999
5B3	Saline Water Intrusion Barrier Facilities	Individual Permit	April 14, 2000
5B4 —	Subsidence Control Facilities	Permit by Rule	register by April 14, 1999
5B5 —	Facilities used to prevent, control or- remediate aquifer pollution, which are not- owned or controlled by the Department of Environmental Quality.	General Permit	2 years after the date of the general- permit
5B6 —	Department Controlled Facilities	Permit by Rule	register by April 14, 1999
5B7 —	Air Sparging Facilities	Permit by Rule	register by April 14, 1999
5C1	Air Scrubber Waste Disposal Facilities	— Individual Permit	April 14, 2000
5C2	Water Treatment Brine Disposal Facilities	— Individual Permit	April 14, 2000
5C3 —	Industrial Process Water and Waste Disposal Facilities	Individual Permit	April 14, 2000

TYPE	DESCRIPTION	TYPE OF PERMIT	WHEN REQUIRED
504		C 1D '	0 6 1 6
5C4 —	Existing Automotive Waste Disposal Facilities	General Permit	 2 years after date of general permit
5C4	New Automotive Waste Disposal Facilities	Ban	<u>April 14, 1998</u>
5C5 —	Coal Bed Methane Injection Facilities	General Permit	within 6 months of the date of issue for- the general permit- for existing facilities, and before injection for all new facilities
5C6	Small Commercial Disposal Systems	- General Permit	- 2 years after the date of the general permit
5D1 —	Agricultural Drainage Facilities	General Permit	2 years after the date- of the general permit
5D2 —	Storm Water Drainage Facilities	General Permit	-2 years after date of general permit
5D3	Improved Sinkholes	- Individual Permit	April 14, 2000
5D4 —	Industrial Drainage Facilities	– Individual Permit	April 14, 2000
5D5	Special Drainage Facilities	Permit by Rule	register by April 14, 1999
5E1	Aquaculture Return Flow Facilities	- General Permit -	 2 years after date of general permit
5E2	Existing Untreated Domestic sewage Disposal Facilities (Cesspools)	Ban	<u>April 14, 1998</u>
5E3	Existing Domestic Subsurface Fluid Distribution Systems	General Permit	<u>2 years after date</u> of general permit
5E3	Existing Domestic Subsurface Fluid Distribution Systems Permitted as a small- wastewater facility	Permit by Rule	register by April 14, 1999

TYPE	DESCRIPTION	TYPE OF PERMIT	WHEN REQUIRED
5E4	New Domestic Wastewater Treatment Plant Disposal Facilities	Individual Permit	<u>April 14, 2000</u>
5E5	- Small Domestic Subsurface Fluid Distribution Systems	General Permit	2 years after the date of the general permit
5F1	Cathodic Protection Facilities	Permit by Rule	register by April 14, 1999
5F2	All other facilities that inject fluids into or above an underground source of drinking water which do not fall into Classes I, II, III, or IV injection facilities.	Individual Permit	April 14, 2000

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CHAPTER 16

Class V Injection Wells and Facilities Underground Injection Control Program

REPEALED

1	CHAPTER 27
2	
3	UNDERGROUND INJECTION CONTROL PROGRAM CLASS I AND V WELLS
4 5	CLASS I AND V WELLS
6 7	Section 1. Authority.
8	(from Chapter 13, Section 1 and Chapter 16, Section 1) These regulations are promulgated
9	pursuant to W.S. 35-11-101 through 1413, specifically 302, and no person shall cause, threaten or
10	allow violations of any provision contained herein. (from Chapter 16, Section 1) These
11	regulations fulfill Wyoming state obligations under Section 1422 of the Federal Safe Drinking
12	Water Act and Federal Underground Injection Control regulations found in 40 CFR 124 and 40
13	<u>CFR 144-148 (both as of December 7, 1999).</u>
14	
15	Section 2. Definitions.
16 17	(from Chapter 13, Section 2 and Chapter 16, Section 2) The following definitions supplement
18	those definitions contained in Section 35-11-103 of the Wyoming Environmental Quality Act.
19	those definitions contained in Section 55-11-105 of the Wyonning Environmental Quality Fiel.
20	(from Chapter 13, Section 2(a) and Chapter 16, Section 2(a)) (a) "Aquifer" means a zone,
21	stratum or group of strata that can store and transmit water in sufficient quantities for a specific
22	use.
23	
24	(from Chapter 13, Section 2(b) and Chapter 16, Section 2(b)) (b) "Area of review" means
25	the area for which information and analyses shall be submitted as part of an underground injection
26	control permit application, and reviewed for issuance of a permit. (from Chapter 16, Section 2)
27	The area of review must include all portions of an aquifer which will be affected in a measurable
28	way within ten (10) years of the granting of a permit, assuming that the permit is complied with.
29 30	(from Chapter 13, Section 2(c) and Chapter 16, Section 2(c)) (c) "Background" means
30 31	the constituents or parameters and the concentrations or measurements which describe water
32	guality and water quality variability prior to the subsurface discharge.
33	quarty and water quarty variability prior to the substitute discharge.
34	(from Chapter 13, Section 2(d)) (d) "Bore/casing annulus" means the space
35	between the well bore and the well casing.
36	
37	(from Chapter 13, Section 2(e)) (e) "Casing/tubing annulus" means the space
38	between the well casing and the tubing.
39	
40	(from Chapter 13, Section 2(f)) (f) "Cementing" means to seal the annular space
41	around the outside of a casing string using a specially formulated Portland cement mixture or other budenulis secret mixture to hold the assist in place and ensure the secret and the secret secret and the secret
42	other hydraulic cement mixture to hold the casing in place and prevent any movement of fluid in this annular more. Comparing also includes anorations to each the well at the time of
43 44	this annular space. Cementing also includes operations to seal the well at the time of abandonment.
44 45	
46	(from Chapter 16, Section 2(d)) (g) "Cesspool" means a drywell that receives
47	solely untreated domestic sewage, and which sometimes has an open bottom and/or perforated
48	sides.

49	
50	(from Chapter 13, Section 2(g)) (h) "Class I well" means a well used to inject
51	hazardous or non-hazardous industrial, commercial or municipal waste beneath the lowermost
52	formation containing, within one- quarter (1/4) mile of the well bore, an underground source of
53	drinking water.
54	
55	(from Chapter 13, Section 2(h)) (i) "Class II well" means a well regulated by the
56	Wyoming Oil and Gas Conservation Commission, other than a Class II commercial disposal
57	well, which injects fluids:
58	
59	(from Chapter 13, Section 2(h)(i)) (i) Which are brought to the surface in
60	connection with natural gas storage operations, or conventional oil or natural gas production.
61	Non-hazardous gas plant wastes may be disposed of in a class II well pending Environmental
62	Protection Agency co-approval.
63	
64	((from Chapter 13, Section 2(h)(ii)) (ii) For enhanced recovery of oil or natural
65	gas.
66	
67	(from Chapter 13, Section 2(h)(iii)) (iii) For storage of hydrocarbons which are
68	liquid at standard temperature and pressure.
69	
70	(from Chapter 13, Section 2(i)) (j) "Class III well" means a well used for in situ
71	mining which injects for extraction of minerals, or products, or recovers recovery fluids,
72	minerals or products, including a well used in:
73	
74	(from Chapter 13, Section 2(i)(i)) (i) Mining of sulfur by the Frasch process.
75	
76	(from Chapter 13, Section 2(i)(ii)) (ii) In situ mining of uranium or other
77	metals; this category includes in situ production from ore bodies which that have not been
78	conventionally mined by means of an open pit or underground excavation.
79	
80	(from Chapter 13, Section 2(i)(iii)) (iii) In situ mining of salts, trona, or potash.
81	
82	(from Chapter 13, Section 2(i)(iv)) (iv) Underground coal gasification
83	operations.
84	
85	(from Chapter 13, Section 2(i)(v)) (v) Solution mining of open pits or
86	underground excavations used for the production of minerals, such as stopes leaching.
87	
88	(from Chapter 13, Section 2(i)(vi)) (vi) Fossil fuel recovery including coal,
89	lignite, oil shale, and tar sands.
90	
91	(from Chapter 13, Section 2(i)(vii)) (vii) Experimental technologies, such as
92	pilot scale in situ mining wells in previously unmined areas.
93	
94	(from Chapter 13, Section 2(j)) (k) "Class IV well" means a well used to dispose
95	of hazardous waste or radioactive waste into or above a formation which contains, within one-
96	quarter (1/4) mile of the well bore, an underground source of drinking water. Class IV wells are
97	prohibited by this Chapter.

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98	
99	(from Chapter 13, Section 2(j)) Except that a well is not class IV if it is used to
100	inject contaminated groundwater that has been treated and reinjected into the same formation
101	from which it is drawn for the purpose of aquifer remediation where the ultimate cleanup
102	criteria is protective of groundwater standards of these regulations. These wells are regulated as
103	a class V well, type 5X26 under these regulations.
104	
105	(from Chapter 13, Section 2(k)) (k) "Class V well" means any included in Classes
106	I, II, III, or IV.
107	
108	(from Chapter 16, Section 2(e)) (1) "Class V facility" means any property which
109	contains an injection well, drywell, or subsurface fluid distribution system which is not defined
110	as a Class I, II, III, or IV well in Chapter 13, Water Quality Rules and Regulations this chapter.
111	(from Chapter 16, Section 2(e)) The Class V facility includes all systems of collection,
112	treatment, and control which are associated with the subsurface disposal. Appendix A-C of this
113	chapter contains a list of Class V facilities.
114	
115	(from Chapter 13, Section 2(1)) (m) "Cone of influence" means that area around a
116	well within which increased discharge zone pressures caused by the injection would be
117	sufficient to force fluids into an under- ground source of drinking water.
118	
119	(from Chapter 13, Section 2(m)) (n) "Confining zone" means the zone in the well
120	designated in the permit application to provide hydrologic separation between the receiver and
121	any underground source of drinking water.
122	
123	(from Chapter 16, Section 2(f)) (o) "Domestic sewage" means liquids or solid
124	wastes obtained from humans and domestic activities including wastewater from activities such
125	as showers, toilets, human wash basins, food preparation, clothes washing, and dishwashers.
126	
127	(from Chapter 13, Section 2(n) and from Chapter 16, Section 2(g)) (p) "Draft permit"
128	means a document indicating the tentative decision by the department to issue or deny, modify,
129	revoke (from Chapter 16, Section 2(g))and reissue, or terminate a permit (from Chapter 13,
130	Section 2(n))or license . (from Chapter 16, Section 2(g)) A notice of intent to terminate a
131	permit and a notice of intent to deny a permit are types of draft permits. (from Chapter 13,
132	Section 2(n) and from Chapter 16, Section 2(g))A denial of a request for modification,
133	revocation and reissuance, or termination is not a draft permit. A draft permit for issuance shall
134	contain all conditions and content, compliance schedules and monitoring requirements required
135	by this (fromChapter 13, Section 2(n)) Chapter chapter.
136	
137	(from Chapter 16, Section 2(h)) (q) "Drywell" means a well, other than an
138	improved sinkhole or subsurface distribution system, completed above the water table so that its
139	bottom and sides are typically dry, except when receiving fluids.
140	
141	(from Chapter 13, Section 2(o) and Chapter 16, Section 2(i)) (r) "Duly authorized
142	representative" means a specific individual or a position having responsibility for the overall
143	operation of the regulated facility or activity. The authorization shall be made in writing by a
144	responsible corporate officer and shall be submitted to the administrator.
145	

146	(from Chapter 13, Section 2(p)) (s) "Endangerment" means exposure to actions or
147	activities which could pollute groundwaters of the State.
148	
149	(from Chapter 13, Section 2(q) and Chapter 16, Section 2(j)) (t) "Fact sheet" means a
150	document briefly setting forth the principal facts and the significant factual, legal,
151	methodological, and policy questions considered in preparing the draft permit. Fact sheets for
152	Class I wells are incorporated into the public notice.
153	<u>.</u>
154	(from Chapter 13, Section 2(r) and Chapter 16, Section 2(k)) (u) "Fluid" means any
155 156	material which flows or moves, whether semisolid, liquid, sludge, gas or any other form or state.
157	(from Chapter 16, Section 2(1)) (v) "General permit" means a permit issued to a
158	class of operators, all of which inject similar types of fluids for similar purposes. General
159	permits require less information to be submitted by the applicant than individual permits and do
160	not require public notice for a facility to be included under the authorization of a general permit.
161	not require public notice for a facility to be included under the authorization of a general permit.
162	(from Chapter 13, Section 2(s) and Chapter 16, Section 2(m)) (w) "Groundwater"
162	means subsurface water that fills available openings in rock or soil materials such that they may
164	be considered water saturated under hydrostatic pressure.
165	(from Chapter 12, Section 2(4) and Chapter 16, Section 2(a)) (a) "Crown devotors of the
166	(from Chapter 13, Section 2(t) and Chapter 16, Section 2(n)) (x) "Groundwaters of the
167	state" are all bodies of underground water which are wholly or partially within the boundaries of
168	the state.
169	
170	(from Chapter 16, Section 2(o)) "Hazardous waste" means a hazardous waste as defined
171	in Chapter 2, Section 1 (c), Wyoming Hazardous Waste Rules and Regulations.
172	
173	(from Chapter 13, Section 2(u)) (y) "Hazardous waste" means a hazardous waste
174	as defined in 40 CFR 261.3.
175	
176	(from Chapter 16, Section 2(p)) (z) "Improved sinkhole" means a naturally
177	occurring karst depression which has been modified by man for the purpose of directing and
178	emplacing fluids into the subsurface.
179	
180	(from Chapter 16, Section 2(q)) (aa) "Individual permit" means a permit issued for
181	a specific facility operated by an individual operator, company, municipality, or agency. An
182	individual permit may be established as an area permit and include multiple points of discharge
183	that are all operated by the same person.
184	
185	(from Chapter 16, Section 2(r)) (bb) "Injectate" means the wastewater being
186	disposed of through any underground injection facility after it has received whatever
187	pretreatment is done.
188	
189	(from Chapter 13, Section 2(v) and Chapter 16, Section 2(s)) (cc)"Lithology" means the
190	description of rocks on the basis of their physical and chemical characteristics.
191	
192	(from Chapter 13, Section 2(w)) (dd) "Long string casing" means a casing which is
193	continuous from at least the top of the injection interval to the surface and which is cemented in
194	place.
1.) T	parec.

195	
196	(from Chapter 13, Section 2(x)) (ee) "Log" means to make a written record
197	progressively describing the strata and geologic and hydrologic character thereof to include
198	electrical, radioactivity, radioactive tracer, temperature, cement bond and similar surveys, a
199	lithologic description of all cores, and test data.
200	
201	(from Chapter 13, Section 2(z)) (ff) "Mechanical integrity" means the sound and
202	unimpaired condition of all components of the well or facility or system for control of a
203	subsurface discharge and associated activities.
204	
205	(from Chapter 13, Section 2(aa) and Chapter 16, Section 2(u)) (gg) "Permit"
206	means a Wyoming Underground Injection Control permit, unless otherwise specified.
207	
208	(from Chapter 16, Section 2(u)) (hh) "Permit by rule" means an authorization
209	included in these rules which does not require either an individual permit or a general permit. A
210	facility which is permitted by rule must meet the requirements found in this chapter, but is not
211	required to apply for and obtain a permit to construct and operate the facility.
212	
213	(from Chapter 13, Section 2(bb) and Chapter 16, Section 2(v)) (ii) "Permittee"
214	means the named permit holder.
215	
216	(from Chapter 16, Section 2(w)) (jj) "Point of compliance" means a point at which
217	the permittee shall meet class of use standards for the receiver.
218	
219	(from Chapter 16, Section 2(x)) (kk) "Point of injection" means the last accessible
220	sampling point prior to waste fluids being released into the subsurface environment through a
221	<u>Class V injection well</u> . For example the 'point of injection' of a Class V septic system might be
222	the distribution box - the last accessible sampling point before the waste fluids drain into the
223	underlying soils. For a dry well, it is likely to be the well bore itself.
224	
225	(from Chapter 16, Section 2(y)) (ll) "Public hearing" means a non-adversary
226 227	hearing held by the administrator or director of the department. The hearing is conducted
227	pursuant to Chapter 3 of the Wyoming Department of Environmental Quality Rules of Practice and Procedure.
228 229	and Procedure.
229	(from Chapter 13, Section 2(y) and Chapter 16, Section 2(z)) (mm) "Radioactive
230	waste" means any waste which that contains radioactive material in concentrations which that
231	exceed those listed in 10 CFR Part 20, Appendix B, Table II, Column 2 (from Chapter 16,
232	Section 2(z)) as of December 22, 1993.
233	Section $2(2)$ as of December 22, 1995.
234	(from Chapter 13, Section 2(cc) and Chapter 16, Section 2(aa)) (nn) "Receiver"
235	means any zone, interval, formation or unit in the subsurface into which fluids and pollutants
230	are discharged.
237	<u>ur ubbliutzeu.</u>
238	(from Chapter 13, Section 2(dd) and Chapter 16, Section 2(bb)) (oo) "Responsible
240	corporate officer" means a president, secretary, treasurer, or vice president of the corporation in
240	charge of a principal business function, or any other person who performs similar policy- or
242	decision-making functions for the corporation.
243	decision making functions for the corporation.
2.5	

8	(from Chapter 16, Section 2(cc)) (pp) "Secondarily affected aquifer" means any quifer affected by migration of fluids from an injection facility, when the aquifer is not directly
	lischarged into.
-	
S	(from Chapter 16, Section 2(dd)) (qq) "Septic system" means a facility that is used olely to emplace domestic sewage below the surface and is comprised of a septic tank and
<u>s</u>	ubsurface fluid distribution system.
	(from Chapter 16, Section 2(ee)) (rr) "Source water protection area" means the area
	lelineated for the protection of ground and surface water sources for a public water supply
_	under a department approved plan developed pursuant to Section 1453 of the Safe Drinking
7	Vater Act.
	(from Chapter 13, Section 2(ee)) (ss) "Subsurface discharge" means a discharge into
2	receiver.
	(from Chapter 16, Section 2(ff)) (tt) "Subsurface fluid distribution system" means
2	in assemblage of perforated pipes or drain tiles used to distribute fluids below the surface of the
-	round. Subsurface fluid distribution systems include but are not limited to drain fields, leach
	ields, mounded leach fields, leach lines, bed type distribution systems, and gravel-less chamber
	ype distribution systems.
	(from Chapter 13, Section 2(ff) and Chapter 16, Section 2(hh)) (uu) "Underground
S	ource of drinking water" means those aquifers or portions thereof (from Chapter 16, Section
	(hh)) which have a total dissolved solids content of less than 10,000 mg/L, (from Chapter 13,
	Section 2(ff) that have been and are classified (from Chapter 13, Section 2(ff) and Chapter 16,
	Section 2(hh))as either Class I, II, III, IV (a), or Special (A), pursuant to Chapter 8, Quality
2	Standards for Wyoming Groundwaters, Water Quality Rules and Regulations.
(from Chapter 16, Section 2(gg)) "Vadose Zone" means the unsaturated zone in the
	earth, between the land surface and the top of the first saturated aquifer. The vadose zone contains water at less than saturated conditions.
e	ontains water at less than saturated conditions.
(from Chapter 9, Section 2(gg)) (vv) "Vadose Zone" means the unsaturated zone in the
	earth, between the land surface and the top of the first saturated aquifer which is not a perched
	vater aquifer. The vadose zone characteristically contains liquid water under less than
	tmospheric pressure, and water vapor and air or other gases at atmospheric pressure. Perched
	vater bodies exist within the vadose zone.
1	
	(from Chapter 16, Section 2(ii)) (ww) "Water quality management area" means the
8	rea delineated for the protection of water quality under a department approved plan developed
_	inder Sections 303, 208 and/or 201 of the Federal Clean Water Act, as amended.
	(from <u>Chapter 16, Section 2(jj))</u> "Well" means a bored, drilled, or driven shaft; a hole
_	lug whose depth is greater than the largest surface dimension; an improved sinkhole; or a
5	ubsurface fluid distribution system.

291	(from Chapter 13, Section 2(gg)) (xx) "Well" means an opening, excavation, shaft or		
292	hole in the ground allowing or used for an underground injection or for the purpose of extracting		
293	a fluid, mineral, product or pollutant from the subsurface or for monitoring.		
294			
295	(from Chapter 16, Section 2(kk)) (yy) "Wellhead protection area" means the area		
296	delineated for the protection of a public water supply utilizing a groundwater source under a		
297	department approved plan developed pursuant to Section 1428 of the federal Safe Drinking		
298	Water Act.		
299			
300	(from Chapter 13, Section 2(hh)) (zz) "Workover" means to pull the tubing, packer,		
301	or any downhole hardware from the well and inspect, replace, or refurbish it prior to placing that		
302	hardware back in service, or to enter the hole with any drilling tool.		
303			
304	Section 3. Applicability.		
305			
306	(from Chapter 13, Section 3)These regulations shall apply to all Class I, Class IV, commercial		
307	oil field waste disposal wells and those gas plant waste wells not regulated by the Wyoming Oil		
308	and Gas Conservation Commission. In addition, (from Chapter 16, Section 3)) these regulations		
309	shall apply to any discharge to the subsurface, including the vadose zone, for all of the types of		
310	discharges listed in Appendix A C of this chapter.		
311			
312	Section 4. Timing of Compliance with These Regulations for Class V Wells.		
313	((from Chapter 16 Section 4) Any Class V commit issued under Chapters 0 or 16 Water Ovality		
314	((from Chapter 16, Section 4) Any Class V permit issued under Chapters 9 or 16, Water Quality		
315	Rules and Regulations, prior to the effective date of these regulations shall remain in effect until		
316 317	replaced by an individual permit, a general permit or permit by rule pursuant to this chapter.		
317	Existing individual permits issued under Chapters 9 or 16 will be reviewed on a five (5) year basis pursuant to Section 6 (c) of this chapter. Any individual permit issued pursuant to		
319	Chapters 9 or 16 prior to the effective date of these regulations fulfills all of the requirements to		
320	obtain a permit under this chapter.		
320	obtain a permit under tills enapter.		
322			
322	(Itrom Chapter 16 Nection (I(a)) (a) All operators of evicting systems which are		
272	((from Chapter 16, Section 4(a)) (a) All operators of existing systems which are required to obtain an individual permit under these regulations shall obtain a permit by April 14		
323 324	required to obtain an individual permit under these regulations shall obtain a permit by April 14,		
324			
324 325	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000.		
324 325 326	required to obtain an individual permit under these regulations shall obtain a permit by April 14,		
324 325 326 327	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits		
324 325 326 327 328	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits ((from Chapter 16, Section 4(b(i)) (i) Within two (2) years of the effective		
324 325 326 327 328 329	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits		
324 325 326 327 328 329 330	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits ((from Chapter 16, Section 4(b(i)) (i) Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall:		
324 325 326 327 328 329 330 331	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits ((from Chapter 16, Section 4(b(i)) (i) Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall: ((from Chapter 16, Section 4(b)(i)(A)) (A) Apply for coverage		
324 325 326 327 328 329 330 331 332	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits ((from Chapter 16, Section 4(b(i)) (i) Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall:		
324 325 326 327 328 329 330 331 332 333	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits ((from Chapter 16, Section 4(b(i)) (i) Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall: ((from Chapter 16, Section 4(b)(i)(A)) (A) Apply for coverage under the general permit.		
324 325 326 327 328 329 330 331 332 333 334	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits ((from Chapter 16, Section 4(b(i)) (i) Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall: ((from Chapter 16, Section 4(b)(i)(A)) (A) Apply for coverage under the general permit. ((from Chapter 16, Section 4(b)(i)(B)) (B) Apply for an		
324 325 326 327 328 329 330 331 332 333 334 335	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits ((from Chapter 16, Section 4(b(i)) (i) Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall: ((from Chapter 16, Section 4(b)(i)(A)) (A) Apply for coverage under the general permit.		
324 325 326 327 328 329 330 331 332 333 334	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b) General permits ((from Chapter 16, Section 4(b(i)) (i) Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall: ((from Chapter 16, Section 4(b)(i)(A)) (A) Apply for coverage under the general permit. ((from Chapter 16, Section 4(b)(i)(B)) (B) Apply for an		
324 325 326 327 328 329 330 331 332 333 334 335 336	required to obtain an individual permit under these regulations shall obtain a permit by April 14, 2000. ((from Chapter 16, Section 4(b)) (b)General permits ((from Chapter 16, Section 4(b(i)) (i)Within two (2) years of the effective date of the general permit, all operators of existing facilities which require coverage shall: ((from Chapter 16, Section 4(b)(i)(A)) (A)Apply for coverage under the general permit. ((from Chapter 16, Section 4(b)(i)(B)) (B)Apply for an ((from Chapter 16, Section 4(b)(i)(B)) (B)Apply for an individual permit for the facility.		

340	((from Chapter 16, Section 4(b)(i)(D)) (D) Cease discharging				
341 342	fluids to the subsurface.				
343	((from Chapter 16, Section 44(b)(ii)) (ii) All operators of facilities which are				
344	required to be covered by a general permit which are constructed after the effective date of these				
345	regulations shall apply for and obtain coverage prior to the construction of the facility.				
346					
347	((from Chapter 16, Section 44(b)(iii)) (iii) Facilities will be covered by				
348 349	general permits as soon as the department has issued a written statement of acceptance to				
349 350	construct and operate the facility under the general permit. The department will issue a				
351	statement either accepting the operation for coverage under a general permit, or denying coverage under a general permit within 60 days of the date when the operator has requested				
352	coverage.				
353					
354	((from Chapter 16, Section 4(c)) (c) Permit by rule				
355					
356	((from Chapter 16, Section 4(c)(i)) (i) All operators of existing facilities				
357	permitted by rule shall submit inventory information to the department within one (1) year of				
358	the effective date of this chapter.				
359					
360	((from Chapter 16, Section 4(c)(ii)) (ii) All operators of facilities permitted by				
361 362	rule which are to be constructed after the effective date of these regulations shall submit inventory information to the department prior to constructing the facility.				
363	inventory information to the department prior to constructing the facility.				
364	Section 5. Control of Class I well subsurface discharges; permit required;				
365	aquifer exemptions.				
366					
367	(from Chapter 13, Section 4(a)) (a) Class I wells shall be allowed only pursuant to				
368	the Wyoming Environmental Quality Act, Chapter VIII 8, Wyoming Water Quality Rules and				
369	Regulations, and this chapter.				
370	$(f_{1}, \dots, f_{n}) = 12$, $f_{n-1}(i_{n-1}, \dots, i_{n-1})$, $f_{n-1}(i_{n-1}, \dots, i_{n-1})$				
371 372	(from Chapter 13, Section 4(b)) (b) Discharges into or construction of Class I wells are prohibited unless a permit has been obtained from the Department of Environmental Quality				
372	through the Water Quality Division.				
374	unough the water Quanty Division.				
375	(from Chapter 13, Section 4(c)) (c) Injections from Class I wells shall be restricted				
376	to those receivers defined as Class VI groundwaters by the department pursuant to Chapter VIII				
377	8, Quality Standards for Wyoming Groundwaters, Water Quality Rules and Regulations and				
378	receivers which have obtained an aquifer exemption pursuant to this section.				
379					
380	(from Chapter 13, Section 4(d)) (d) Permits may be issued for individual wells or				
381	on an area basis except Class I hazardous waste wells, which shall have individual permits.				
382	(from Chapter 13 Section I(a)) (a) The precedure for obtaining an equifer				
383 384	(from Chapter 13, Section 4(e)) (e) The procedure for obtaining an aquifer exemption from the U.S. Environmental Protection Agency shall be as follows:				
385	exemption from the 0.5. Environmental Protection Agency shall be as follows.				
386	(from Chapter 13, Section 4(e)(i)) (i) Water Quality Division shall submit				
387	one complete copy of the application, the Draft Permit, and the public notice to the U.S.				
388	Environmental Protection Agency, Region VIII 8. This submission shall be made so that EPA				

389	receives the complete application at least twenty (20) days prior to the scheduled start of the		
390	public comment period.		
391			
392	(from Chapter 13, Section 4(e)(ii)) (ii) When the aquifer exemption request is		
393	for an aquifer containing 3,000 mg/+L or more of total dissolved solids, the following		
394	procedure shall be used: Within forty five (45) days of EPA receipt of a complete aquifer		
395	exemption request, EPA shall provide the department a written interim determination of		
396	intention to issue or deny the aquifer exemption pending receipt and review of the results of the		
397	public participation process conducted by the department. The interim response will become		
398	final if there are no comments relating to the aquifer exemption request during the comment or		
399	hearing process. If comments are received during the public comment or hearing process, the		
400	interim response will become final if not modified by EPA in writing within thirty (30) days of		
401	receipt of all comments.		
402			
403	(from Chapter 13, Section 4(e)(iii)) (iii) An aquifer exemption request for an		
404	aquifer containing less than 3,000 mg/+L of total dissolved solids requires the aquifer		
405	exemption request to be processed as a program revision pursuant to 40 CFR 145.32.		
406	Section (
407 408	Section 6. Permits and Permit Applications.		
408	(from Chapter 13, Section 5(a)) (a) It is the operator's responsibility to make		
410	application for and obtain a permit in accordance with these regulations. Each application must		
411	be submitted with all supporting data.		
412	<u></u>		
413	(from Chapter 13, Section 9(a) and Chapter 16, Section 5(a)(vi)) (b) All permits		
414	issued under this chapter, (from Chapter 16, Section 5(a)(vi)) whether individual permits, or		
415	general permits, (from Chapter 13, Section 9(a) and Chapter 16, Section 5(a)(vi)) shall be for no		
416	more than ten (10) years duration.		
417			
418	(from Chapter 13, Section 9(b) and Chapter 16, Section 5(a)(vii)) (c) Each permit		
419	shall be reviewed by the department at least once every five (5) years for continued validity of		
420	all permit conditions and contents. (from Chapter 16, Section 5(a)(vii))) Permits that do not		
421	satisfy the requirements of these regulations are subject to modification, revocation and		
422	reissuance, or termination pursuant to this chapter.		
423 424	(from Chapter 13, Section 9(c)) Permits that do not satisfy the review criteria are subject		
425	to modification, revocation and reissuance, or termination pursuant to Section 8 of this chapter.		
426	(from Chapter 16, Section 5(a)(viii)) (d) Sections of permit applications filed under this		
420	chapter which represent engineering work shall be sealed, signed, and dated by a licensed		
428	professional engineer as required by Wyoming Statutes, Title 33, Chapter 29.		
429	(from Chapter 16, Section 5(a)(ix)) (e) Sections of permit applications filed under this		
430 431	chapter which represent geologic work shall be sealed, signed, and dated by a licensed professional geologist as required by Wyoming Statutes, Title 33, Chapter 41.		
431 432	professional geologist as required by wyoning statutes, The 55, Chapter 41.		
+JZ			

433 434	(from Chapter 13, Section 5(b)) (f) A complete application for a Class I well shall include:				
435 436 437 438	(from Chapter 13, Section 5(b)(i)) (i) A brief description of the nature of the business and the activities to be conducted that require the applicant to obtain a permit under this chapter.				
439 440 441 442	(from Chapter 13, Section 5(b)(ii)) (ii) The name, address and telephone number of the operator, and the operator's ownership status and status as a Federal, State, private, public or other entity.				
443 444 445 446	(from Chapter 13, Section 5(b)(iii)) (iii) The name address and telephone number of the facility. Additionally, the location of the facility shall be identified by section, township, range and county, and whether or not it is located on Indian lands.				
447 448 449 450 451	(from Chapter 13, Section 5(b)(iv)) (iv) A calculation of the area of review, which requires the calculation of the cone of influence and the area of the ultimate limit of emplaced waste.				
451 452 453 454	(from Chapter 13, Section 5(b)(iv)(A)) (A) The formula for determining the cone of influence is:				
455	$r = \left(\frac{2.25 \ KHt}{510^{x}}\right)^{\frac{1}{2}}$				
456 457	Where: $x = \left(\frac{W}{G} - B\right) \left(\frac{4PKH}{230}\right)$				
458	(A, B, C, A, C,				
459 460	r = Radius of the cone of influence of an injection well (feet)				
461	K = Hydraulic conductivity of the injection zone (feet/day)				
462	H = Thickness of the injection zone (feet)				
463	t = Time of injection (days)				
464	S = Storage coefficient (dimensionless)				
465	Q = Injection rate (cubic feet/day)				
466	B = Original hydrostatic head of injection zone (feet) measured from the base of the				
467	injection zone				
468	W = Hydrostatic head of underground source of drinking water (feet) measured from				
469	the base of the injection zone				
470	G = Specific gravity of fluid in the injection zone (dimensionless)				
471	P = 3.142 (dimensionless)				
472 473	(from Chapter 13, Section 5(b)(iv)(B)) (B) A volume calculation to				

474	determine the maximum area that the injected waste could occupy shall be submitted on all new
475	Class I wells. This calculation determines the total amount of void space around the well and
476	assumes that the injected fluid completely displaces the formation water.
477	
478	(from Chapter 13, Section 5(b)(iv)(C)) (C) A Class I non-hazardous
479	waste well's area of review shall never be less than one-quarter (1/4) mile, the cone of influence,
480	or the area of emplaced waste, whichever is greatest.
481	
482	(from Chapter 13, Section 5(b)(iv)(D)) (D) A Class I hazardous waste
483	well's area of review shall never be less than two (2) miles, the cone of influence, or the area of
484	emplaced waste, whichever is greatest.
485	
486	(from Chapter 13, Section 5(b)(iv)(E)) (E) All Areas of Review
487	shall be legally described by township, range and section to the nearest quarter quarter of a
488	section.
489	
490	(from Chapter 13, Section 5(b)(v)) (v) Information about the proposed
491	facility, including:
492	
493	(from Chapter 13, Section $5(b)(v)(A)$) (A) A description of the
494	substances proposed to be discharged, including type, source, and chemical, physical,
495	radiological and toxic characteristics; and
496	
497	(from Chapter 13, Section 5(b)(v)(B)) (B) Construction and
498	engineering details in accordance with Section 44 12 of this chapter.
499	
500	(from Chapter 13, Section 5(b)(vi)) (vi) Information, including the name,
501	description, depth and geology of the receiver and confining zone and the hydrology, fluid
502	chemistry, fluid pressure, temperature, fracture pressure and the total dissolved solids (TDS) in
503	the receiver.
504	
505	(from Chapter 13, Section 5(b)(vii)) (vii) Water quality information,
506	including back_ground background water quality data, which will facilitate the classification of
507	any groundwaters which may be affected by the proposed discharge. This must include
508	information necessary for the Water Quality Division to classify the receiver as class VI under
509	Chapter VIII-8 Section 4(d)(9) of the Wyoming Water Quality Rules and Regulations.
510	
511	(from Chapter 13, Section 5(b)(viii)) (viii) A topographic and other
512	pertinent maps, extending at least one (1) mile beyond the property boundaries of the facility,
513	but never less than the area of review, depicting:
514	
515	(from Chapter 13, Section 5(b)(viii)(A)) (A) The facility and each
516	of its intake and discharge structures;
517	
518	(from Chapter 13, Section 5(b)(viii)(B)) (B) Each of its hazardous
519	waste treatment, storage, or disposal facilities;
520	
521	(from Chapter 13, Section 5(b)(viii)(C)) (C) Each well where fluids
522	from the facility are injected underground;

523				
524	(from Chapter 13, Section 5(b)(viii)(D)) (D) Other wells, springs,			
525	and surface water bodies, and drinking water wells listed in public records or otherwise known			
526	to the applicant within a minimum one-quarter (1/4) mile of the facility property boundary, or			
527	further, as the administrator may determine is necessary; and			
528 529	(from Chapter 13, Section 5(b)(viii)(E)) (E) General geology and			
530	hydrogeology in the area.			
531				
532	(from Chapter 13, Section 5(b)(ix)) (ix) A list of other relevant permits,			
533	whether federal or state, that the facility has been required to obtain, such as construction			
534	permits.			
535 536	(from Chapter 13, Section $5(b)(x)$) (x) A listing of all wells that penetrate the			
537	(Irom Chapter 13, Section $S(D)(X))(X)$ A listing of all wells that penetrate the confining zone and are within the area of review, and records of plugging or completion,			
538	sufficient to satisfy the administrator as to the adequacy of the plugging or completion.			
539				
540	(from Chapter 13, Section $5(b)(x)(A)$) (A) For those wells that the			
541	administrator determines have not been adequately plugged, completed, or abandoned, or for			
542 543	wells which lack supporting information, the applicant shall also submit a plan to prevent movement of fluids into Underground Source of Drinking Waters through these wells, and this			
543 544	plan, after approval or modification by the administrator, shall be incorporated as a permit			
545	condition.			
546				
547	(from Chapter 13, Section 5(b)(xi)) (xi) Detailed plans for:			
548				
549 550	(from Chapter 13, Section 5(b)(xi)(A)) (A) Monitoring volume and chemistry of the discharge, and water quality of water wells within the area of review;			
551	and chemistry of the discharge, and water quanty of water wens within the area of review,			
552	(from Chapter 13, Section 5(b)(xi)(B)) (B) Monitoring injection			
553	and annular pressures in the well, to minimize the potential for fracturing of the confining zone			
554	and below the receiver; and			
555				
556 557	(from Chapter 13, Section 5(b)(xi)(C)) (C) Corrective action to cope with alarms, shut-downs, malfunctions or well failures, so as to prevent endangerment of			
558	groundwater.			
559				
560	(from Chapter 13, Section 5(b)(xii)) (xii) Information sufficient to			
561	demonstrate mechanical integrity of the well, and compatibility between the proposed discharge			
562	and the well material.			
563 564	(from Chapter 13, Section 5(b)(xiii)) (xiii) Information sufficient to			
565	demonstrate compliance with Sections 12, 14, 15, 16, 17 and 19 of this chapter.			
566	<u> </u>			
567	(from Chapter 13, Section 5(b)(xiv)) (xiv) All applications for permits			
568	shall be signed by a responsible officer as follows:			
569	(from Charter 12, Section 5/b)(six)(A) and Charter 16, Section			
570 571	<u>(from Chapter 13, Section 5(b)(xiv)(A) and Chapter 16, Section</u> <u>6(c)(xi)(A)) (A)</u> For a corporation - by a responsible corporate officer. For the purpose			
211	o(c)(a)(a)) (a) rol a corporation - by a responsible corporate officer. For the purpose			

572	of this section, a responsible corporate officer means:		
573	(from Chapter 12, Section 5(h)(riv)(A)(1) and and Chapter 1(
574 575	Section 6(c)(xi)(A)(i) (1) (from Chapter 13, Section 5(b)(xiv)(A)(1) and and Chapter 16, A President, Secretary, Treasurer, or Vice President of the		
575	Section 6(c)(xi)(A)(i) (1) A President, Secretary, Treasurer, or Vice President of the corporation in charge of a principal business function, or any other person who performs similar		
570	policy or decision making functions for the corporation; or		
578	poncy of decision making functions for the corporation, or		
	(from Chapter 12, Section 5(h)(riv)(A)(2) and and Chapter 1(
579	Section $f(a)(xi)(A)(ii)(2)$ (from Chapter 13, Section $5(b)(xiv)(A)(2)$ and and Chapter 16, The measure of one or more measure for the section $f(a)(xiv)(A)(2)$ and $f(a)(xiv)(A)(2)$ and $f(a)(xiv)(A)(2)$ (from Chapter 16, $a)(xiv)(A)(2)$ (from Chapter 16, $a)(xiv)(A)(A)(A)(A)(A)(A)(A)(A)(A)(A)(A)(A)(A)$		
580	Section $6(c)(xi)(A)(ii)$ (2) The manager of one or more manufacturing, production, or		
581	operating facilities employing more than 250 persons or having gross annual sales or		
582	expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign		
583	documents has been assigned or delegated to the manager in accordance with corporate		
584	procedures.		
585			
586	(from Chapter 13, Section 5(b)(xiv)(B) and Chapter 16, Section		
587	6(c)(xi)(B) (B) For a partnership or sole proprietorship by a general partner or the proprietor,		
588	respectively;		
589			
590	(from Chapter 13, Section 5(b)(xiv)(C) and Chapter 16, Section		
591	<u>6(c)(xi)(C)) (C)</u> For a municipality, state, federal or other public agency by either the		
592	principal executive officer or ranking elected official.		
593			
594	(from Chapter 13, Section 5(b)(xv) and Chapter 16, Section 6(c)(xii)) (xv)		
595	The application shall contain the following certification by the person signing the		
596	application:		
597			
598	<u>"I certify under penalty of law that this document and all attachments were prepared under my</u>		
599	direction or supervision in accordance with a system designed to assure that qualified personnel		
600	properly gather and evaluate the information submitted. Based on my inquiry of the person or		
601	persons who manage the system, or those persons directly responsible for gathering the		
602	information, the information submitted is, to the best of my knowledge and belief, true,		
603	accurate, and complete. I am aware that there are significant penalties for submitting false		
604 COT	information, including the possibility of fine and imprisonment for knowing violations."		
605	(from Charton 12, Section 5(h)(mi)) (mi)		
606	(from Chapter 13, Section 5(b)(xvi)) (xvi) All relevant data used to complete permit applications shall be kept for a minimum of three (3) years from the date of		
607			
608	signing.		
609	(a) For Close V facilities the following are employed as		
610	(g) For Class V facilities the following are applicable:		
611	(i) Demaits required (from Charter 16 Section 5(a)) A normitic required		
612	(i) Permits required. (from Chapter 16, Section 5(a)) A permit is required.		
613	(from Chapter 16 Section 5(a)(i)) (ii) Construction installation		
614 615	(from Chapter 16, Section 5(a)(i)) (ii) Construction, installation, modifications or operation of Class V facilities shall be allowed only in accordance with these		
615 616			
616	regulations.		
617	(from Chapter 16 Section $5(a)(11)(111)$ Discharges into an experimential of		
618	(from Chapter 16, Section 5(a)(ii)) (iii) Discharges into, or construction of,		
619	any Class V facility are prohibited unless permitted pursuant to this chapter.		
620			

621	(from Chapter 16, Section 5(a)(iii)) (iv) Every facility shall be covered by one		
622	of the three types of permitting systems: individual; general; or permit by rule. The following		
623	sections of these regulations describe the permitting method for and subclasses of facilities. The		
624	owner or operator of a facility that can be covered by a general permit or authorized under		
625	permit by rule may apply for and be permitted by an individual permit if the owner or operator		
626	desires. Operators who do not meet the requirements for a general permit or permit by rule		
627	must obtain an individual permit prior to installation or construction of the Class V facility.		
628			
629	(from Chapter 16, Section 5(a)(iv)) (v) Permits may be issued for individual		
630	facilities or they may be issued on an area basis for multiple points of discharge operated by the		
631	same person.		
632			
633	(from Chapter 16, Section 5(a)(v)) (vi) A separate permit to construct is not		
634	required under Chapter 3, Water Quality Rules and Regulations for any Class V facility.		
635	Requirements of the Chapter 3 permit to construct will be included in the underground injection		
636	control permit issued under this chapter.		
637			
638	(h) Permit conditions and contents.		
639			
640	(from Chapter 13, Section 9(d)) (i) All permits All Class I permits issued		
641	under this chapter shall contain the following conditions:		
642			
643	(from Chapter 13, Section 9(d)(ii)) (A) A requirement that the		
644	injection pressure shall be limited to the fracture pressure of the receiver, except as necessary		
645	during well stimulation, and, within one (1) year of the issuance of the permit, the operator shall		
646	conduct a step-rate injection test to determine the actual fracture pressure of the receiver.		
647			
648	(from Chapter 13, Section 9(d)(vii)) (B) A requirement that mechanical		
649	integrity shall be maintained continuously and be reviewed at least every five (5) years. The test		
650	used to determine mechanical integrity shall be a two-part test approved by the administrator,		
651	who shall approve only those tests that have been approved first by the U.S. Environmental		
652	Protection Agency's Office of Drinking Water.		
653			
654	(from Chapter 13, Section 9(d)(vii)(A)) (I) Part one of the		
655	mechanical integrity test shall demonstrate the absence of leaks through the packer, tubing,		
656	casing, and well head.		
657			
658	(from Chapter 13, Section 9(d)(vii)(B)) (II) Part two of the		
659	mechanical integrity test shall demonstrate the absence of fluid movement behind the casing.		
660 661	(from Chapter 13, Section 9(d)(vii)(C)) (III) Proposed		
662	(from Chapter 13, Section 9(d)(vii)(C)) (III) Proposed mechanical integrity tests that have not yet been approved shall be submitted to the		
663	administrator who shall forward the information to the U.S. Environmental Protection Agency's		
664	Office of Drinking Water along with a request for approval, if, in the administrator's opinion, it		
665	will adequately determine mechanical integrity of the well system. A previously unauthorized		
666	mechanical integrity test submitted for approval shall include:		
667	monancar mogney tost submitted for approval shan include.		
668	(from Chapter 13, Section 9(d)(vii)(C)(I)) (1.) The		
669	proposed method for demonstrating the lack of significant leaks in the well;		
555	proposed means a for demonstrating the fact of orginite and found in the work,		

(from Chapter 13, Section 9(d)(vii)(C)(II)) (2.) The		
proposed method for showing the absence of significant fluid movement; and		
(from Chapter 13, Section	<u>n 9(d)(vii)(C)(III)) (3.) Any</u>	
technical data supporting the use of this test.		
(from Chapter 13, Section 9(d)(viii)) (C)A		
demonstrate mechanical integrity shall be shut down until such tim	ne as the mechanical integrity	
has been restored.		
(from Chapter 13, Section 9(d)(xxv)) (D)	A requirement that the	
packer be set within five-hundred (500) feet of the top of the receiv		
allows some other specific interval to be used to set the packer, bu		
covered by excellent cement bond as shown by the cement bond lo	· · · · · · · · · · · · · · · · · · ·	
correct by excendent content bond us shown by the content bond it	<u> </u>	
(from Chapter 13, Section 10) (ii) Special p	ermit conditions for	
hazardous waste wells.		
-		
(from Chapter 13, Section 10) (A)		
wells permitted under this chapter shall be subject to the special per-		
section below in addition to the conditions applicable to all Class I	I well permits in Section 9 of	
this chapter.		
(from Chapter 13, Section 10(a)) (B) All hazardous waste injection		
permits issued under this chapter shall include the following conditions:		
(from Chapter 12 Section 10(a)/:	$(\mathbf{I}) = \mathbf{A}$ requirement that the	
(from Chapter 13, Section 10(a)(i)) (I) A requirement that the operator shall maintain a casing/tubing annulus pressure that exceeds the operating injection		
pressure, unless the administrator determines that such a requirement		
of the well. The fluid used in the casing/tubing annulus shall be no		
a corrosion inhibitor.	meorrosive, and shan contain	
(from Chapter 13, Section 10(a)(i	i)) (II) A requirement that the	
(from Chapter 13, Section 10(a)(ii)) (II) A requirement that the operator shall follow special procedures when wastes have the potential to react with the		
injection formation or to generate gases either during or after injection. These procedures may		
take the form of special permit conditions that limit the temperature or pH of the injected waste		
and require the operator to follow procedures necessary to assure that pressure imbalances		
which might cause a backflow or blowout do not occur.		
č		
(from Chapter 13, Section 10(a)(i	ii)) (III) A requirement	
that the operator shall install, maintain, and use continuous recordi		
injection pressure, flow rate, temperature, of injected fluids and pressure on the casing/tubing		
annulus, and shall install and use automatic alarm and shut-off systems designed to shut down		
the well when pressures, flow rates, and other parameters approved by the administrator exceed		
the range specified in the permit.		
(from Chapter 13, Section 10(a)(i		
that the operator have a trained operator onsite at all times the well	l is operating.	

719		
720	(from Chapter 13, Section 10(a)(v)) (V) A requirement that if	
721	an automatic alarm or shutdown is triggered, the operator shall immediately investigate and	
722	identify as early as possible, the cause of the alarm or shutdown. If, upon such investigation, or	
723	if required monitoring indicates, that the well is lacking in mechanical integrity, the operator	
724	shall:	
725		
726	(from Chapter 13, Section $10(a)(v)(A)$) (1.) Cease	
727	all injections of waste fluids immediately.	
728	an injections of waste finite finite date fy.	
729	(from Chapter 13, Section $10(a)(v)(B)$) (2.) Take	
730	all necessary steps to determine the presence or absence of a leak.	
	an necessary steps to determine the presence of absence of a leak.	
731		
732	(from Chapter 13, Section 10(a)(v)(C)) (3.) Notify	
733	the administrator within twenty-four (24) hours after the alarm or shutdown, using procedures	
734	and criteria listed in paragraph 20 of Section 9(d)(xx) in this chapter. (h)(iii)(Q) of this section.	
735		
736	(from Chapter 13, Section $10(a)(v)(D)$) (4.) The	
737	operator shall restore and demonstrate, to the satisfaction of the administrator, mechanical	
738	integrity prior to resuming injection activities.	
739		
740	(from Chapter 13, Section 10(a)(vi)) (VI) A requirement	
741	that whenever the operator obtains evidence that there may have been a release of injected	
742	wastes into an unauthorized zone, regardless of whether or not an automatic alarm or shutdown	
743	was triggered, the operator shall:	
744		
745	(from Chapter 13, Section $10(a)(vi)(A)$) (1.)	
746	Immediately cease all injection activities.	
747	<u>Infinediatory couse un injection denvines.</u>	
748	(from Chapter 13, Section 10(a)(vi)(B)) (2.) Notify	
749	the administrator pursuant to the procedures outlined in paragraph 20 of Section 9 in this	
	chapter. (h)(iii)(Q) of this section. In addition to the information required by paragraph 20	
′50		
51	(h)(iii)(Q) of this section, the operator shall also include, as part of the written submission, a	
52	proposed remedial action plan, designed to minimize the adverse impact of the unauthorized	
/53	release.	
'54		
55	(from Chapter 13, Section $10(a)(vi)(C)$) (3.)	
56	Comply with the requirements of any remedial action plan approved by the	
57	administrator.	
758		
759	(from Chapter 13, Section 10(a)(vi)(D)) (4.) Where	
760	the unauthorized release is into a Class I aquifer, as classified under Chapter VIII-8, Quality	
761	Standards for Wyoming Groundwaters, Water Quality Rules and Regulations, which is	
762	currently serving as a water supply, the operator shall place a notice, describing the	
763	unauthorized release and the actions taken, in a newspaper of general circulation in the locality	
764	of the release.	
765		
'66	(from Chapter 13, Section 10(a)(vi)(E)) (5.) The	
767	administrator may allow the operator to resume injection prior to completion of cleanup	
/0/	auministrator may anow the operator to resume injection prior to completion of cleanup	

operations if the operator demonstrates, to the satisfaction of the administrator, that the injection activity will not endanger any Underground Source of Drinking Waters.	<u>1</u>	
activity will not endanger any Onderground Source of Drinking waters.		
(from Chapter 13, Section 10(a)(vii)) (VII) A requirement	t	
that the operator notify the administrator and obtain his approval prior to conducting any well	-	
workover.		
(from Chapter 13, Section 10(a)(viii)) (VIII) A requirement	t	
that the operator comply with the following federal regulations contained in 40 CFR 264 or		
applicable state hazardous waste regulations:		
(from Chapter 13, Section 10(a)(viii)(A)) (1.)		
Identification numbers.		
(from Chapter 13, Section 10(a)(viii)(B)) (2.)		
Recordkeeping and reporting for manifested wastes.		
(from Chapter 13, Section 10(a)(viii)(C)) (3.) Manifest	t	
discrepancies.		
(from Chapter 13, Section 10(a)(viii)(D)) (4.)		
Operating record requirements.		
(from Chapter 13, Section 10(a)(viii)(E)) (5.) Annual		
reporting requirements and unmanifested waste reports.		
(from Chapter 13, Section 10(a)(viii)(F)) (6.) Personne	1	
training requirements.		
(from Chapter 13, Section 10(a)(ix)) (IX) When		
abandonment is completed, the operator must submit to the administrator certification by the		
operator and certification by an independent registered professional engineer that the facility has		
been closed in accordance with the specifications detailed in the closure plan in Section 16 17 of		
this chapter.		
(from Chapter 16, Section 5(c)(i)) (iii) All individual and general permits		
issued under this chapter shall contain the following conditions:		
(from Chapter 13, Section 9(d)(i) and Chapter 16, Section 5(c)(i)(A))		
(A) A requirement that the permittee comply with all conditions of the permit and any		
permit noncompliance constitutes a violation of these regulations and is grounds for		
enforcement action, permit termination, revocation, or modification;		
$\frac{(\text{from Chapter 13, Section 9(d)(ii) and Chapter 16, Section 5(c)(i)(B))}{(B)}$		
(B) A requirement that if the permittee wishes to continue injection activity after the		
expiration of the permit, the permittee must apply to the administrator for, and obtain, a new		
<u>permit ;</u>		
(from Chapter 12 Section O(d)(iv) and Chapter 16 Section 5(a)(i)(C))		
(from Chapter 13, Section 9(d)(iv) and Chapter 16, Section 5(c)(i)(C))		

817	(C) A stipulation that it shall not be a defense for a permittee in an enforcement action that
818	it would have been necessary to halt or reduce the permitted activity in order to maintain
819	compliance with the conditions of this permit;
820	
821	(from Chapter 13, Section 9(d)(v) and Chapter 16, Section 5(c)(i)(D))
822	(D) A requirement that the permittee shall take all reasonable steps to minimize or correct
823	any adverse impact on the environment resulting from noncompliance with this permit;
824	
825	(from Chapter 13, Section 9(d)(v) and Chapter 16, Section 5(c)(i)(E))
826	(E) A requirement that the permittee properly operate and maintain all facilities and systems
827	of treatment and control which are installed or used by the permittee to achieve compliance with
828	the conditions of this permit. Proper operation and maintenance includes effective performance,
829	adequate funding and operator staffing and training, and adequate laboratory and process
830	controls including appropriate quality assurance procedures. This provision requires the
831	operation of back-up or auxiliary facilities or similar systems only when necessary to achieve
832	compliance with the conditions of the permit;
833	(for a C_{1} best 12 , C_{2} at 0 (1)(i-) and C_{2} best 16 , C_{2} (i)(T))
834	$\frac{\text{(from Chapter 13, Section 9(d)(ix) and Chapter 16, Section 5(c)(i)(F))}}{(F)}$
835	(F) A stipulation that the filing of a request by the permittee, or at the instigation of the administrator, for a permit modification, revocation, termination, or notification of planned
836 837	changes or anticipated non-compliance, shall not stay any permit condition;
838	changes of anticipated non-compliance, shall not stay any permit condition;
839	(from Chapter 13, Section $9(d)(x)$ and Chapter 16, Section $5(c)(i)(G)$)
840	(G) A stipulation that this permit does not convey any property rights of any sort, or any
841	exclusive privilege;
842	<u>exclusive privilege,</u>
843	(from Chapter 13, Section 9(d)(xi) and Chapter 16, Section 5(c)(i)(H))
844	(H) A stipulation that the permittee shall furnish to the administrator, within a specified
845	time, any information which the administrator may request to determine whether cause exists
846	for modifying, revoking and reissuing, or terminating the permit, or to determine compliance
847	with the permit. The permittee shall also furnish to the administrator, upon request, copies of
848	records required to be kept by the permit;
849	
850	(from Chapter 13, Section 9(d)(xii) and Chapter 16, Section 5(c)(i)(I))
851	(I) A requirement that the permittee shall allow the administrator, or an authorized
852	representative of the administrator, upon the presentation of credentials, during normal working
853	hours, to enter the premises where a regulated facility is located, or where records are kept
854	under the conditions of this permit, and inspect the discharge and related facilities, review and
855	copy reports and records required by the permit, collect fluid samples for analysis, measure and
856	record water levels, and perform any other function authorized by law or regulation;
857	
858	(from Chapter 13, Section 9(d)(xiii) and Chapter 16, Section 5(c)(i)(J) (J)
859	A requirement that the permittee furnish any information necessary to establish a
860	monitoring program pursuant to (from Chapter 13, Section 9(d)(xiii)) Section 13 (from Chapter
861	16, Section 5(c)(i)(J)) Section 11 Section 15 of this chapter;.
862	
863	(from Chapter 13, Section 9(d)(xiv) and Chapter 16, Section 5(c)(i)(K))
864	(K) A requirement that all samples and measurements taken for the purpose of monitoring
865	shall be representative of the monitored activity, and records of all monitoring information be

866	retained by the permittee. The monitoring information to be retained shall be that information
867	stipulated in the monitoring program established pursuant to the criteria in (from Chapter 13,
868	Section 9(d)(xiv)) Section 13, (From Chapter 16, Section 5(c)(i)(K)) Section 11 Section 15 of
869	this chapter;
870	
871	(from Chapter 13, Section 9(d)(xv) and Chapter 16, Section 5(c)(i)(L))
872	(L) A requirement that all applications, reports, and other information submitted to the
873	administrator contain certifications as required in (from Chapter 13, Section 9(d)(xiii)) Section 5
874	(c)(14)-Section (from Chapter 16, Section 5(c)(L)) 6 (c)(xi) 6 (f) (xv) (from Chapter 13, Section
875	9(d)(xv) and Chapter 16, Section 5(c)(i)(L)) of this chapter, and be signed by (from Chapter 13,
876	Section 9(d)(xiii)) either a responsible corporate officer or a duly authorized representative.
877	(From Chapter 16, Section 5(c)(i)(L)) a person who meets the requirements to sign permit
878	applications found in (from Chapter 16, Section 5(c)(i)(L)) Section 6 (c)(xii) of this chapter
879	Section 6 (f) (xiv), or for routine reports, a duly authorized representative;
880	
881	(from Chapter 13, Section 9(d)(xvi) and Chapter 16, Section 5(c)(i)
882	(M)) (M) A requirement that the permittee give advance notice to the administrator as
883	soon as possible of any planned physical alteration or additions, other than authorized operation
884	and maintenance, to the permitted facility and receive authorization prior to implementing the
885	proposed alteration or addition;
886	
887	(from Chapter 13, Section 9(d)(xvii) and Chapter 16, Section
888	5(c)(i)(N)) (N) A requirement that any modification which may result in a violation of a permit
889	condition shall be reported to the administrator, and any modification that will result in a
890	violation of a permit condition shall be reported to the administrator through the submission of a
891	new or amended permit application;
892	
893	(from Chapter 13, Section 9(d)(xviii) and Chapter 16, Section
894	5(c)(i)(O)) (O) A requirement that any transfer of a permit must first be approved by the
895	administrator, and that no transfer will be approved if the facility is not in compliance with the
896	existing permit unless the proposed permittee agrees to bring the facility into compliance;
897	enisting perint unless the proposed perintate agrees to ering the menty into compliance,
898	(from Chapter 13, Section 9(d)(xix) and Chapter 16, Section 5(c)(i)(P))
899	(P) A requirement that monitoring results shall be reported at the intervals specified
900	elsewhere in the permit ; .
901	<u>ensewhere in the permit</u> ,
902	(from Chapter 13, Section $9(d)(xx)$ and Chapter 16, Section $5(c)(i)(Q)$)
903	(Q) A requirement that reports of compliance or non-compliance with, or any progress
904	reports on interim and final requirements contained in any compliance while, or any progress
905	required by the administrator, shall be submitted no later than thirty (30) days following each
906	schedule date;.
907	schedule date;
908	(from Chapter 13, Section 9(d)(xxi) and Chapter 16, Section 5(c)(i)(R))
908	(R) A requirement that confirmed noncompliance resulting in the migration of injected fluid
909 910	into any zone outside of the permitted receiver must be orally reported to the administrator
	within (from Chapter 13, Section 9(d)(xxi)) twenty four 24 hours, and a written submission shall
911	
912	be provided within five (5) days of the time the permittee becomes aware of the excursion. The unittee submission shall contain
913	written submission shall contain:
914	

915 916	Section(5)(c)(i)(R)(I))(I)
917 918 919 920 921	<u>(from Chapter 13, Section 9(d)(xxi) and Chapter 16,</u> Section(5)(c)(i)(R)(II)) (II) The period of noncompliance, including exact dates and times, and, if the noncompliance has not been controlled, the anticipated time it is expected to continue; and
922 923 924 925 926	<u>(from Chapter 13, Section 9(d)(xxi) and Chapter 16,</u> Section(5)(c)(i)(R)(III))) (III) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
927 928 929 930 931 932	$\frac{(\text{from Chapter 13, Section 9(d)(xxii) and Chapter 16, Section 5(c)(i)(S))}{(S)}$ (S) A requirement that the permittee report all instances of noncompliance not already required to be reported under paragraphs (from Chapter 13, Section 9(d)(xxii)) xix, xx and xxi (from Chapter 16, Section 5(c)(i)(S) (c) (i) (P) through (R) (h) (iii) (P) through (R) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (from Chapter 13, Section 9(d)(xxii)) xxi(A) through (C) (from Chapter 16,
933 934 935 936 937	Section 5(c)(i)(S)) (c) (i) (R) (h) (iii) (R) of this section. (from Chapter 13, Section 9(d)(xxiii) and Chapter 16, Section 5(c)(i)(T)) (T) A requirement that (from Chapter 13, Section 9(d)(xxiii)), in the situation where the permittee becomes aware that it failed to submit any relevant facts in a permit
938 939 940 941	application, or submitted incorrect information in a permit application or in any report to the administrator, the permittee shall promptly submit such facts or information. (from Chapter 13, Section 9(d)(xxiv) and Chapter 16, Section 5(c)(i)(U)) (U) A requirement that the injection (from Chapter 12, Section 0(d)(reign)) well
942 943 944 945 946	5(c)(i)(U)) (U) A requirement that the injection (from Chapter 13, Section 9(d)(xxiv)) well facility meet construction requirements outlined in (from Chapter 13, Section 9(d)(xxiv)) Section 11 Section 10 of this chapter, and that the permittee submit notice of completion of construction to the administrator and allow for inspection of the facility upon completion of construction, prior to commencing any injection activity.
947 948 949 950 951	(from Chapter 13, Section $9(d)(xxvi)$ and Chapter 16, Section 5(c)(i)(V) (V) A requirement that the permittee notify the administrator at such times as the permit requires before conversion or abandonment of the (from Chapter 13, Section $9(d)(xxvi)$) well facility.
952 953 954 955 956 957 958 959 960	(W) (from Chapter 13, Section 9(d)(xxvii)) A requirement that a plugging and abandoning report (from Chapter 16, Section 5(c)(i)(W)) A requirement that an abandonment report, (from Chapter 13, Section 9(d)(xxvii) and Chapter 16, Section 5(c)(i)(W)) detailing the compliance abandonment procedures outlined the original in the original permit application, or describing any deviations from the original plan, be submitted as soon as practicable after (from Chapter 13, Section 9(d)(xxvii)) plugging and abandonment. (from Chapter 16, Section 5(c)(i)(W)) abandonment, and is complete.
961 962 963	(from Chapter 13, Section 9(d)(xxix)) Injection into a well may not commence until construction is complete.

964 965 966 967 968	(from Chapter 16, Section 5(c)(i)(X)) (X) A requirement that injection may not commence until construction is complete. (from Chapter 13, Section 9(e) and Chapter 16, Section 5(c)(ii)) (Y) In
969	addition to the conditions required of all permits, the administrator may establish, on a case-by-
970 971	case basis, conditions as required for monitoring, schedules of compliance, and such additional conditions as are necessary to prevent the migration of fluids into underground sources of
972	drinking water.
973	
974	
975	
976 977	Section 7. Permit Processing Procedures.
978	(a) For Class I wells the following are applicable:
979	
980	(from Chapter 13, Section 6(a)) (i) The applicant shall file seven (7)
981	copies of the permit application with the Water Quality Division.
982 983	(from Chapter 13, Section 6(b)) (ii) Within sixty (60) days of submission
984	of the application, the administrator shall make an initial determination of completeness. An
985	application shall be determined complete when the administrator receives an application and
986	any supplemental information necessary to determine compliance with these regulations.
987	
988	(from Chapter 13, Section 6(c)) (iii) An incomplete application will be processed in the following manner:
989 990	processed in the following manner:
991	(from Chapter 13, Section $6(c)(i)$) (A) For an extremely incomplete
992	application, additional information shall be requested in detail or the application will be returned
993	to the applicant. Incomplete permit applications will result in permit denial.
994	
995 006	(from Chapter 13, Section 6(c)(ii)) (B) If an application is denied because of incompleteness necessitating a request for additional information, the applicant shall
996 997	have a maximum of six (6) months to comply with the requests. If the applicant fails to provide
998	the requested information within that period, the entire incomplete application shall be returned.
999	
1000	(from Chapter 13, Section 6(c)(iii)) (C) Resubmittal of information by
1001	an applicant on an incomplete application will begin the process described in subsection (b)
1002	(a)(ii) of this section.
1003 1004	(from Chapter 13, Section 6(d)) (iv) During any sixty (60) day review
1004	period where an application is determined complete, the administrator shall take one of the
1005	following actions:
1007	
1008	(from Chapter 13, Section 6(d)(i)) (A) Prepare a draft permit for
1009	issuance or denial, prepare a fact sheet on the proposed operation, and provide public notice
1010 1011	pursuant to Section 19 21; or
1011	

1012	(from Chapter 13, Section 6(d)(ii)) (B) Provide the applicant notice
1012	that the permit is deficient and state the deficiencies in the application.
1014	that the permit is deficient and state the deficiencies in the approximitie
1015	(from Chapter 13, Section 6(e)) (v) Determinations of deficiency by the
1016	Department are appealable by the applicant to the Environmental Quality Council. Requests for
1017	appeal must be in writing, state the reasons for appeal, and be made to both the Director and the
1018	Chairman of the Environmental Quality Council. A deficient application is considered a permit
1019	denial but is not subject to the public notice requirements of Section 19 22 unless a hearing is
1020	requested by the applicant. Resubmittal of information for a deficient application will start the
1021	sixty (60) day review period again.
1022	
1023	(from Chapter 13, Section 6(f)) (vi) Denials of permit applications will be
1024	pursuant to procedures outlined in Section 19 of this chapter paragraph (d) of this section.
1025	
1026	(from Chapter 13, Section 6(g)) (vii) All draft permits for Class I wells
1027	require public notice pursuant to Section 19 -21 of this chapter.
1028	
1029	(b) For Class V wells that require an Individual Permit, the following are
1030	applicable:
1031	
1032	(from Chapter 16, Section 6(e)) (i) The applicant shall submit five (5)
1033	copies of the permit application to the division.
1034	
1035	(from Chapter 16, Section 6(f)) (A) Within 60 days of submission
1036	of the application, the administrator shall make an initial determination of completeness. An
1037	application shall be determined complete when the administrator receives an application and
1038	any supplemental information necessary to determine compliance with these regulations.
1039	
1040	(from Chapter 16, Section 6(g)) (ii) Resubmittal of information by an
1041	applicant on an incomplete application will begin the process described in paragraph (f)
1042	(b)(i)(A) of this section.
1043	
1044	(from Chapter 16, Section 6(h) (iii) During any 60 day review period
1045	where an application is determined complete, the administrator shall prepare a draft permit for
1046	issuance or denial, prepare a fact sheet on the proposed operation, and provide public notice
1047	pursuant to Section 13 21.
1048	
1049	(from Chapter 16, Section 6(i)) (iv) A denial of the application by the
1050	department is appealable by the applicant to the Environmental Quality Council in accordance
1051	with the Rules of Practice and Procedure. Requests for appeal must be in writing, state the
1052	reasons for appeal, and be made to both the director and the chairman of the Environmental
1053	Quality Council.
1054	
1055	(c) For Class V wells that require a General Permit, the following are applicable:
1056	
1057	(from Chapter 16, Section 6(c)) (i) In order to be covered by a general
1058	permit, an operator must submit all information required in Section 6(c)(i)(ii), and (iii) 9 (c) (i),
1059	(ii), and (iii), plus any additional information required to be submitted or reported in the issued
1060	general permit. The submittal requesting coverage by a general permit shall be signed by a

1061	person meeting the same signatory requirements of Section 6 (c)(xi) 6 (f) (xiv) and shall be
1062	certified in accordance with Section $\frac{6}{(c)(xii)} \frac{6}{6} (f) (xv)$. Facilities will be covered by general
1063	permits as soon as the department has issued a written statement of acceptance to allow the
1064	construction and operation of the facility under the general permit. The department will issue an
1065	authorization accepting the operation for coverage under the general permit or denying coverage
1066	under the general permit, within 60 days of the date when the operator requested coverage.
1067	Requests for coverage under a general permit, which do not meet the requirements for general
1068	permit pursuant to this chapter, may be denied by the administrator.
1069	
1070	(from Chapter 16, Section 6(b)) (ii) If a general permit has been issued by
1071	the department, an operator of a facility must register the facility with the department and sign a
1072	statement agreeing to be bound by the conditions of that permit. Failure to register for general
1073	permit coverage, when available, is the same as operation of a facility without a permit, unless
1074	an individual permit has been obtained.
1075	un marviedar permit has been obtained.
1076	(from Chapter 16, Section 6(d)) (iii) Once issued, general permits must
1070	remain the same for all persons covered by the permit. A general permit may be modified in
1077	accordance with Section 5 (b) (iv) 7 (d) (vii). Any such modification must cover all persons
1079	covered by the permit.
1080	(form Observer 12, Service O) (1) Permit and 1'Service Assistance view termination
1081	(from Chapter 13, Section 8) (d) Permit modification, denial, revocation, termination
1082	and transfer.
1083	
1084	(from Chapter 13, Section 8(a) and Chapter 16(b)(iii)) (i)Permits may be
1085	modified, revoked and reissued, or terminated either at the request of any interested person
1086	(including the permittee or (from Chapter 13, Section 8(a)) licensee) (from Chapter 13, Section
1087	8(a) and Chapter 16(b)(iii))or upon the administrator's initiative. However, permits may only be
1088	modified, revoked and reissued, or terminated for the reasons specified in (from Chapter 13,
1089	Section 8(a)) Section 5 (b) (vi) of this chapter this section. All requests shall be in writing and
1090	shall contain facts or reasons supporting the request.
1091	
1092	(from Chapter 16, Section 5(b)(iii) If the administrator decides the petition is
1093	not justified, the petitioner shall be sent a brief written response giving the reason for the
1094	decision. A request for modification, revocation and reissuance, or termination shall be
1095	considered denied if the administrator takes no action within 60 days after receiving the written
1096	request. Denials of requests for modification, revocation and reissuance, or termination are not
1097	subject to public notice and comment. Denials by the administrator may be appealed for hearing
1098	to the Environmental Quality Council by a letter briefly setting forth the relevant facts.
1099	to the Environmental Quality Counter of a fease offering setting form the fere valit facts.
1100	(from Chapter 13, Section 8(b)) (ii) If the administrator decides the request
1101	is not justified, he or she shall send the requester a brief written response giving the reason for
1101	the decision. A request for modification, revocation and reissuance, or termination shall be
1102	considered denied if the administrator takes no action within 60 days after receiving the written
1105	request. Denials of requests for modification, revocation and reissuance, or termination are not
1105	subject to public notice and comment. Denials by the administrator may be appealed for hearing
1106	to the Environmental Quality Council by a letter briefly setting forth the relevant facts.
1107	$(f_{1}, f_{2}, f_{3}) = (f_{1}, f_{3}) + (f_{2}, f_{3}) + (f_{3}, f_{3})$
1108	(from Chapter 13, Section 8(g)) If the administrator tentatively decides to
1109	modify or revoke and reissue a permit, he or she shall prepare a draft permit or license

1110 incorporating the proposed changes. The administrator may request additional information and, 1111 in the case of a modified permit, may require the submission of an updated application. In the 1112 case of revoked and reissued permits, the administrator shall require the submission of a new 1113 application. 1114 1115 (from Chapter 16, Section 5(b)(vii)) (iii) If the administrator tentatively decides 1116 to modify or revoke and reissue a permit, a draft permit incorporating the proposed changes 1117 shall be prepared. The administrator 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 1118 1119 and reissued permits, the administrator shall require the submission of a new application. 1120 (from Chapter 13, Section 8, (h)) In a permit modification under this section, 1121 only those conditions to be modified shall be reopened when a new draft permit or license is 1122 prepared. All other aspects of the existing permit shall remain in effect for the duration of the 1123 unmodified permit. When a permit is revoked and reissued under this section, the entire permit 1124 1125 is reopened just as if the permit has expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until 1126 1127 a new final permit is issued. 1128 1129 (from Chapter 16, Section 5(b)(viii)) (iv) In a permit modification under Section 5 (b)(iv) Section 7 (d) (vii) of this chapter, only those conditions to be modified shall be 1130 reopened when a new draft permit is prepared. All other aspects of the existing permit shall 1131 1132 remain in effect for the duration of the unmodified permit and the modified permit shall expire on the date when the original permit would have expired. When a permit is revoked and 1133 reissued under this section, the entire permit is reopened as if the permit has expired and is 1134 being reissued. When the entire permit is reopened, the modified permit shall be issued for no 1135 more than ten (10) years. During any revocation and reissuance proceeding, the permittee shall 1136 1137 comply with all conditions of the existing permit until a new final permit is issued. 1138 1139 Proposed permit (from Chapter 16, Section 5(b)(ix) Permit (v) 1140 modifications, revocations or terminations shall be developed as a draft permit and are subject 1141 to the public notice and hearing requirements outlined in Section 13-21. 1142 1143 (from Chapter 13, Section 8(c)) (vi) For Class I wells The the administrator shall modify a permit or license when: 1144 1145 (from Chapter 13, Section 8(c)(i)) (A) Any material or substantial 1146 alterations or additions to the facility occur after permitting or licensing, which justify the 1147 application of permit conditions that are different or absent in the existing permit; or 1148 1149 (from Chapter 13, Section 8(c)(ii)) (B) Any modification in the 1150 operation of the facility is capable of causing or increasing pollution in excess of applicable 1151 1152 standards or permit conditions. 1153 (from Chapter 13, Section 8(c)(iii)) (C) Information warranting 1154 modification is discovered after the operation has begun that would have justified the 1155 1156 application of different permit conditions at the time of permit issuance; 1157

1158 1159 1160 1161	(from Chapter 13, Section 8(c)(iv)) (D) Regulations or standards upon which the permit or license was based have changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;
1161 1162 1163 1164	(from Chapter 13, Section 8(c)(v)) (E) Cause exists for termination, as described in this section, but the department determines that modification is appropriate; or
1165 1166	(from Chapter 13, Section 8(c)(vi)) (F) Modification is necessary to comply with applicable statutes, standards or regulations.
1167 1168 1169	(vii) For Class V wells (from Chapter 16, Section 5(b)(iv)) The the administrator may modify a permit when:
1170 1171 1172 1173 1174	$\frac{(\text{from Chapter 16, Section 5(b)(iv)(A))}}{(A)}$ Any material or substantial alterations or additions to the facility occur after permitting or licensing, which justify the application of permit conditions that are different or absent in the existing permit;
1174 1175 1176 1177 1178	$\frac{(\text{from Chapter 16, Section 5(b)(iv)(B)}}{(B)} (B) Any modification in the operation of the facility is capable of causing or increasing pollution in excess of applicable standards or permit conditions;$
1179 1180 1181	(from Chapter 16, Section 5(b)(iv)(C)) (C) Information warranting modification is discovered after the operation has begun that would have justified the application of different permit conditions at the time of permit issuance;
1182 1183 1184 1185	(from Chapter 16, Section 5(b)(iv)) (D) Regulations or standards upon which the permit was based have changed by promulgation of amended standards or regulations, or by judicial decision after the permit was issued;
1186 1187 1188	(from Chapter 16, Section 5(b)(iv)) (E) Cause exists for termination, as described in this section, but the department determines that modification is appropriate; or
1189 1190 1191	(from Chapter 16, Section 5(b)(iv)) (F) Modification is necessary to comply with applicable statutes, standards or regulations.
1192 1193 1194 1195 1196	(from Chapter 13, Section 8(d) and Chapter 16, Section 5(b)(v)) (viii) Minor modifications of permits may occur with the consent of the permittee without following the public notice requirements. Minor modifications will become final 20 days from the date of receipt of such notice. For the purposes of this chapter, minor modifications may only:
1197 1198 1199	(from Chapter 13, Section 8(d)(i) and Chapter 16, Section5(b)(v)(A)) (A) Correct typographical errors;
1200 1201 1202 1202	(from Chapter 13, Section 8(d)(ii) and Chapter 16, Section 5(b)(v)(B)) (B) Require more frequent monitoring or reporting by the permittee;
1203 1204 1205	(from Chapter 13, Section 8(d)(iii) and Chapter 16, Section 5(b)(v)(C)) (C) Change an interim compliance date in a schedule of compliance, provided the new date

1206 1207	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;
1208	$(f_{12}, \dots, f_{12}, f_{12}, \dots, f_{12}, f_{12}, \dots, f_{$
1209 1210	(from Chapter 13, Section 8(d)(iv) and Chapter 16, Section 5(b)(v)(D)) (D) Allow for a change in ownership or operational control of a facility where the
1210	administrator determines that no other change in the permit is necessary, provided that a written
1211	agreement containing a specific date for transfer of permit responsibility, coverage, and liability
1213	between the current and new permittees have been submitted to the administrator;
1214	
1215	(from Chapter 13, Section 8(d)(v) and Chapter 16, Section 5(b)(v)(E))
1216	(E) Change quantities or types of fluids injected which that are within the capacity of the
1217	facility as permitted and, in the judgment of the administrator, would not interfere with the
1218	operation of the facility or its ability to meet conditions described in the permit and would not
1219 1220	change its classification;
1220	(from Chapter 13, Section 8(d)(vi) and Chapter 16, Section 5(b)(v)(F))
1222	(F) Change construction requirements approved by the administrator pursuant to
1223	department rules and regulations provided that any such alteration shall comply with the
1224	requirements of this chapter; or
1225	
1226	(from Chapter 13, Section 8(d)(vii) and Chapter 16, Section 5(b)(v)(G))
1227	(G) Amend an abandonment plan.
1228	(iv) For a Class Lyvell The (from Chapter 12 Section 7(a)) the administrator
1229 1230	(ix) For a Class I well The (from Chapter 13, Section 7(a)) the administrator may deny a permit for any of the following reasons:
1230	may deny a permit for any of the following reasons.
1232	(from Chapter 13, Section $7(a)(i)$) (A) The application is incomplete;
1233	Oľ
1234	
1235	(from Chapter 13, Section 7(a)(ii)) (B) Other justifiable reasons
1236	necessary to carry out the provisions of the Wyoming Environmental Quality Act.
1237	
1238	(from Chapter 13, Section 7(a)(iii)) (C) If the applicant has been and continues to be in violation of the provisions of the Environmental Quality Act Wyoming
1239 1240	Environmental Quality Act.
1240	Environmental Quanty Act.
1242	(x) For Class I wells (from Chapter 13, Section 7(b)) The the administrator
1243	shall deny a permit for any of the following reasons:
1244	
1245	(from Chapter 13, Section 7(b)(i)) (A) The project, if constructed
1246	and/or operated, will cause violation of applicable state surface or groundwater standards;
1247	(from Chapter 13, Section 7(b)(ii)) (B) The application contains a
1248 1249	proposed construction or operation which does not meet the requirements of this chapter; or
1249	proposed construction of operation when does not freet the requirements of this chapter, of
1250	(from Chapter 13, Section 7(b)(iii)) (C) The application does not
1252	provide documentation to comply with financial responsibility requirements of Section <u>47</u> 19.
1253	

1254 1255 1256 1257	(from Chapter 13, Section 7(c)) (D) The administrator shall deny any permit for which the U.S. Environmental Protection Agency has denied an aquifer exemption.
1257 1258 1259 1260 1261	(from Chapter 13, Section 7(d)) (E) When the department intends to deny a permit for any reason other than an incomplete or deficient application, a draft permit shall be prepared and public notice issued pursuant to Section <u>19</u> 21.
1262 1263	(from Chapter 16, Section 5(b) Permit processing procedures applicable to all Class V facilities, individual and general permits.
1264 1265 1266	(xi) For Class V wells (from Chapter 16, Section 5(b)(i)) The the director may deny an individual permit for any of the following reasons:
1267 1268 1269	(from Chapter 16, Section 5(b)(i)(A)) (A) The application is incomplete:
1270 1271 1272 1273	(from Chapter 16, Section 5(b)(i)(B)) (B) The project, if <u>constructed and/or operated</u> , will cause violation of applicable state surface or groundwater <u>standards</u> ;
1274 1275 1276 1277	(from Chapter 16, Section 5(b)(i)(C)) (C) The application contains a proposed construction or operation which does not meet the requirements of this chapter;
1278 1279 1280 1281 1282	(from Chapter 16, Section 5(b)(i)(D)) (D) The permitted facility would be in conflict with or is in conflict with a state approved local wellhead protection plan, state approved local source water protection plan, or state approved water quality management plan; or
1283 1284 1285 1286	(from Chapter 16, Section 5(b)(i)(E)) (E) Other justifiable reasons necessary to carry out the provisions of the Environmental Quality Act_Wyoming Environmental Quality Act.
1287 1288 1289 1290	(from Chapter 16, Section 5(b)(ii)) (F) If the director intends to deny an individual permit for any reason other than an incomplete or deficient application, a draft permit shall be prepared and public notice issued pursuant to Section 13 21 of this chapter.
1291 1292 1293	(from Chapter 13, Section 8(e)) The administrator may revoke a permit for the following reasons:
1294 1295 1296	(from Chapter 16, Section 5(b)(vi)) (xii)The administrator may revoke and reissue or terminate a permit for any of the following reasons:
1297 1298 1299 1300	(from Chapter 13, Section 8(e)(i) and Chapter 16, Section 5(b)(vi)(A)) (A) Noncompliance with terms and conditions of the permit;

1301	(from Chapter 13, Section 8(e)(ii) and Chapter 16, Section 5(b)(vi)(B))
1302 1303	(B) Failure in the application or during the issuance process to disclose fully all relevant facts, or misrepresenting any relevant facts at any time; or
1303	racts, or misrepresenting any relevant racts at any time, or
1305	(from Chapter 13, Section 8(e)(iii) and Chapter 16, Section 5(b)(vi)(C))
1306	(C) A determination that the activity endangers human health or the environment and can
1307	only be regulated to acceptable levels by a permit modification or termination.
1308	
1309	(from Chapter 16, Section 5(b)(vii) The administrator may modify a
1310	permit to resolve issues that could lead to the revocation of the permit under Section 5 (b) (vi) of
1311	this chapter. The administrator, as part of any notification of intent to terminate a permit, shall
1312	order the permittee to proceed with reclamation on a reasonable time period.
1313	
1314	(from Chapter 13, Section 8(f)) (xiii) The administrator may modify a
1315	permit or license to resolve issues that could lead to the revocation or consider any of the
1316	reasons in the preceding paragraph as sufficient justification to terminate a permit or license.
1317	The administrator as part of any notification of intent to terminate a permit or license shall order
1318	the permittee or licensee to proceed with reclamation on a reasonable time period.
1319 1320	(from Chapter 13, Section 8(i)) (xiv) Permits will be Permits for Class I
1320	wells will be automatically terminated after closure and release of the financial responsibility
1321	requirements of Section 17 19 by the department.
1323	requirements of Section 17 19 by the department.
1324	(from Chapter 13, Section 8(k) and Chapter 16, Section $5(b)(x)$) (xv)
1325	Transfer of a permit is allowed only upon approval by the administrator. (from chapter
1326	16, Section $5(b)(x)$) When a permit transfer occurs pursuant to this section, the permit rights of
1327	the previous permittee will automatically terminate.
1328	
1329	(from Chapter 13, Section 8(k)(i)) The permit holder shall apply in
1330	writing as though he was the original applicant for the permit and shall further agree to be
1331	bound by all of the terms and conditions of the permit and provide the necessary bonds;
1332	
1333	$\frac{(\text{from Chapter 16, Section 5(b)(x)(A)) (A)}{\text{The proposed permit}}$
1334	holder shall apply in writing as though that person was the original applicant for the permit and
1335	shall further agree to be bound by all of the terms and conditions of the permit.
1336 1337	(from Chapter 12 Section $\frac{9}{10}$) and Chapter 16 Section $\frac{5}{10}$
1338	 (from Chapter 13, Section 8(k)(iii) and Chapter 16, Section 5(b)(x)(B)) (B) Transfer will not be allowed if the permittee is in noncompliance with any term and
1338	conditions of the permit, unless the transferee agrees to bring the facility back into compliance
1340	with the permit.
1341	
1342	(from Chapter 13, Section 8(j)) When a permit transfer occurs
1343	pursuant to this section, the past permit will automatically terminate.
1344	
1345	(from Chapter 13, section $8(k)(iv)$) (C) When a permit transfer occurs,
1346	the administrator may modify a permit pursuant to this section. The administrator shall provide
1347	public notice pursuant to Section 19 21 for any modification other than a minor modification
1348	defined by this section.
1349	

<u>file a stat</u>	(from Chapter 13, Section 8(k(iv)) (D) The potential transferee shall ment of qualifications to hold a permit with the administrator.
or termin of this ch	(from Chapter 13, Section 8(1)) Proposed modifications, revocations tions are subject to the public notice and hearing requirements outlined in Section 19 opter.
5	ection 8. Records and Reports.
	rom Chapter 16, Section 5(d)) Records and reports required for general and individu
	rom Chapter 13, Section 15(a)) (a) Monitoring reports required by the permit shated to the administrator.
	rom Chapter 13, Section 9(d)(xxviii)) (b) Monitoring results shall be reported i reports unless otherwise specified.
shall sub equipment	rom Chapter 13, Section 15(b) and Chapter 16, Section 5(d)(i)) (c) The permitten it a written report to the administrator of all remedial work concerning the failure of t or operational procedures which resulted in a violation of a permit condition, at the n of the remedial work.
aborted of	rom Chapter 13, Section 15(d) and Chapter 16, Section 5(d)(iii)) (d) For any curtailed operation, in lieu of an annual report, a complete report shall be submitted rty (30) days of complete termination of the discharge or associated activity.
13, Sections reports (f shall be s covered i	rom Chapter 13, Section 15 (c) and Chapter 16, Section 5(d)(ii)) (e) (from Chapter n 15(c) Quarterly and annual reports (Chapter 16, Section 5(d)(ii)) Routine periodic om Chapter 13, Section 15 (c) and Chapter 16, Section 5(d)(ii)) required by the pern ibmitted to the administrator within thirty (30) days following the end of the period a the report. (from Chapter 13, Section 15 (d))Reports shall include the following on: (Chapter 16, Section 5(d)(ii)) Routine periodic on the report.
	(from Chapter 13, Section 15 (c)(iv) and Chapter 16, Section 5(d)(ii)(A)) (i) (from Chapter 16, Section 5(d)(ii)(A)) If the permit requires, an An accounting l volume of fluid injected for the period covered by the report, the year to date, and (pter 13, Section 15 (c)(iv)) the life of the well to date.
injected 1	<u>(from Chapter 13, Section 15 (c)(v) and Chapter 16, Section 5(d)(i)(B)) (ii)</u> An analysis of the physical, chemical and other relevant characteristics of the uid.
event tha	(from Chapter 13, Section 15 (c)(iii)) (iii) A complete description of an triggered any alarm or shutdown the well, and the response taken.
event wh	(from Chapter 13, Section 15 (c)(ii)) (iv) A complete description of an re maximum annular or injection pressures, as specified in the permit, were exceeded

1399 1400	(from Chapter 13, Section 15 (c)(i)) (v) The average, maximum and minimum injection pressures for each month.
1401 1402 1403	(from Chapter 13, Section 15 (c)(vi)) (vi) Any well workover.
1404 1405	(from Chapter 13, Section 15(e)) (f) Quarterly and annual reports for hazardous waste wells shall also include a description of any change in the volume of fluid in the
1406 1407 1408	casing/tubing annulus of the well, and an explanation of the temperature/volume relationships covering the fluid. Any addition or withdrawal of fluids from the casing/tubing annulus shall be noted.
1409 1410	(from Chapter 13, Section 15 (f)) (g) The results of any mechanical integrity test, or
1411 1412	any other testing done on a well, shall be submitted to the administrator within thirty (30) days or with the next quarterly report, whichever comes later, following the completion of the test.
1413 1414 1415	(from Chapter 13, Section 15(g) and Chapter 16, Section 5(d)(iv)) (h) The permittee shall retain all monitoring records required by the permit for a period of three (3) years
1416 1417	following (from Chapter 13, Section 15(g) well closure, at which time the operator shall deliver the records to the administrator. facility closure.
1418 1419 1420	Section 9. Individual Permits for Class V Facilities.
1421 1422	(from Chapter 16, Section 6(a)) (a) The operator shall submit an application and obtain a permit prior to the construction, installation, modification or operation of any facility in
1423 1424 1425	the following subclasses: 5A3; 5B3; 5B5; 5C1; 5C2; 5C3; 5D1; 5D3; 5D4; 5E3, 5E4 and 5F2 unless the facility is covered by a general permit. In addition, any facility not authorized under Sections 10 and 11, and operators directed by the administrator to obtain an individual permit,
1426 1427	shall obtain an individual permit under this section.
1428 1429 1430	(from Chapter 16, Section 6(b)) (b) The operator is responsible to make application for and obtain a permit. Each application must be submitted with all supporting data required in this chapter.
1431 1432 1433	(from Chapter 16, Section 6(c)) (c) A complete application for a Class V facility individual permit shall include:
1434 1435	(from Chapter 16, Section 6(c)(i)) (i) A brief description of the nature of the
1436 1437 1438	business and the activities to be conducted that require the applicant to obtain a permit under this chapter.
1439 1440	(from Chapter 16, Section 6(c)(ii)) (ii) The name, address and telephone number of the operator, and the operator's ownership status and status as a federal, state, private,
1441 1442	public or other entity. (from Chapter 16, Section $G(a)(iii)$) (iii) The name address and talenhane
1443 1444 1445 1446	<u>(from Chapter 16, Section 6(c)(iii)) (iii) The name address and telephone</u> <u>number of the facility. Additionally, the location of the facility shall be identified by section,</u> <u>township, range and county.</u>

(from Chapter 16, Section 6(c)(iv)) (iv) A calculation of the area of review to include including:
$\frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A) \qquad A \text{ calculation to}}{A \text{ calculation to}} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{or modified after the affected by the injected waste for all Class V facilities constructed}} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{or modified after the effective date of these regulations. This calculation determines the total} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{or modified after the effective date of these regulations. This calculation determines the total} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{or modified after the effective date of these regulations. This calculation determines the total} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{or modified after the effective date of these regulations. This calculation determines the total} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)(iv)(A))}(A)}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ \frac{(\text{from Chapter 16, Section 6(c)}(A))}{(\text{from Chapter 16, Section 6(c)}(A))} \\ (\text{from Chapt$
(from Chapter 16, Section 6(c)(iv)(B)) (B) A Class V area of review shall never be less than the area of potentially impacted groundwater.
(from Chapter 16, Section 6(c)(iv)(C)) (C) All areas of review shall be legally described by township, range and section to the nearest ten (10) acres as described under the general land survey system.
(from Chapter 16, Section 6(c)(v)) (v) Information about the proposed facility including:
(from Chapter 16, Section $6(c)(v)(A)$) (A) A description of the substances proposed to be discharged, including type, source, and chemical, physical, radiological and toxic characteristics; and
(from Chapter 16, Section 6(c)(v)(B)) (B) Construction and engineering details in accordance with Section 10 13 of this chapter and Chapter 11 Water Quality Rules and Regulations.
(from Chapter 16, Section 6(c)(vi)) (vi) Information, including the name, description, depth, geologic structure, faulting, fracturing, lithology, hydrology, and fluid pressure of the receiver and any relevant confining zones. The fracture pressure of the receiver shall be submitted only if the injection is under pressure into a confined aquifer.
(from Chapter 16, Section 6(c)(vii)) (vii)Water quality information including background water quality data which will facilitate the classification of any groundwaters which may be affected by the proposed discharge. This must include information necessary for the division to classify the receiver and any secondarily affected aquifers under Chapter 8, Wyoming Water Quality Rules and Regulations.
(from Chapter 16, Section 6(c)(viii)) (viii) A topographic and other pertinent maps, extending at least one (1) mile beyond the property boundaries of the facility, but never less than the area of review, depicting:
(from Chapter 16, Section 6(c)(viii)(A)) (A) The facility and each of its intake and discharge structures;
(from Chapter 16, Section 6(c)(viii)(B)) (B) Each well, drywell or subsurface fluid distribution system where fluids from the facility are injected underground;

(from Chapter 16, Section 6(c)(viii)(C)) (C) Other wells, springs, and surface water bodies, and drinking water wells listed in public records or otherwise known	
to the applicant within the area of review; and	
(from Chapter 16, Section 6(c)(viii)(D)) (D) Bedrock and surfician geology, geologic structure, and hydrogeology in the area.	<u>u</u>
(from Chapter 16, Section 6(c)(ix)) (ix) A list of other relevant permits, whether federal or state, that the facility has been required to obtain, such as construction permits. This includes a statement as to whether or not the facility is within a state approved water quality management plan area, a state approved wellhead protection area or a state approved source water protection area.	
(from Chapter 16, Section $6(c)(x)$) (x) Detailed plans for monitoring the volume and chemistry of the discharge, and water quality of selected water wells within the arc of review in accordance with Section 15 of this chapter.	<u>ea</u>
(from Chapter 16, Section $6(c)(xi)$) (xi) All applications for permits, reports, information to be submitted to the Administrator administrator shall be signed by a responsible officer as follows (new language) described in Section $6(f)(xiv)$ and the application shall contain the certification contained in Section $6(f)(xv)$ of this chapter.	
(from Chapter 16, Section 6(d)) (xii) All data used to complete permit applications shall be kept by the applicant for a minimum of three (3) years from the date of signing. Section 10. General Permits for Class V Facilities.	
(from Chapter 16, Section 7(a)) (a) The department may develop and issue gener permits pursuant to these regulations which cover Class V facilities for the following subclasses: 5A1, 5A2, 5B1, 5C4, 5C5, 5C6, 5D1, 5D2, 5E1, 5E3, and 5E5. The administrator may issue general permits in other categories as the need arises. 5E3 facilities which were permitted as small wastewater systems prior to April 14, 1998 are permitted by rule under Section 8 (c) (v) and are not covered by this section. Facilities in these subclasses which have already been issued individual permits under Chapter 9 or Chapter 16, Water Quality Rules an Regulations may continue under these permits until they are terminated, revoked and reissued, or canceled at the request of the operator. Coverage shall not be extended to any facility if such a facility would be in violation of any state approved source water protection area. Facilities in these subclasses not presently covered by an individual permit will be authorized by permit by rule until the general permit for the specific subclass is issued. The operator of a facility listed in this section shall have two (2) years after the date of issuance of the general permit to: (from Chapter 16, Section 7(a)(i)) (i) Obtain coverage under the issued	<u>id</u> <u>h</u> <u>n</u>
general permit; <u>(from Chapter 16, Section 7(a)(ii)) (ii)</u> Submit an application and receive an individual permit under this chapter.	L

1543 1544 1545	(from Chapter 16, Section 7(a)(iii)) (iii) Continue to be covered by a permit issued pursuant to Chapter 9 of these regulations.
1545 1546 1547 1548	(from Chapter 16, Section 7(a)) (iv) Abandon the facility in accordance with Section $\frac{12}{18}$.
1549 1550	(from Chapter 16, Section 7(e)) (b) General permits shall also include:
1551 1552 1553	$\frac{\text{(from Chapter 16, Section 7(e)(i))}(i)}{\text{Section 5-(c)-(i)}} \frac{\text{The permit conditions required in}}{6(h)(iii)}$
1554 1555 1556 1557 1558 1559	(from Chapter 16, Section 7(e)(ii)) (ii) A requirement to submit information necessary for the department to make an assessment of the vulnerability of the environment and public health to the injection from the Class V well. Such information may include the depth to the groundwater table at the disposal field, groundwater quality or existing available information on the lithology, geology, hydrogeology and the location of the following items within 1/4 mile of the Class V facility:
1560 1561 1562	(from Chapter 16, Section 7(e)(ii)(A)) (A) All water supply wells and the uses of each respective well;
1563 1564 1565 1566 1567 1568	<u>(from Chapter 16, Section 7(e))(ii)(B)) (B)</u> All property boundaries and land uses; <u>(from Chapter 16, Section 7(e))(ii)(C)) (C)</u> All surface water bodies or springs; and
1569 1570 1571	<u>(from Chapter 16, Section 7(e))(ii)(D)</u> All known sources of groundwater contamination or pollution.
1572 1573 1574 1575	(from Chapter 16, Section 7(e))(ii)(E)) (E) All state approved source water protection areas, wellhead protection areas, 201 service areas, or water quality management plan areas.
1576 1577 1578 1579	(from Chapter 16, Section 7(e(iii)) (iii) Depth below the ground surface for the point of injection and for the well screening in all wells within the area of review;
1580 1581 1582 1583 1584	(from Chapter 16, Section 7(e)(iv)) (iv) A requirement for facilities constructed after April 14, 1998 that the operator certifies the facility will meet the design, construction, and operational performance requirements in Section 10 13 for the specific subclass of facility.
1584 1585 1586 1587 1588 1589 1590	(from Chapter 16, Section 7(e)(v)) (v) <u>A requirement that the operator submit</u> the disposal capacity of the facility in gallons per day as calculated using Table 1, Chapter 25 Tables 1 and 2, Water Quality Rules and Regulations Chapter 25. Some facilities may be required to monitor the volume of injectate actually disposed of, or the volume of water used in the area served by the Class V facility.

1591	(from Chapter 16, Section 7(f)) (c) The administrator may require any operator
1592	covered by a general permit to obtain an individual permit for the facility when a review of the
1593	information submitted under this section indicates that the general permit would not be
1594	protective of groundwater in that specific case. Any operator covered by a general permit may
1595	at any time apply for and obtain an individual permit for the same facility. Once issued, an
1596	individual permit will replace coverage by the general permit for that facility.
1597	
1598	(from Chapter 16, Section 7(g)) (d) General permits will contain the subclass of
1599	injection facility covered, the geographic area covered, the general nature of the fluids to be
1600	discharged, and the location of the receiver where the discharge will be allowed. General
1601	permits will follow the public notice requirements of Section 13 22 of this chapter. During each
1602	five (5) year review of a general permit, a public notice shall be issued by the department stating
1603	that a five (5) year review has been done, listing the facilities covered by a general permit, and
1604	stating where the public may obtain a copy of the permit.
1605	
1606	(from Chapter 16, Section 7(h)) (e) Operators of new injection facilities who
1607	believe that their facility may be covered by a general permit in class 5C6 facilities may apply
1608	for coverage under the general permit for that subclass. If not accepted for coverage under this
1609	general permit, the operator shall apply for an individual permit under subclass 5C3.
1610	
1611	(from Chapter 16, Section 7(i)) (f) Operators of new injection facilities who
1612	believe that their facility may be covered by a general permit in class 5E5 facilities may apply
1613	for coverage under the general permit for that subclass. If not accepted for coverage under this
1614	general permit, the operator shall apply for an individual permit under subclass 5E3.
1615	
1616	(from Chapter 16, Section 7(j)) (g) In order to obtain coverage under the general
1617	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an
1618	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of
1618 1619	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an
1618 1619 1620	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility.
1618 1619 1620 1621	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the
1618 1619 1620 1621 1622	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the
1618 1619 1620 1621 1622 1623	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on
1618 1619 1620 1621 1622 1623 1624	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the
1618 1619 1620 1621 1622 1623 1624 1625	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on
1618 1619 1620 1621 1622 1623 1624 1625 1626	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health.
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(l)) (i) General permits for Class 5C5 coal bed
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health.
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(l)) (i) General permits for Class 5C5 coal bed methane injection facilities shall require that:
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(1)) (i) General permits for Class 5C5 coal bed methane injection facilities shall require that: (from Chapter 16, Section 7(1)(i)) (i) Each operator provide background
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(1)) (i) General permits for Class 5C5 coal bed methane injection facilities shall require that: (from Chapter 16, Section 7(1)(i)) (i) Each operator provide background information showing that the class of use under Chapter 8 for each injection zone will not be
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(1)) (i) General permits for Class 5C5 coal bed methane injection facilities shall require that: (from Chapter 16, Section 7(1)(i)) (i) Each operator provide background
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h)General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(1)) (i)General permits for Class 5C5 coal bed methane injection facilities shall require that: (from Chapter 16, Section 7(1)(i)) (i)Each operator provide background information showing that the class of use under Chapter 8 for each injection zone will not be violated by the injection of coal bed methane produced water.
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h)
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h)General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(1)) (i)General permits for Class 5C5 coal bed methane injection facilities shall require that: (from Chapter 16, Section 7(1)(i)) (i)Each operator provide background information showing that the class of use under Chapter 8 for each injection zone will not be violated by the injection of coal bed methane produced water.
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(l))(i) General permits for Class 5C5 coal bed methane injection facilities shall require that: (from Chapter 16, Section 7(l)(i)) (i) Each operator provide background information showing that the class of use under Chapter 8 for each injection zone will not be violated by the injection of coal bed methane produced water. (from Chapter 16, Section 7(l)(ii)) (i) A valid pressure falloff curve be recorded for each well within one (1) year of the start of injection into that well.
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(l)) (i) General permits for Class 5C5 coal bed methane injection facilities shall require that: (from Chapter 16, Section 7(l)(i)) (i) Each operator provide background information showing that the class of use under Chapter 8 for each injection zone will not be violated by the injection of coal bed methane produced water. (from Chapter 16, Section 7(l)(ii)) (ii) A valid pressure falloff curve be recorded for each well within one (1) year of the start of injection into that well.
1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636	permit all operators of class 5C6 and 5E5 shall submit detailed construction drawings and an abbreviated groundwater study showing the approximate depth to groundwater and a list of water wells within one half mile of the facility. (from Chapter 16, Section 7(k)) (h) General permits may be written to require the operator to monitor the water quality of the injected fluid and to submit the information to the department. Existing facilities under this section may be required to monitor injectate quality on a one time basis, on a quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to cause adverse environmental damage or affect human health. (from Chapter 16, Section 7(l))(i) General permits for Class 5C5 coal bed methane injection facilities shall require that: (from Chapter 16, Section 7(l)(i)) (i) Each operator provide background information showing that the class of use under Chapter 8 for each injection zone will not be violated by the injection of coal bed methane produced water. (from Chapter 16, Section 7(l)(ii)) (i) A valid pressure falloff curve be recorded for each well within one (1) year of the start of injection into that well.

gradient of the receiver making the calculation	r is .70 psi/foot of depth and using the depth of the second seco	he topmost perforation in
Section 11.	Permit by Rule for Class V Facilities.	
minimal threats to poll of this section are pern information contained facility and to meet the this Chapter. No facili state approved source which is in conflict with		h meet the requirements her or operator to submit r modification of a and in Section 10 13 of wellhead protection area uality management area
(from Chapter shall meet the followin		y rule under this section
Section 6 (c)(i), (ii) and submit the following in constructed after the ef date of these regulation Underground Injection	Chapter 16, Section 8(a)(i)) (i) In addition to d (iii) Section 9 (c) (i), (ii) and (iii) of this chapter aventory information to the department prior to c ffective date of these regulations and within one as for existing facilities: (Facilities which are alread Control Program, or which were issued a permi w registration, but may be asked for updated info	er, the operator shall construction for facilities (1) year of the effective eady registered with the t under Chapters 3, 9 or
facility, either a compl meter accuracy.	(from Chapter 16, Section 8(a)(i)(A)) (A) ete legal description or latitude and longitude pro	<u>The location of the</u> eferably within a (ten) 10
description of the qual	(from Chapter 16, Section 8(a)(i)(B)) (B) ity of the injected fluid.	Type and general
of the facility in gallon	(from Chapter 16, Section 8(a)(i)(C)) (C) as per day.	The disposal capacity
zone.	(from Chapter 16, Section 8(a)(i)(D)) (D)	Depth of injection
facility is operating, te	(from Chapter 16, Section 8(a)(i)(E)) (E) mporarily abandoned, or permanently abandoned	
constructed and operat	Chapter 16, Section 8(a)(ii)) (ii) The facility sl ed to protect groundwater standards contained ir ulations and performance standards found in this	n Chapter 8, Water

1687	(from Chapter 16, Section 8(a)(iii)) (iii) Chemical, bacteriological, radiological
1688	additives, hazardous substances or toxic substances additives shall not be mixed in the injected
1689	fluid at any time during use of the water, prior to injection or during injection.
1690	
1691	(from Chapter 16, Section 8(a)(iv)) (iv) Any violation of the requirements of
1692	these regulations by a Class V facility operator permitted by rule shall be reported to the
1693	department by telephone within twenty-four (24) hours of the time when the operator becomes
1694	aware of the violation. A written report shall be filed by the operator with the department
1695	within seven (7) days detailing steps which have been taken and will be taken to eliminate the
1696	violation.
1697	
1698	(from Chapter 16, Section 8(b)) (b) All facilities, referenced in this section, which
1699	do not meet the requirements of subsection (a) shall obtain an individual permit under this
1700	chapter. For facilities constructed or modified after the effective date of these regulations
1701	requiring an individual permit, the owner or operator shall obtain the permit prior to any
1702	construction.
1703	(from Charten 16 Section 8(a)) (a) The following classes of facilities are
1704 1705	(from Chapter 16, Section 8(c)) (c) The following classes of facilities are permitted by rule under this section:
1705	permitted by fulle under this section.
1700	(from Chapter 16, Section $8(c)(i)$) (i) 5B2 facilities, except any facility
1708	which injects wastewater or contains polluted groundwater or surface water in concentrations
1709	above the receiver use standards contained in Chapter 8, Water Quality Rules and Regulations.
1710	abore the receiver use standards contained in empter 6, which Quarty Rules and Regulations.
1711	(from Chapter 16, Section $8(c)(ii)$) (ii) After the effective date of these
1712	regulations, coal bed methane operators cannot be covered by 5B2 aquifer recharge rule
1713	authorizations. All coal bed methane disposal systems must be covered by a general permit or
1714	an individual permit under this chapter if they inject into an Underground Source of Drinking
1715	Water, or a Class II permit issued by the Wyoming Oil and Gas Conservation Commission if
1716	they inject into a Class VI aquifer.
1717	
1718	(from Chapter 16, Section 8(c)(iii)) (iii) 5B4 facilities, provided that the water
1719	injected will not cause a groundwater standards violation under Chapter 8, Water Quality Rules
1720	and Regulations.
1721	(from Charten 1C, Castien 9(a)(b)) (b) 5DC and 5D7 for illing
1722	(from Chapter 16, Section 8(c)(iv)) (iv) 5B6 and 5B7 facilities;
1723 1724	(from Chapter 16, Section $8(c)(v)$) (v) 5D5 facilities, except those facilities
1724	receiving water polluted above the receiving groundwater class of use standards contained in
1725	Chapter 8, Water Quality Rules and Regulations and facilities injecting swimming pool wastes
1720	into a Class I groundwater.
1728	into a class i gioundwater.
1729	(from Chapter 16, Section $8(c)(vi)$) (vi) 5E3 facilities which were originally
1730	permitted under a small wastewater system permit issued by the Department of Environmental
1731	Quality or a local government delegated the authority to issue small wastewater system permits,
1732	located within any five (5) acres of land where the cumulative maximum peak daily wastewater
1733	flow injected from other small wastewater system permitted facilities under the same ownership
1734	would exceed 2,000 gallons per day.
1735	

	(from Chapter 16, Section 8(c)(vii)) (vii)5F1 facilities, provided that
i	nformation contained in Section 10 13 (m) of this chapter is submitted.
	(from Chapter 16, Section 8(d)) (d) A permit by rule where the operator has
	rovided the necessary information shall be valid until the facility is properly closed pursuant to
<u>t</u>]	nese regulations or until a permit has been issued or denied under this chapter.
	(from Chapter 16 Section 8(a)) (a) The administrator may request information
£	(from Chapter 16, Section 8(e)) (e) The administrator may request information rom the owner or operator of a well or facility permitted by rule to determine whether the
	acility may be causing a violation of groundwater use standards in Chapter 8, Water Quality
_	Rules and Regulations, the construction standards found in this chapter and in Chapter 11,
	Vater Quality Rules and Regulations, or any other requirements of this chapter. Such
_	nformation may include, but is not limited to:
-	
	(from Chapter 16, Section 8(e)(i)) (i) Analysis of injected fluids and periodic
<u>s</u>	ubmission of reports of such monitoring.
	(from Chapter 16, Section 8(e)(ii)) (ii) Groundwater monitoring and periodic
<u>S</u>	ubmission of reports of such monitoring.
	(from Chapter 16 Section 9(a)(iii)) (iii) Description of reactiving strate
	(from Chapter 16, Section 8(e)(iii)) (iii) Description of receiving strata.
	(from Chapter 16, Section 8(e)(iv)) (iv) Well locations and down gradient use
0	f groundwater.
<u> </u>	
	(from Chapter 16, Section 8(f)) (f) Any request for information under this section
s	hall be made in writing and include a brief statement of the reasons for requesting the
_	nformation. An owner or operator shall submit the information within the time frames
p	rovided in the request for information.
_	(from Chapter 16, Section 8(g)) (g) The administrator may require any operator
	ermitted by rule to obtain an individual permit for the facility when a review of the information
	ubmitted under Section 8 (e) of this chapter paragraph (e) of this section indicates that the
p	ermit by rule would not be protective of groundwater in that specific case.
	Section 12. Construction Standards for Class I Wells.
	(from Chapter 13, Section 11(a)) (a) All existing and new Class I wells shall be
c	onstructed to prevent the movement of fluids into any underground source of drinking water,
_	ermit the use of testing devices and workover tools, and permit continuous monitoring of
	njection tubing and long string casing, as required under Sections 9 and 10 6 (h)(i) and 6 (h)(ii)
_	f this chapter.
<u>u</u>	i uns enaptei.
	(from Chapter 13, Section 11(b)) (b) All well materials shall be compatible with the
v	vastes that may be contacted. The applicant shall submit data necessary to document
	ompatibility.

783	(from Chapter 13, Section 11(c)) (c) Casing and cement used in the construction of
-	each newly drilled well shall be designed for the life expectancy of the well. The applicant shall
	provide all information required to make a determination based on these factors:
786 787	(from Chapter 13, Section 11(c)(i)) (i) Depth to the injection zone.
788	
789	(from Chapter 13, Section 11(c)(ii)) (ii) Injection pressure, external pressure,
-	internal pressure, and axial loading.
791 792	(from Chapter 13, Section 11(c)(iii)) (iii) Hole size.
793 794	(from Chapter 13, Section 11(c)(iv)) (iv) Size and grade of all casing
	strings (wall thickness, diameter, nominal weight, length of joints, joint specifications and
-	construction material).
797	
98	(from Chapter 13, Section 11(c)(v)) (v) Corrosiveness of injected
	fluid, formation fluids, and temperatures.
	(from Chapter 13, Section 11(c)(vi)) (vi) Lithology of injection and
	confining intervals.
	(from Chapter 13, Section 11(c)(vii)) (vii) Type or grade of cement.
	(from Chapter 13, Section 11(d)) (d) Construction requirements for Class I
_	hazardous waste wells.
	(from Chapter 13, Section 11(d)(i)) (i) For casing and cementing
	requirements, the applicant shall provide all information necessary to make a determination of
-	adequacy based on quantity and chemical composition of injected fluids.
	(from Chapter 13, Section 11(d)(i)) (ii) One surface casing string shall, at a
	minimum, extend into the confining zone below the lowest Underground Source of Drinking
	Water and be cemented by circulating cement from the base of the casing to the surface, using a
	minimum of one-hundred twenty percent (120%) of the calculated annular volume. The
	administrator may require more than one- hundred twenty percent (120%) when the geology or
	other circumstances warrant a greater percentage.
-	suor encumstances warrant a greater percentage.
	(from Chapter 13, Section 11(d)(iii)) (iii) At least one long string casing, using
	a sufficient number of centralizers, shall extend to the receiver and shall be cemented by
	circulating cement to the surface in one or more stages:
9	circulating cement to the surface in one of more stages:
	(from Chapter 13, Section 11(d)(iii)(A)) (A) Of sufficient quantity
	and quality to withstand the maximum operating pressure.
-	and quarty to withstand the maximum operating pressure.
	(from Chapter 13, Section 11(d)(iii)(B)) (B) In a quantity no less
	than one hundred twenty percent (120%) of the calculated volume necessary to fill the annular
	space. The administrator may require more than one hundred twenty percent (120%) when the
	geology or other circumstances warrant a greater percentage.
2	geology of other encultistances warrant a greater percentage.

<u>(from (</u>	Chapter 13, Section 11(d)(iv)) (iv)	Circula	ation of cement may be
accomplished by stagin	g. The administrator may approve an alt	ernative	method of cementing in
cases where the cement	t cannot be recirculated to the surface, pro	ovided th	ne operator can
demonstrate by logs that	at the cement is continuous and does not a	allow flu	id movement behind
the casing.			
<u>(from (</u>	Chapter 13, Section 11(d)(v)) (v)	Casing	s, including any casing
connections, must be ra	ted to have sufficient structural strength	to withst	tand, for the life the
	st and collapse pressures which may be e		
	, and closure of the well. Casings shall al		
	which may be experienced at any point a	along the	e entire length of the
casing during construct	ion, operation, and closure of the well.		
(from (Chapter 13, Section 11(d)(vi)) (vi)At a m	inimum	compant and compant
	fficient quantity and quality to maintain n		
design life of the well.	increate quantity and quanty to mailtain h	neenanne	a mogny over the
design me of the well.			
(from (Chapter 13, Section 11(d)(vii)) (vii)	For tub	oing and packer, the
	all information necessary to make a deter		
these factors:			
	(from Chapter 13, Section 11(d)(vii)(A))) (A)	Depth of setting.
	*		<u> </u>
	(from Chapter 13, Section 11(d)(vii)(B)) (B)	Characteristics of the
injection fluid, includin	g chemical content, corrosiveness, tempe	erature, a	and density.
	(from Chapter 13, Section 11(d)(vii)(C)	(C)	Injection pressure.
	(from Chapter 13, Section 11(d)(vii)(D)) (D)	Annular pressure.
•	(from Chapter 13, Section 11(d)(vii)(E)	<u>) (E)</u>	Rate (intermittent or
continuous), temperatu	re, and volume of injected fluid.		
	(from Charten 12, Contine 11/4)/ "MTN		Cine of continue of 1
	(from Chapter 13, Section 11(d)(vii)(F)	<u>) (F)</u>	Size of casing; and
	(from Chapter 12 Section 11(d)(-::)(C)	(\mathbf{C})	Tubing tongila burgt
and collance strongthe	(from Chapter 13, Section 11(d)(vii)(G)	<u>) (U)</u>	i uding tensile, durst,
and collapse strengths.			
(from (Chapter 13, Section 11(d)(viii)) (viii)	Durino	the drilling and
	I hazardous waste well, appropriate logs		
	depth, thickness, porosity, permeability,		
-	d fluids in all relevant geologic units to as		
	of Section 14 16 of this chapter, and to co		
	ients may be compared. A descriptive rep		
	prepared by the operator and submitted to		· · · · · · · · · · · · · · · · · · ·
minimum, such logs sh	· · ·		ministration. At a
minimum, such togs sit	an menuce.		

1879	(from Chapter 13, Section 11(d)(viii)(A)) (A) Deviation checks
1880	made during drilling of all Class I hazardous waste wells. Such checks shall be done at
1881	sufficiently frequent intervals to determine the location of the borehole.
1882	
1883	(from Chapter 13, Section 11(d)(viii)(B)) (B) Such other logs and
1884	tests as may be needed after taking into account the availability of similar data in the area of the
1885	drilling site, the construction plan and the need for additional information that may arise as
1886	construction of the well progresses. At a minimum, the following logs shall be required:
1887	$(f_{\text{respect}}, C_{\text{respect}}, 12, C_{\text{resplicits}}, 11(4)(-11)(D)(D)(D) = W_{\text{respect}}$
1888	(from Chapter 13, Section 11(d)(viii)(B)(I)) (I) When
1889	installing the surface casing: resistivity, spontaneous potential, and caliper logs shall be run before the installation of the casing. A cement bond log and variable density log and
1890	
1891 1892	temperature log are required after the surface casing is installed and before the well is deepened.
1892	(from Chapter 13, Section 11(d)(viii)(B)(II)) (II) When
1894	installing the long string casing: resistivity, spontaneous potential, porosity, caliper, gamma ray
1895	and fracture finder logs are required before the casing is installed. After the casing is installed
1896	and cemented, a cement bond log and variable density log are required before the well is
1897	completed.
1898	<u>completed.</u>
1899	(from Chapter 13, Section 11(d)(viii)(B)(III)) (III) The
1900	administrator may allow the use of an alternative to the logs described above, when, in the
1901	administrator's opinion, the alternative will provide equivalent or better information.
1902	
1903	(from Chapter 13, Section 11(d)(viii)(C)) (C) A mechanical integrity
1904	test as described in Section 9 6(h)(i) of this chapter.
1905	
1906	(from Chapter 13, Section 11(d)(viii)(D)) (D) Whole core or
1907	sidewall cores of the confining zone and receiver and formation fluid samples from the receiver
1908	shall be taken. The administrator may accept cores from nearby wells if the operator can
1909	demonstrate, to the administrator's satisfaction, that core retrieval is not possible, and the other
1910	cores are representative of the conditions in the well. The administrator may require the
1911	operator to core other formations in the borehole.
1912	
1913	(from Chapter 13, Section 11(d)(ix)) (ix)The fluid temperature, pH,
1914	conductivity, pressure, and static fluid level of the discharge zone shall be recorded during
1915	construction.
1916	$(f_{1}, \dots, f_{n}) = (1, 2, 2, \dots, 1) + (1, 2) +$
1917	$\frac{\text{(from Chapter 13, Section 11(d)(x)) (x)}}{\text{At a minimum, the following}}$
1918	information about the injection and confining zones shall be calculated or determined during
1919	construction:
1920 1921	(from Chapter 13, Section $11(d)(x)(A)$) (A) The physical and
1921	chemical characteristics of the rock itself; and
1922	chemical characteristics of the fock fisen, and
1925	(from Chapter 13, Section 11(d)(x)(B)) (B) Physical and chemical
1924	characteristics of the formation fluids.
1925	characteristics of the formation fluids.
1920	

1927	$\frac{(\text{from Chapter 13, Section 11(d)(x)(C))}}{(C)} Upon \text{ completion of}}$
1928 1929 1930	construction, but still prior to operation, the operator shall conduct either pump tests or injectivity tests to verify the hydrogeologic characteristics of the discharge zone.
1930 1931 1932 1933	(from Chapter 13, Section 11(e)) (e) Fluid seals are not allowed in place of a packer in any Class I well.
1935 1934 1935	Section 13. Construction and Operation Standards for Class V Wells.
1936 1937 1938	(from Chapter 16, Section 10)(a) (a) All Class V facilities must meet or exceed the design standards of these regulations including Part B of Chapter 11 and Chapter 26, Water Quality Rules and Regulations.
1939 1940 1941 1942 1943	(from Chapter 16, Section 10)(b)) (b) All Class V facilities shall be constructed to permit the use of testing devices, and allow monitoring of injected fluid quality. Class V facilities shall be constructed to provide for metering of the injectate volume if the individual or general permit requires such metering.
1944 1945 1946	(from Chapter 16, Section 10)(c)) (c) All heating and cooling facilities (5A1, 5A2 and 5A3) shall include:
1947 1948 1949 1950 1951	(from Chapter 16, Section 10)(c)(i)) (i) Provision for the use of non-toxic circulating medium in closed loop systems or an operating system which cannot be made to operate with fluid leaking.
1951 1952 1953 1954	(from Chapter 16, Section 10)(c)(ii)) (ii) Provision for operations without the use of corrosion inhibitors, biocides, or other toxic additives in open loop systems.
1955 1956 1957	(from Chapter 16, Section 10)(c)(iii)) (iii) Provisions to control the total dissolved solids of waters injected into open loop systems to the class of use standard.
1957 1958 1959 1960	(from Chapter 16, Section 10)(c)(iv)) (iv) Provisions for automatic shutdown of the system in the event of a fluid loss from a closed loop system or a loss of any product to an open loop system.
1961 1962 1963 1964 1965	(from Chapter 16, Section 10)(c)(v)) (v) Provisions to ensure that injected water does not come to the surface or flood any subsurface structure in the immediate vicinity of the injection system.
1965 1966 1967 1968 1969	(from Chapter 16, Section 10)(c)(vi)) (vi) Provisions to ensure that known groundwater contamination is not spread by the direct injection of contaminated water or by movement of contamination from one zone to another caused indirectly by the injection.
1970 1971 1972	(from Chapter 16, Section 10)(d)) (d) All mining, sand and backfill facilities (5B1) shall include:
1973 1974 1975	(from Chapter 16, Section 10)(d)(i)) (i) Provision for insuring mechanical integrity of any well designed to remain in service for more than 60 days.

			Provision for controlling the
type of material injector	ed and to insure that no h	nazardous waste i	s injected.
(from	Chapter 16, Section 10)		Provision for leak detection in
all surface piping.	Chapter 10, Section 10)	(u)(III)) (III)	Trovision for leak detection in
	Chapter 16, Section 10)		Provision for insuring that the
backfill remains within	n the permitted area of in	jection.	
(from	Chapter 16, Section 10)	(d)(v)) (v)	Provision to insure that the
	-		ne class of use of the receiver.
	and 5B7) shall include:	All beneficial u	use injection facilities (5B2,
<u>505, 504, 505, 500, 6</u>	and 5D7) shan menude.		
<u>(from</u>	Chapter 16, Section 10)	(e)(i)) (i)	Plans to insure that
contaminants do not en	nter the injection stream.		
(fuom	Chapter 16 Section 10)		Information to show that the
	ish the desired goal state		Information to show that the
	ish the desired gour state	a in the approach	<u></u>
			Target restoration values for
the groundwater in the	affected area being rem	ediated for 5B5 f	acilities.
(from Chapter	¹⁶ , Section 10)(f)) (f)	All commercia	l and industrial Class V
facilities (5C1, 5C2, 5		All commercia	Tand Industrial Class V
	-		e a pre-treatment plan to insure
	abstances) are not dischar andards found in Chapte	-	dwater at concentrations higher
			<u>CFR 141 (as of June 6, 2001),</u>
whichever is more stri	• •		
			<u>m to applicable construction</u>
standards found in Cha	apter 25, Wyoming Wate	er Quality Rules a	ind Regulations; and
(from	Chapter 16, Section 10)	(f)(iii)) (iii)	Include, at a minimum, annual
sampling of the waste	injected as part of the mo	onitoring plan for	the facility.
(from Charton	16.9 + (10)(-1)(-)	\mathbf{W}	
			cility receiving slaughter house ards will occur, the facility shall
be:	e that no violations of gr	oundwater standa	and will beeur, the facility shall
	Chapter 16, Section 10)	(g)(i)) (i) Design	ed for the following minimum
disposal capacities:			
	(from Chapter 16, Sec	tion 10 (σ)(i)(A))	(A) 300 gallons per day
for plant cleanup plus.	· · · · · · · · · · · · · · · · · · ·	<u>uon 10/(E/(1/(A))</u>	<u>(11) 500 ganons per uay</u>
	-		

2025 2026	(from Chapter 16, Section 10)(g)(i)(B) 25 gallons per head of cattle slaughter capacity.
2027 2028 2029	(from Chapter 16, Section 10)(g)(i)(C)) (C) 40 gallons per head of hog slaughter capacity.
2030 2031 2032	(from Chapter 16, Section 10)(g)(i)(D)) (D) 35 gallons per head of sheep slaughter capacity.
2033 2034 2035	(from Chapter 16, Section 10)(g)(i)(E)) (E) Appropriate capacity for any other species slaughtered on a per head basis.
2036 2037 2038 2039 2040	(from Chapter 16, Section 10)(g)(ii) Designed to prevent the disposal of blood and viscera into the septic system except as a small incidental portion of the total flow. Blood and viscera shall be sent to a rendering plant or other approved disposal or recycling system.
2041 2042 2043 2044	(from Chapter 16, Section 10)(g)(iii)) (iii) A grease trap shall be provided ahead of the septic system with a total capacity equal to one half of the total required capacity of the septic tank.
2045 2046 2047 2048	(from Chapter 16, Section 10)(h)) (h) All drainage facilities (those with the code number 5D on Appendix A C) shall include:
2049 2050 2051	(from Chapter 16, Section 10)(h)(i)) (i) A plan to preclude the inadvertent introduction of contaminants into the wastewater stream.
2051 2052 2053 2054 2055 2056	(from Chapter 16, Section 10)(h)(ii)) (ii) An operations and maintenance manual detailing maintenance required, reporting requirements for known spills affecting the facility, and steps to be taken to prevent the introduction of contaminants in the event of a spill within the area served by the facility.
2050 2057 2058 2059	(from Chapter 16, Section 10)(h)(iii)) (iii) Maps showing the area where runoff will be transported to the drainage facility.
2039 2060 2061 2062 2063 2064 2065	(from Chapter 16, Section 10)(i)) (i) All agricultural drainage facilities (5D1) injecting surface runoff from animal waste piles, feedlots, or dairy operations for which a demonstration can be made that the groundwater standards can be met, shall be designed for treatment in a septic tank, lagoon, or other treatment technology prior to injection. The following requirements apply to these systems:
2065 2066 2067 2068 2069 2070	(from Chapter 16, Section 10)(i)(i) The treatment facility shall be sized for the strength and solids content of the wastewater to be treated. (from Chapter 16, Section 10)(i)(ii)) (ii) The flow capacity requirements shall
2070	include all runoff from operations within the collection area and all runoff from precipitation up

2073	(from Chapter 16, Section 10)(i)(iii)) The flow capacity
2074	requirements for drainage from a fully enclosed dairy or feeding operation shall be as follows:
2075	
2076	(from Chapter 16, Section 10)(i)(iii)(A)) (A) 20 gallons per day per
2077	animal up to 50 pounds.
2078	
2079	(from Chapter 16, Section 10)(i)(iii)(B)) (B) 100 gallons per day
2080	per animal up to 500 pounds.
2081	
2082	(from Chapter 16, Section 10)(i)(iii)(C)) (C) 200 gallons per day
2083	per animal over 500 pounds.
2084	
2085	(from Chapter 16, Section 10)(i)(iv)) (iv) The subsurface fluid
2086	distribution system shall be designed in accordance with general design requirements found in
2087	Chapter 25.
2088	Chupter 25.
2089	(from Chapter 16, Section 10)(j)) (j) All sewage disposal (5E) facilities shall:
2085	(1000 Chapter 10, Section 10) (1) An sewage disposal (32) factures share.
2091	(from Chapter 16, Section 10)(j)(i) (i) Conform to applicable construction
2091	standards found in Chapter 25, Wyoming Water Quality Rules and Regulations;
2092	standards found in Chapter 23, wyoning water Quanty Rules and Regulations,
2093	(from Chapter 16, Section $10)(j)(ii)$) (ii) Comply with applicable sections of
2094	Chapter 11, Parts B and C, Water Quality Rules and Regulations for all piping systems or
2095	storage facilities feeding existing or Class V facilities constructed after the effective date of
2090	
	these regulations; and
2098	(from Chapter 16 Section 10)(i)(iii) De designed for the manimum
2099	(from Chapter 16, Section 10)(j)(iii) Be designed for the maximum
2100	daily peak flow determined from Table 1 Tables 1 and 2 of Chapter 25, Water Quality Rules
2101	and Regulations. In addition, whenever multiple points of discharge under one owner within
2102	any five (5) acres of land have a design capacity under Chapter 25 to inject more than a total of
2103	2,000 gallons per day of domestic sewage, they shall be permitted under this chapter in the same
2104	manner that they would be permitted if all the waste were delivered to a single point of
2105	discharge.
2106	
2107	(from Chapter 16, Section 10)(k)) (k) All aquiculture aquaculture return flow
2108	facilities (5E1) shall include pretreatment in a lagoon, septic tank, or oxidation ditch sized for
2109	the strength and volume of the wastes to be disposed of.
2110	
2111	(from Chapter 16, Section 10)(1) (1) All domestic wastewater treatment plant
2112	disposal facilities (5E4) shall also include:
2113	
2114	(from Chapter 16, Section 10)(1)(i) (i) Provisions for filtering of the waste
2115	and disinfection of the injectate.
2116	
2117	(from Chapter 16, Section 10)(1)(ii)) (ii) An environmental monitoring
2118	program, including pre-discharge, operational monitoring, and post discharge monitoring.
2119	
2120	(from Chapter 16, Section 10)(1)(iii) Monitoring of the injectate on
2121	at least a weekly basis for Nnitrate as N, Aammonia as N, and coliform bacteria.

2122	
2122 2123	(from Chapter 16, Section 10)(1)(iv)) (iv) Design to prevent groundwater
2123	standards violations as defined by Chapter 8, Water Quality Rules and Regulations.
2124	standards violations as defined by chapter 6, water Quanty Rules and Regulations.
2125	(from Chapter 16, Section 10)(1)(v)) (v) The points of compliance shall be at
2120	down gradient monitor wells installed on land owned by the same utility that operates the
2127	treatment plant and injection facilities whenever the point of injection is not the point of
2128	compliance.
2129	<u>comphance.</u>
2130	(from Chapter 16, Section 10)(1)(vi)) (vi) Requirements for the
2131	submission, approval and conformance with an operational and maintenance manual.
2132	submission, approval and comormance with an operational and maintenance manual.
2133	(from Chapter 16, Section 10)(m)) (m) All cathodic protection facilities (5F1) shall
2134	include:
2135	merude.
2130	(from Chapter 16, Section 10)(m)(i)) (i) A seal of sodium bentonite or sodium
2137	bentonite grout is required from the surface to a minimum depth of three (3) feet. A second
2138	sodium bentonite or sodium bentonite grout seal is required for a minimum thickness of three
2135	(3) feet, just above the top of the coke breeze. After the sodium bentonite has been placed in the
2140	hole, it shall be hydrated to insure a proper seal. The remainder of the hole between these seals
2141	may be backfilled with cuttings. The above seals may be placed directly in the hole or may be
2142	placed outside of a surface pipe of sufficient length to reach down to the anodes. If a surface
2145	pipe is used, no seals are required inside the pipe except during final abandonment.
2144	pipe is used, no seals are required inside the pipe except during milar abandonment.
2145	(from Chapter 16, Section 10)(m)(ii)) (ii) All aquifers encountered while
2140	drilling shall be isolated from one another using a bentonite seal of at least two (2) feet in
2147	vertical dimension.
2140	
2150	(from Chapter 16, Section 10)(m)(iii)) The coke breeze shall be a
2150	high quality product containing a minimum of leachable metals or organic pollutants. The coke
2152	breeze shall not discharge any pollutant which will cause a groundwater standard violation.
2153	oreche shair not disentinge any pondadite which will eause a groundwater standard fromtoni
2154	(from Chapter 16, Section 10)(m)(iv)) (iv) Surface access to the anode
2155	shall be kept sealed and locked at all times when the anode is not actually being serviced.
2156	
2157	(from Chapter 16, Section $10(m)(v)$) (v) Each separate aquifer
2158	penetrated shall require a separate breather pipe. Each aquifer shall remain in hydrologic
2159	isolation from each other if they were isolated prior to installation.
2160	isolation from each other if they were isolated prior to instantation.
2161	(from Chapter 16, Section 10)(m)(vi)) (vi) If it becomes necessary to wet
2162	any anode installed under this section, only water from a public water supply or water meeting
2163	all of the standards for Class I groundwater of the state shall be used unless the division is first
2164	supplied with an analyses of the water for approval.
2165	The second s
2166	(from Chapter 16, Section 10)(m)(vii)) (vii) Each 5F1 facility shall be
2167	marked in the field with a sign showing the name, address, and telephone number of the
2168	operator who installed the system. Upon abandonment, such markers shall remain in place.
2169	spectro into mounted the system. Open dounderment, such markets shart temain in place,
2105	

	(from Chapter 16, Section 10)(m)(viii) A 5F1 facility shall not be
	lled within 200 feet of any pipeline, wellhead, storage tank, mud pit or other potential
sour	ce of pollution unless the operator's surface rights prevent this requirement from being met.
	(from Chapter 16, Section 10)(n)) (n) Except for beneficial use facilities, Class V
facili	ities shall not be located within 200 feet of any active public water supply well, regardless
	hether or not the well is completed in the same aquifer. This minimum distance may
	ase or the existence of a Class V facility may be prohibited within a state approved
-	head protection area, source water protection area or water quality management plan area.
	(from Chapter 16, Section 10)(0)) (0) Class 5C6 and 5E5 facilities shall meet the
cons	truction standards and separation distances appropriate for the design flow as shown in
	pter 25.
	(from Chapter 16, Section 10)(p)) (p) Class 5C5 coal bed methane injection facilities
shall	
	(from Chapter 16, Section 10)(p)(i)) (i) Provide for metering of water injected
into	each well.
	(from Chapter 16, Section 10)(p)(ii)) (ii) Be constructed to insure that the water
inioc	ted reaches the intended receiver and only the intended receiver. The intended receiver
	be identified by geologic formation and/or member name as well as the depth of that
-	ver below ground surface.
10001	ver below ground surface.
	(from Chapter 16, Section 10)(p)(iii) Provide for disinfection of the
wate	r injected if analysis shows that coliform bacteria, sulfate reducing bacteria or iron fixing
	eria are present in the water as pumped from the coal seam. Treatment methods must be
	ods that would be appropriate for treating water in a public water supply system.
	(from Chapter 16, Section 10)(p)(iv)) (iv) Provide for injection at a
press	sure of less than the fracture pressure of the receiver.
	(from Chapter 16, Section 10)(p)(v)) (v) Provide for monitoring of the quality
of th	e injected water on a periodic basis.
<u>or ul</u>	e injected water on a periodic basis.
	(from Chapter 16, Section 10)(p)(vi)) (vi) Provide notification of the
inten	t to obtain coverage under the general permit to all surface owners, mineral owners or
	r rights owners, oil and gas owners and the owners of coal leases within one-half mile of
	roposed point of injection.
une p	
	(from Chapter 16, Section 10)(p)(vii)) (vii) Provide for pressure testing of
the c	asing before injection and at least once every five (5) years thereafter. The casing shall be
	sure tested up to an indicated surface pressure of 700 psi and held for 15 minutes. A
-	ing result is indicated if the casing still has 690 psi at the end of the 15 minute shut in time.
	Section 14. Siting conditions for Class I Wells.

2217	
2218	(from Chapter 13, Section 12(a)) (a) All Class I wells shall be situated such that
2219	they inject into a formation that is beneath the lowermost Under- ground Source of Drinking
2220	Water within one-quarter (1/4) mile of the well or within two (2) miles for Class I hazardous
2221	waste injection wells, and the discharge zone has sufficient permeability, porosity, thickness,
2222	and extends over a sufficient area to prevent migration of fluids into any underground source of
2223	drinking water.
2224	
2225	(from Chapter 13, Section 12(b)) (b) Class I wells shall be limited to areas that are
2226	determined by the administrator to be geologically suitable for the prevention of migration of
2227	fluids into underground source of drinking waters. In determining geological suitability, the
2228	administrator shall consider the following information submitted by the applicant:
2229	
2230	(from Chapter 13, Section 12(b)(i)) (i) An analysis of the structural and strati-
2231	graphic stratigraphic geology, hydrogeology, and the seismicity of the region.
2232	
2233	(from Chapter 13, Section 12(b)(ii)) (ii) An analysis of the local geology and
2234	hydro-geology hydrogeology of the well site, including, at a minimum, detailed information
2235	regarding the stratigraphy, structure, and rock properties, aquifer hydrodynamics, and mineral
2236	resources.
2237	
2238	(from Chapter 13, Section 12(b)(iii)) (iii) A determination that the
2239	geology of the area can be described confidently, and, for hazardous waste wells only, that the
2240	waste fate and transport can be accurately predicted through the use of models.
2241	
2242	(from Chapter 13, Section 12(c)) (c) The operator shall demonstrate to the
2243	satisfaction of the administrator that:
2244	
2245	(from Chapter 13, Section 12(c)(i)) (i) The confining zone is free from faults
2246	or fractures over an area sufficient to prevent the migration of fluids into a underground source
2247	of drinking water, and contains at least one formation of sufficient thickness and characteristics
2248	capable of preventing vertical propagation of fractures; and
2249	
2250	(from Chapter 13, Section 12(c)(ii)) (ii) The confining zone is separated from
2251	the base of the lowermost underground source of drinking water by at least one (1) sequence of
2252	permeable and less permeable strata that will provide an added layer of protection in the event
2253	of fluid movement through an unlocated borehole or fault.
2254	
2255	(from Chapter 13, Section 12(c)(iii)) (iii) Within the area of review, the
2256	piezometric surface of the fluid in the receiver is less than the piezometric surface of the
2257	lowermost underground source of drinking water considering density effects, injection
2258	pressures, and any significant pumping of the overlying aquifer; or
2259	
2260	(from Chapter 13, Section 12(c)(iv)) (iv) There are no underground sources of
2261	drinking waters present.
2262	
2263	(from Chapter 13, Section 12(d)) (d) The administrator may approve a site which
2264	does not meet the above requirements, if the operator can demonstrate that because of the site's
	· · · · · · · · · · · · · · · · · · ·

	e waste, or other considerations, it would not cause endangerment to
underground source of	of drinking waters.
Section 15.	Environmental Monitoring Program.
(from Chanta	r 13, Section 13(a)) (a) A monitoring program shall be required for
	be adequate to establish baseline data and ensure knowledge of mig
and behavior of the d	
and benavior of the d	isenai ge.
(from Chapte	er 16, Section 11)(a)) (a) The monitoring program shall be adequa
-	migration and behavior of the discharge in the receiver.
•	
<u>(fron</u>	n Chapter 13, Section 13(a)(i) and Chapter 16, Section 11)(a)(i)) (i)
	nay be required for any circumstance where groundwaters of the stat
could be affected (fre	om Chapter 16, Section 11)(a)(i)) by a Class V facility.
	n Chapter 13, Section 13(a)(ii)) and Chapter 16, Section 11)(a)) (ii)
	a monitoring system shall be sufficient to deal with the pollution pot
of the proposed disch	arge.
(fron	h Chapter 16, Section 11)(a)(iii)) (iii) Before construction or
) Class I (from Chapter 16, Section 11)(a)(iii)) or V facility, a monit
	red, shall be adequate to establish baseline conditions of the receiver
program, when requi	ed, shar be adequate to establish buseline conditions of the receiver
(from Chapte	er 13, Section 13(b) and Chapter 16, Section 11)(b)) (b) The
-	shall consist of any or all of the following:
	n from Chapter 13, Section 13(b)(i) and Chapter 16, Section 11)(b)(i
Pre-discharge	e or pre-operational monitoring.
(from	Chapter 12 Section 12(k)(ii) and from Chapter 16 Section 11)(k)(
	<u>n Chapter 13, Section 13(b)(ii) and from Chapter 16, Section 11)(b)(</u> ational monitoring.
Oper	<u>auonai montornig.</u>
(fron	n from Chapter 13, Section 13(b)(iii) and Chapter 16, Section 11)(b)
	e or post-operational monitoring.
	· · · · · · · · · · · · · · · · · · ·
<u>(fron</u>	n from Chapter 13, Section 13(b)(iv) and Chapter 16, Section 11)(b)
(iv) Record keepi	ng and reporting.
	n from Chapter 13, Section 13(b)(v) and Chapter 16, Section 11)(b)(
	additional requirements established by the administrator to meet the
	Chapter 16, Section 11)(b)(v)) Environmental Quality Act Wyomin
Environmental Quali	ty Act and these regulations.
(from Charts	er 13, Section 13(c) and Chapter 16, Section 11)(c)) (c) Each
	shall include maps and cross-sections, where appropriate, showing the
.	nd screening interval of each monitoring site.

2313 2314	(from Chapter 13, Section 13(d) Chapter 16, Section (11)(d)) (d) The operator is responsible for properly installing, operating, maintaining and removing all necessary
2315 2316	monitoring equipment.
2317 2318 2319 2320 2321 2322 2323 2324	(from Chapter 13, Section 13(g) and Chapter 16, Section 11)(e)) (e) The operator shall develop and follow (from Chapter 13, Section 13(g) an approved a written waste analysis plan that describes the procedures to be carried out to obtain detailed chemical and physical analyses of a representative sample of the waste, including quality assurance procedures to be used. (from Chapter 16, Section 11)(e)) Once approved by the department, the operator shall not deviate from the plan without filing an amended plan and obtaining department approval for that amended plan. (from Chapter 13, Section 13(g) and Chapter 16, Section 11)(e)) At a minimum, any plan shall include:
2325 2326 2327 2328 2329	(from Chapter 13, Section 13(g)(i) and Chapter 16, Section 11)(e)) (i) The parameters for which the waste will be analyzed, the rationale for the selection of these parameters, and the test methods to be used to test for these parameters. (from Chapter 13, Section 13(g)(i)) and
2330 2331 2332 2333	(from Chapter 13, Section 13(g)(ii) and Chapter 16, Section 11)(e)) (ii) The sampling method that will be used to obtain a representative sample of the waste.
2334 2335 2336 2337 2338 2339 2340	(from Chapter 13, Section 13 (h) and Chapter 16, Section 11)(e)) (iii) The operator shall repeat the analysis of the injected wastes in the manner and on the schedule described in the waste analysis plan, (from Chapter 16, Section 11)(e)) or when operating changes occur that may significantly alter the characteristics of the waste stream. (from Chapter 13, Section 13 (h) and when process or operating changes occur that may significantly alter the characteristics process, or operating changes occur that may significantly alter the characteristics of the waste stream.
2341 2342 2343	(from Chapter 13, Section 13(i)) (A) The operator shall conduct continuous or periodic monitoring of selected parameters as required by the administrator.
2344 2345 2346 2347 2348	<u>(from Chapter 13, Section 13(j)) (B)</u> The operator shall assure ensure that the plan remains accurate and the analyses remain representative. (f) Requirements for Class I Wells:
2348 2349 2350 2351 2352 2353	(from Chapter 13, Section 13(e)) (i) At a minimum, the permittee shall monitor the pressure in the injection zone annually, including at a minimum, a shutdown of the well for a time sufficient to conduct a valid observation of the pressure falloff curve.
2354 2355 2356	(from Chapter 13, Section 13(f)) (ii) When prescribing a monitoring system, the administrator may also require:
2357 2358 2359 2360 2361	(from Chapter 13, Section 13(f)(i)) (A) Continuous monitoring for pressure changes in the first aquifer overlying the confining zone. When such a well is installed, the operator shall, on a quarterly basis, sample the aquifer and analyze for constituents specified by the administrator.

2 3	(from Chapter 13, Section 13(f)(ii)) (B) The use of indirect, geophysical techniques to determine the position of the waste front, the water quality in a
4 5	formation designated by the administrator, or to provide other site specific data.
	(from Chapter 13, Section 13(f)(iii)) (C) Periodic monitoring of the
	groundwater quality in the first aquifer overlying the receiver.
	(from Chapter 13, Section 13(f)(iv)) (D) Periodic monitoring of the
	groundwater quality in the lowermost underground source of drinking water; and
	(from Chapter 13, Section $13(f)(v)$) (E) Any additional monitoring necessary to determine whether fluids are moving into or between any aquifers penetrated by
	the well.
	(from Chapter 13, Section 13(f)(vi)) (F) The administrator may require
	seismicity monitoring when he has reason to believe that the injection activity may have the
	capacity to cause seismic disturbances.
	(from Chapter 13, Section 13(k)) (iii) Testing and monitoring requirements
	for all Class I hazardous waste wells shall include:
	(from Chapter 12, Section 12(1)(i)) (A). Submission of information by
	(from Chapter 13, Section 13(k)(i)) (A) Submission of information by the applicant demonstrating that the waste stream and its anticipated reaction products will not
	alter the permeability, thickness, or other relevant characteristics of the confining or dis charge
	discharge zones such that they would no longer meet the requirements specified when the area
	of review was calculated.
	(from Chapter 13, Section 13(k)(ii)) (B) Submission of information by
	the applicant demonstrating that the waste will be compatible with the well materials with which
	the waste is expected to come into contact and a description of the methodology used to make
	that determination. Compatibility for purposes of this requirement is established if contact with
	injected fluids will not cause the well materials to fail to satisfy any design requirement imposed
	under Section 11 12 of this chapter.
	(from Charton 12, Section 12(1)(iii)) (C) The administrator shall require
	(from Chapter 13, Section 13(k)(iii)) (C) The administrator shall require continuous corrosion monitoring of the construction materials in the well for all wells where the
	pH of the injection fluid is less than two (2) or greater than eleven (11), and may require such
	monitoring of other wastes. This monitoring may be conducted by placing samples of the well
	construction materials in contact with the waste stream or routing the waste stream through a
	loop constructed of the same materials used in the well, or by using an alternative method
	approved by the administrator.
	(from Chapter 13, Section 13(k)(iv)) (D) If a corrosion monitoring
	program is required, the test shall use identical materials to those used in the construction of the
	well, and such materials shall be continuously exposed to the operating pressures, temperatures,
	and flow rates of the injection operation as measured at the well head. The operator shall
	monitor the materials for loss of mass, thickness, pitting, and other signs of corrosion on a quarterly basis to ensure that the well components meet the minimum standards for material
	strength and performance set forth in Section 11 12 of this chapter.
	<u>savingar and performance bet for an section 11 12 of ans enapter.</u>

	(from Chapter 13, Section 13(1)) (iv) In addition to the above-mentioned
	ments, operators of Class I hazardous waste wells shall also conduct mechanical integ
testing	as follows:
	(from Charten 12, florting 12(1)(1)) (A). The lower string region
iniaatio	(from Chapter 13, Section 13(1)(i)) (A) The long string casing,
	n tubing, and annular seals shall be tested by means of an approved pressure test with r gas on an annual basis and whenever there has been a well workover.
<u>iiquiu c</u>	<u>I gas on an annual basis and whenever there has been a wen workover.</u>
	(from Chapter 13, Section 13(1)(ii)) (B) The bottom-hole cement sh
be teste	d by means of an approved radioactive tracer survey annually.
	(from Chapter 13, Section 13(1)(iii)) (C) An approved temperature,
noise, c	r other approved log shall be run at least once every five (5) years to test for moveme
of fluid	along the borehole. The administrator may require such tests whenever the well is
worked	over.
	(from Chapter 13, Section 13(1)(iv)) (D) Casing inspection logs shall
	east once every five (5) years, unless the administrator waives this requirement due to
well co	nstruction or other factor's factors which limit the test's reliability.
	(from Chapter 13, Section 13(l)(v)) (E) Any other test approved by
	strator may also be used. Procedures for approval of unauthorized mechanical integrit
lests are	e outlined in Section 9 (d) (7) 6(h)(i)(B) of this chapter.
	(from Chapter 13, Section 13(1)(vi)) (F) The administrator shall be
oiven tł	the opportunity to witness all logging and drill stem testing done by the operator at any
	ring the permitting of any well under this chapter. The operator shall submit a schedu
	planned logging and testing to the administrator at least thirty (30) days prior to the f
test.	
	(g) Requirements for Class V Wells:
	(from Chapter 16, Section 11(f)) (i) All Class V permits shall contain a
	(from Chapter 16, Section 11(f)) (i) All Class V permits shall contain a compliance. The point of compliance shall be the point of injection or specific mon
	(from Chapter 16, Section 11(f)) (i) All Class V permits shall contain a
	(from Chapter 16, Section 11(f)) (i) All Class V permits shall contain a E compliance. The point of compliance shall be the point of injection or specific mon pocated down gradient of the injection facilities.
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permit limitations may	be established at the por	int of compliance which are more stringent than
the class of use standar	<u>.d.</u>	
		tion 11(f)(iii)) (C) Facilities where subsurface
^	• •	nitor the injected fluid at the point of injection.
		injection which exceeds the class of use
	· ·	a demonstration is made showing that a class of
		t of compliance downgradient from the point of
•		ded to provide early warning of possible non-
compliance at the poin	t of compliance.	
(from Chapter	16 Section $11(g)$ (h)	Procedures and methods for sample collection
-		ittee to ensure that the samples are representative
	iter, or wastes being sam	· · ·
(`	<u> </u>	*
(from Chapter	16, Section 11(h)) (i)	Sample collection of groundwater shall be of
· · ·	• •	ne, location, depth, etc.) to properly describe the
-	· · ·	methods and procedures described in the U.S.
		RA Groundwater Monitoring Technical
	*	, 1986, unless alternate methods and procedures
are approved by the ad	<u>ministrator.</u>	
		Analysis of all samples shall be accomplished
<u>pursuant to Chapter 8,</u>	Water Quality Rules and	l Regulations, Sections 7 and 8.
		s riegunations, see alons ; and ot
Section 16.	Quality Assurance an	nd Quality Control for Sample Collection and
<u>Section 16.</u> Analysis.	Quality Assurance an	
Analysis.		nd Quality Control for Sample Collection and
<u>Analysis.</u> (from Chapter	13, Section 14 (a)) (a)	nd Quality Control for Sample Collection and Procedures and methods for sample collection
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	of injection activities. The requirement to maintain y enforceable regardless of whether the requirer	
permit.	y enforceable regardless of whether the requirer	
part of the permit applie	Chapter 13, Section 16(a)(i)) (i) The operator s cation, and, upon approval by the administrator, tion of any permit issued.	
proposed significant rev	Chapter 13, Section 16(a)(ii)) (ii) The operator s vision to the method of closure reflected in the p nan the date on which notice of closure is require	lan for approval by t
	Chapter 13, Section 16(a)(iii)) (iii)The pas required in Section 1719 of this chapter.	<u>lan shall <mark>assure</mark> ensu</u>
(from (following information:	Chapter 13, Section 16(a)(iv)) (iv) The closure pl	an shall include the
of plugs to be used.	(from Chapter 13, Section 16(a)(iv)(A)) (A)	The type and num
plug including the eleva	(from Chapter 13, Section 16(a)(iv)(B)) (B) ation of the top and bottom of each plug.	The placement of o
and quantity of materia	(from Chapter 13, Section 16(a)(iv)(C)) (C) I to be used in plugging.	The type, and grad
placement of the plugs.	(from Chapter 13, Section 16(a)(iv)(D)) (D)	The method of
measure to be made.	(from Chapter 13, Section 16(a)(iv)(E)) (E)	Any proposed test
location (by depth) of c	(from Chapter 13, Section 16(a)(iv)(F)) (F) asing and any other materials to be left in the we	
location where casing is	(from Chapter 13, Section 16(a)(iv)(G)) (G) s to be parted, if applicable.	The method and
used to meet the require	(from Chapter 13, Section 16(a)(iv)(H)) (H) ements of paragraph (d)(5) of this section;	The procedure to b
closure.	(from Chapter 13, Section 16(a)(iv)(I)) (I)	The estimated cost

	Chapter 13, Section 16(a)(v)) (v) Post-closure pl	lans shall include the
following information:		
	(from Charton 12 Section $1(\alpha)(\alpha)(A)$) (A)	The surgery is the
injection zone before in	(from Chapter 13, Section 16(a)(v)(A)) (A)	The pressure in the
Injection zone before in	<u>gection began.</u>	
	(from Chapter 13, Section 16(a)(v)(B)) (B)	The anticipated
pressure in the injection	$r_{\rm const}$ zone at the time of closure.	
	(from Chapter 13, Section 16(a)(v)(A)) (C)	The predicted time
	ection zone decays to the point that the well's cor	
intersects the base of th	e lowermost Underground Source Drinking Wate	<u>er.</u>
	(from Chapter 13, Section 16(a)(v)(A)) (D)	Predicted position of
the waste front at closu	<u>re.</u>	
	(from Chapter 13, Section 16(a)(v)(A)) (E)	The status of any
required cleanups; and		The status of ally
regaries creanups, and		
	(from Chapter 13, Section 16(a)(v)(A)) (F)	The estimated cost of
proposed post-closure c	care.	
	Chapter 13, Section 16(a)(vi)) (vi) The administra	
	nce with the procedures outlined in Section 87 o	f this chapter governing
modification of permits	<u>.</u>	
(from ($\frac{1}{2} \sum_{i=1}^{n} \frac{1}{2} \sum_{i=1}^{n} \frac{1}$	anaton of a Class I
	Chapter 13, Section 16(a)(vii)) (vii) An operation on well who ceases injection temporarily, may keep and the section temporarily of	
provided:	on wen who ceases injection temporarily, may k	eep the wen open
	(from Chapter 13, Section 16(a)(vii)(A)) (A)	He The operator
receives authorization f		
	(from Chapter 13, Section 16(a)(vii)(A)) (B)	
lescribed actions or pro	ocedures, satisfactory to the administrator, that th	e operator will take to
	1 not endanger Under- ground Source of Drinkin	
· · ·	use. These actions and procedures shall include of	· · · · · · · · · · · · · · · · · · ·
technical requirements	applicable to active injection wells unless waived	d by the administrator.
(fueros (Chapter 12 Section 16(a)(will) (will) The sec	arotor of a wall that has
	Chapter 13, Section 16(a)(viii)) (viii) The opnore than two years shall notify the administrator	
prior to resuming operations		<u>ai itasi uiiity (50) üäys</u>
prior to resulting opera	aton of the went.	
(from Chapter	13, Section 16(b)) (b) The operator shall noti	fy the administrator at
	or to closure of a well. The administrator may all	
less than sixty (60) day		and a state particular
	—	
	13, Section 16(c)) (c) Within sixty (60) days	
time of the next quarter	ly report, whichever is less, except if the next qu	arterly report is due

2607	within fifteen (15) days, in which case the sixty (60) day requirement will be used, the operator
2608	shall submit a closure report to the administrator.
2609	
2610	(from Chapter 13, Section 16(c)(i)) (i) Such report shall contain a certification
2611	by the operator and the person who performed the closure, if different from the operator, of the
2612	accuracy of the report, and:
2613	
2614	(from Chapter 13, Section $16(c)(i)(A)$) (A) A statement that the
2615	well was closed in accordance with the closure plan previously submitted and approved by the
2616	administrator.
2617	
2618	(from Chapter 13, Section $16(c)(i)(B)$) (B) Where actual closure
2619	differed from the plan previously submitted, a written statement specifying the differences
2620	between the previous plan and the actual closure.
2621	<u>section de provious pluit une de detail crosuloi</u>
2622	(from Chapter 13, Section 16(d)) (d) Standards for well closure.
2623	<u>(110111 Chapter 15, Section 10(d)) (d)</u> Standards for wen closure.
2623	(from Chapter 13, Section $16(d)(i)$) (i) Prior to well closure, the owner or
2625	operator shall observe and record the pressure decay for a time specified by the administrator,
2625	who shall then analyze the pressure decay and the transient pressure observations conducted to
2627	determine whether the injection activity has conformed with predicted values.
2628	determine whether the injection activity has conformed with predicted values.
2628	(from Chapter 13, Section 16(d)(i)i) (ii) Prior to well closure, appropriate
2630	mechanical integrity testing shall be conducted to ensure the integrity of that portion of the long
2631	string casing and cement that will be left in the ground after closure. Testing methods shall be
2632	similar to the mechanical integrity tests required during the operating life of the well.
2632	similar to the meenancar megnty tests required during the operating me of the wen.
2633	(from Chapter 13, Section 16(d)(iii)) (iii) Prior to well closure, the well
2635	shall be flushed with a buffer fluid.
2635	shall be flushed with a buffer fluid.
2637	(from Chapter 13, Section 16(d)(iv)) (iv)Upon closure, a Class I hazardous
2638	waste well shall be plugged with cement in a manner that will not allow the movement of fluids
2639	into or between any underground source of drinking water.
2640	into or between any underground source of drinking water.
2641	(from Chapter 13, Section $16(d)(v)$) (v) Placement of the cement plugs shall be
2642	accomplished by circulating cement to the bottom of the well using a working string. The
2643	working string shall be removed as the cement is pumped. The cement used shall be of a
2644	variety such that the working string can be withdrawn while still allowing the well to be filled
2645	with cement.
2646	
2647	(from Chapter 13, Section 16(d)(vi)) (vi)Each plug used shall be appropriately
2648	tagged and tested for seal and stability before closure is completed.
2648	agged and tested for sear and stability before crosure is completed.
2650	(from Chapter 13, Section 16(d)(vii)) (vii) The well to be closed shall be
2651	in a state of static equilibrium with the mud weight equalized top to bottom, either by
2652	circulating the mud in the well at least once or by a comparable method described by the
2653	administrator, prior to the placement of the cement plugs.
2653	auministrator, prior to the pracement of the cement plugs.
2004	

(from Chapter 13, Section 16(e)) (e) Post-closure care.	
(from Chapter 13, Section 16(e)(i)) (i) The operator shall continue and	
complete any required cleanup action.	
(from Chapter 13, Section 16(e)(i)) (ii) The operator shall continue to condu	ct
any groundwater monitoring required under the permit until pressure in the injection zone	
decays to the point that the well's cone of influence no longer intersects the base of the	
lowermost Underground Source of Drinking Water. The administrator may extend the period of	of
post-closure monitoring if he or she determines that the well may endanger an Underground	_
Source of Drinking Water.	
(from Chapter 13, Section 16(e)(i)) (iii) The operator shall submit a survey pl	
o the local zoning authority designated by the administrator, indicating the location of the well	<u>11</u>
relative to permanently surveyed benchmarks. A copy of the plat shall be submitted to the	
Regional administrator of the U.S. EPA Region <u>VIII</u> 8, the Wyoming State Engineer's Office,	
and to the Wyoming Oil and Gas Conservation Commission.	
(from Chapter 13, Section 16(e)(i)) (iv) The operator shall retain for a	
minimum of three (3) years following well closure, records reflecting the nature, composition	
and volume of all injected fluids. The administrator shall require the operator to deliver the	
records to the administrator at the conclusion of this retention period.	
(from Chapter 13, Section 16(f)) (f) Each owner of a Class I hazardous waste wel	(1
and the owner of the surface or subsurface property on or in which a Class I hazardous waste	<u></u>
well is located, must record a notation on the deed to the facility property or on some other	
instrument which is normally examined during title search that will in perpetuity provide any	
potential purchaser of the property the following information:	
solution parentaser of the property the following information.	
(from Chapter 13, Section $16(f)(i)$) (i) The fact that the land in question has	5
been used to manage hazardous waste.	-
(from Chapter 13, Section 16(f)(ii)) (ii) The name of the State agency or loca	
authority with which the plat was filed, as well as the address of the Environmental Protection	<u>l</u>
Agency Region VIII 8 to which it was submitted.	
(from Chapter 13, Section 16(f)(iii)) (iii) The type and volume of waste injected	
he injection interval or intervals into which it was injected, and the period over which injection	<u>)n</u>
occurred.	
Section 18 Abandonment of Close V Excilition	
Section 18. Abandonment of Class V Facilities.	
((from Chapter 16, Section 12(a)) (a) After the effective date of these regulations,	
Class V facilities may be abandoned in place if the following conditions are met and if it can b)e
demonstrated to the satisfaction of the administrator that:	<u> </u>
demonstrated to the butblewton of the administrator that.	
((from Chapter 16, Section 12(a)(i)) (i) No hazardous waste has ever been	
discharged through the facility.	

discharged through the facility. ((from Chapter 16, Section 12(a)(iii)) (iii)All piping allowing for the discharge has either been removed or the ends of the piping have been plugged in such a way that the plug is permanent and will not allow for a discharge. ((from Chapter 16, Section 12(a)(iv)) (iv)All accumulated sludges a removed from any septic tanks, holding tanks, lift stations, or other waste handling structured prior to abandonment. ((from Chapter 16, Section 12(b)) (b)Facilities which cannot demonstrate compliance with subsection (a) (i) or (a) (ii) of this section, may be abandoned in place if: ((from Chapter 16, Section 12(b))(i))Tests are run on sludges accumula in the septic tanks, holding tanks, lift stations, or other waste handling structures which show that none of these materials contain characteristic hazardous waste or radioactive waste. ((from Chapter 16, Section 12(b)(ii)) (ii) Monitoring of the groundwater in immediate area of the facility shows that there are no toxic materials (substances) present in groundwater at levels higher than class of use standards, which are present as a result of the injection. ((from Chapter 16, Section 12(b)(iii)) (iii)Some other method is determined to be acceptable to the administrator which demonstrates compliance with Chapter of these regulations and prevents the movement of fluid containing any contaminant into an underground source of drinking water, if the
discharge has either been removed or the ends of the piping have been plugged in such a wathat the plug is permanent and will not allow for a discharge. ((from Chapter 16, Section 12(a)(iv)) (iv)All accumulated sludges a removed from any septic tanks, holding tanks, lift stations, or other waste handling structures prior to abandonment. ((from Chapter 16, Section 12(b)) (b)Facilities which cannot demonstrate compliance with subsection (a) (i) or (a) (ii) of this section, may be abandoned in place if: ((from Chapter 16, Section 12(b)(i)) (i)Tests are run on sludges accumula in the septic tanks, holding tanks, lift stations, or other waste handling structures which show that none of these materials contain characteristic hazardous waste or radioactive waste. ((from Chapter 16, Section 12(b)(ii)) (ii) Monitoring of the groundwater in immediate area of the facility shows that there are no toxic materials (substances) present in groundwater at levels higher than class of use standards, which are present as a result of the injection. ((from Chapter 16, Section 12(b)(iii)) (iii)Some other method is determined to be acceptable to the administrator which demonstrates compliance with Chapter of these regulations and prevents the movement of fluid containing any contaminant into an underground source of drinking water, if the
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underground source of drinking water, if the
presence of that contaminant may cause a violation of any primary drinking water standard
found in 40 CFR 141 (as of June 6, 2001).
((from Chapter 16, Section 12(c)) (c) Facilities which cannot make the
demonstrations required under either subsection (a) or (b) of this section shall be excavated
the point where contamination is no longer visible in the soil. At that point, samples shall b
taken of the soil for all hazardous constituents which may have been discharged through the
system. Materials excavated shall be removed from the site for disposal under approval of t Solid and Hazardous Waste Management Division.
John and Hazardous waste management Division.
((from Chapter 16, Section 12(d)) (d) Cathodic protection (5F1) facilities will be
considered to have made the demonstrations required under subsections (a) and (b) if no wa
has been disposed of into the facility. After they have fulfilled their useful purpose, they sh
be abandoned by filling all breather pipes with an impervious material and removing all sur
installations down to a depth of three (3) feet. All anodes where the construction included z
surface casing shall also have the surface casing cut off three (3) feet below grade and a plu
cap shall be installed on the surface casing. It is not necessary to remove the coke breeze,
anodes, and seals during abandonment. The administrator may approve other alternatives for
abandonment if they provide adequate environmental protection.
((from Chapter 16, Section 12(e)) (e) Prior to abandoning any class 5C4 automo
waste disposal facility, the operator shall provide 30-thirty (30) days notice to the administration

Section 19. Fina		
	ncial responsibil	<u>lity.</u>
(from Chapter 13, Se	ction 17(a)) (a)	The operator of any Class I well shall
		lity and resources to close, plug, abandon an
naintain post-closure care for	the underground	d injection operation in a manner prescribed
dministrator. The permittee	shall show evide	ence of such financial responsibility to the
-	· · · · · · · · · · · · · · · · · · ·	nd, or other adequate assurance such as fina
statements or other materials	acceptable to the	administrator.
from Chapter 13, Sec	tion 17(b)) (b)	The amount of the funds available shall b
less than the amount identifie	d as the estimated	d cost of plugging, abandoning, and post-clo
care.		
from Chapter 13, Sec	tion 17(c)) (c)	The obligation to maintain financial
		mit or the cessation of injection. The
· ·	· · · · · ·	ity is enforceable regardless of whether the
requirement is a condition of	*	
from Chapter 13, Sec	tion 17(d)) (d)	After plugging operations are completed,
•	/ required may be	e reduced by the administrator to the estimate
cost of post-closure care.		
6 01 12 0		
		The owner or operator of a well injecting
	<u>v with the financial</u>	al responsibility requirements of 40 CRF 14
Subpart F.		
Section 20 Prok	ibitions	
Section 20. Prob	<u>nonnons.</u>	
(from Chapter 13. Se	etion 18(a))	(a) No person, except when authorized b
permit issued pursuant to the	Wyoming Envire	onmental Quality Act and this chapter, shall:
permit issued pursuant to the (from Chapte	Wyoming Enviro 97 13, Section 18(onmental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the discl
permit issued pursuant to the (from Chapte any pollution or wastes into a	Wyoming Enviro or 13, Section 18(ny groundwaters	onmental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the discl of the State;
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte	Wyoming Envire er 13, Section 18(ny groundwaters er 13, Section 18(a)(ii)) (ii) Alter the physical, chemical,
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac	Wyoming Enviro er 13, Section 18(ny groundwaters er 13, Section 18(exteriological prop	onmental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the disch of the State; (a)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte	Wyoming Enviro er 13, Section 18(ny groundwaters er 13, Section 18(eteriological prop er 13, Section 18(onmental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the disch of the State; (a)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or (a)(iii) Construct, install, or operate any dis-
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or	Wyoming Envire or 13, Section 18(ny groundwaters or 13, Section 18(exteriological prop or 13, Section 18(contributing to pe	onmental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the disch of the State; (a)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or (a)(iii) Construct, install, or operate any dis- ollution of groundwaters of the State.
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or (from Chapter 16, Se	Wyoming Envire or 13, Section 18(ny groundwaters or 13, Section 18(exteriological prop or 13, Section 18(contributing to pe	onmental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the disch of the State; (a)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or (a)(iii) Construct, install, or operate any dis-
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or	Wyoming Envire or 13, Section 18(ny groundwaters or 13, Section 18(exteriological prop or 13, Section 18(contributing to pe	onmental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the disch of the State; (a)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or (a)(iii) Construct, install, or operate any dis- ollution of groundwaters of the State.
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or (from Chapter 16, Se 301 (a), no person shall:	Wyoming Envire or 13, Section 18(my groundwaters or 13, Section 18(exteriological prop or 13, Section 18(contributing to po ction 9 (a)) (a)	onmental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the discler of the State; (a)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or (a)(iii) Construct, install, or operate any dis- ollution of groundwaters of the State. In addition to the requirements in W.S. 35
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or (from Chapter 16, Se 301 (a), no person shall: (from Chapte	Wyoming Enviro er 13, Section 18(my groundwaters er 13, Section 18(exteriological prop er 13, Section 18(contributing to po ction 9 (a)) (a) er 13, Section 18(commental Quality Act and this chapter, shall: ca)(i)) (i) — Cause, threaten or allow the disclet of the State; ca)(ii)) (ii) Alter the physical, chemical, werties of the waters of the state; or a)(iii) Construct, install, or operate any disolution of groundwaters of the State. In addition to the requirements in W.S. 35 (b)(i) and Chapter 16, Section 9 (a)(i)) (i)
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or (from Chapter 16, Se 301 (a), no person shall: (from Chapte Conduct any authoriz	Wyoming Enviro er 13, Section 18(ny groundwaters er 13, Section 18(eteriological prop er 13, Section 18(contributing to po ction 9 (a)) (a) er 13, Section 18(er 13, Section 18(commental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the disclet of the State; (a)(ii)) (ii) Alter the physical, chemical, werties of the waters of the state; or (a)(iii) Construct, install, or operate any discletion of groundwaters of the State. In addition to the requirements in W.S. 35 (b)(i) and Chapter 16, Section 9 (a)(i)) (i) vity in a manner that results in a violation of groundwaters of the state)
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or (from Chapter 16, Se 301 (a), no person shall: (from Chapter Conduct any authoriz permit condition or represents	Wyoming Enviro er 13, Section 18(my groundwaters er 13, Section 18(eteriological prop er 13, Section 18(contributing to per ction 9 (a)) (a) er 13, Section 18(red injection activ	 commental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the disclest of the State; (a)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or (a)(iii) Construct, install, or operate any disolution of groundwaters of the State. In addition to the requirements in W.S. 35 (b)(i) and Chapter 16, Section 9 (a)(i)) (i) vity in a manner that results in a violation of e application, the request for coverage under
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or (from Chapter 16, Se 301 (a), no person shall: (from Chapter 201 (a), no person shall: (from Chapter Conduct any authoriz permit condition or represent general permit, individual per	Wyoming Enviro er 13, Section 18(my groundwaters er 13, Section 18(eteriological prop er 13, Section 18(contributing to per ction 9 (a)) (a) er 13, Section 18(red injection activ	 commental Quality Act and this chapter, shall: (a)(i)) (i) Cause, threaten or allow the disclet of the State; (a)(ii)) (ii) Alter the physical, chemical, werties of the waters of the state; or (a)(iii) Construct, install, or operate any disollution of groundwaters of the State. In addition to the requirements in W.S. 35 (b)(i) and Chapter 16, Section 9 (a)(i)) (i) vity in a manner that results in a violation of groundwaters of the state)
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or (from Chapter 16, Se 301 (a), no person shall: (from Chapter Conduct any authoriz permit condition or represents	Wyoming Enviro er 13, Section 18(my groundwaters er 13, Section 18(eteriological prop er 13, Section 18(contributing to per ction 9 (a)) (a) er 13, Section 18(red injection activ	 commental Quality Act and this chapter, shall: ca)(i)) (i) Cause, threaten or allow the disclest of the State; ca)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or ca)(iii) Construct, install, or operate any disolution of groundwaters of the State. In addition to the requirements in W.S. 35 (b)(i) and Chapter 16, Section 9 (a)(i)) (i) vity in a manner that results in a violation of e application, the request for coverage under
permit issued pursuant to the (from Chapte any pollution or wastes into a (from Chapte radiological, biological or bac (from Chapte system capable of causing or (from Chapter 16, Se 301 (a), no person shall: (from Chapter 201 (a), no person shall: (from Chapter Conduct any authoriz permit condition or represent general permit, individual per	Wyoming Enviro er 13, Section 18(my groundwaters er 13, Section 18(eteriological prop er 13, Section 18(contributing to per ction 9 (a)) (a) er 13, Section 18(red injection activ	 commental Quality Act and this chapter, shall: ca)(i)) (i) Cause, threaten or allow the disclest of the State; ca)(ii)) (ii) Alter the physical, chemical, perties of the waters of the state; or ca)(iii) Construct, install, or operate any disolution of groundwaters of the State. In addition to the requirements in W.S. 3. (b)(i) and Chapter 16, Section 9 (a)(i)) (i) vity in a manner that results in a violation of e application, the request for coverage under the state.

	(From Chapter 13, Section 18(b)(iii) and Chapter 16, Section 9 (a)(iii)) (ii)
Cons	truct, install, modify or improve an authorized injection facility except in compliance with
the p	ermit requirements.
	(from Chapter 13, Section 18(c)) (b) All Class IV wells are prohibited.
	(c) Requirements for Class I Wells:
	(from Chapter 13, Section 18(b)) No person shall:
	(from Chapter 13, Section 18(b)(ii)) (i) No person shall (from Chapter 13,
Secti	on 18, (b)(ii)) conduct any authorized injection activity in a manner that results in a
	ment of fluids out of the receiver, including, but not limited to:
move	ment of funds out of the receiver, mendaling, but not minited to.
	$(f_{1}, \dots, f_{k}) = f_{k} + $
.1	(from Chapter 13, Section 18(b)(ii)) (A) No zone or interval other than
<u>that r</u>	epresented as the discharge zone in the permit shall be used as a receiver for the discharge.
	(from Chapter 13, Section 18(b)(ii)) (B) No uncased hole may be used
<u>as a c</u>	onduit for the discharge, excepting that portion of a hole in the discharge zone.
	(from Chapter 13, Section 18(b)(ii)) (C) No annular space between the
-	of the hole and casing in the hole may be used as a conduit for the discharge, excepting in
that p	ortion of a hole in the discharge zone.
	(from Chapter 13, Section 18(d)) (ii) No solvent wastes which are listed
<u>ha</u> zar	dous waste numbers F001, F002, F003, F004, or F005 under 40 CFR 261.31 shall be
	ed underground in any Class I well unless those wastes are waste solvent mixtures that do
-	xceed or are treated to not exceed the standards listed in Appendix A.
	(from Chapter 13, Section 18(e)) (iii) No dioxin containing wastes which are
listed	hazardous waste number F020, F021, F022, F023, F026, F027 or F028 under 40 CFR
	1 shall be injected underground in any well unless those wastes do not exceed, or are
	a to not exceed the standards listed in Appendix B.
ucat	a to not exceed the standards listed in Appendix D.
	(from Chapter 12 Section 19(f)) (iv) Treatment to most amondar A or D
11	(from Chapter 13, Section 18(f)) (iv) Treatment to meet appendix A or B
<u>iimita</u>	ations shall be accomplished according to a state hazardous waste treatment permit issued
	e department. Dilution is prohibited as a substitute for treatment of wastes listed in
subse	ctions (d) and (e) paragraphs (ii) and (iii) above.
	(from Chapter 13, Section 18(d)) (v) No person shall inject any hazardous
	which has been banned from land disposal pursuant to 40 CFR 268.41 or department
regul	ations, as applicable, unless:
	(A) The hazardous waste has first been treated to a concentration of
less t	han the levels specified in 40 CFR 268.41 or 40 CFR 268 Appendix I, or department
	ations, as applicable.
	(B) An exemption petition has been submitted and approved by the
US	Environmental Protection Agency under 40 CFR 148.20, or department regulations, as
0.0.	$\pm 1000000000000000000000000000000000000$

2898 2899 2900 2901	(from Chapter 16, Section 9(k)) (xi) An operator of a facility which is authorized by rule is prohibited from injection into the facility:
2902 2903 2904	(from Chapter 16, Section 9(k)(i)) (A) Upon failure to submit inventory information prior to construction for facilities constructed after April 14, 1999.
2905 2906	(from Chapter 16, Section 9(k)(ii)) (B) Upon failure to comply with a request for information under Section 8 11 (e) of this chapter.
2907 2908 2909	(from Chapter 16, Section 9(1)) (xii) Pumping domestic sewage out of any Class V facility for any use other than disposal to an approved facility is prohibited.
2910 2911 2912	Section 21. Public Participation, Public Notice and Public Hearing Requirements.
2913 2914 2915 2916	(from Chapter 16, Section 13(a)) Public notice is not required for minor modifications as described by Section 5 (b) (v) of this chapter or for a permit denial where the application is determined incomplete.
2917 2918 2919 2920 2921	(from Chapter 13, Section 19(a)) (a) Public notice is not required for minor modifications or for a permit denial where the application is determined incomplete or deficient in accordance with Section 6-7 unless the permittee or applicant requests a hearing before the council pursuant to this section.
2922 2923 2924	(from Chapter 13, Section 19(b)) (b) The administrator shall give public notice for any of the following actions:
2925 2926 2927	(from Chapter 16, Section 13(c)) The administrator shall give public notice if a draft permit has been prepared or a hearing has been scheduled.
2928 2929 2930	(from Chapter 13, Section 19(b)(i)) (i) The administrator has prepared a draft permit which is intended for issuance, denial or reissuance.
2931 2932 2933	(from Chapter 13, Section 19(b)(ii)) (ii) The administrator intends to modify a permit.
2934 2935 2936 2937	(from Chapter 13, Section 19(b)(iii)) (iii) The administrator intends to revoke or terminate a permit.
2938 2939	(from Chapter 13, Section 19(b)(iv)) (iv) Any hearing held as a result of a request for hearing on above actions or department actions appealable to the council.
2940 2941 2942 2943 2944 2945	(from Chapter 16, Section 13(b)) (c) Public notice is not required for any facility permitted by rule or for any facility covered under general permit. The department shall issue one public notice creating the general permit and then notice at each subsequent five (5) year review.

	16, Section 13(d) Publi		
	for public comment. Put		
•	e hearing. Public notice	· · ·	
public notice of the dra	aft permit and the two no	otices may be combined	÷
	13, Section 19(c)) (d)		
	eriod for any action on i		
	ing date as part of the pu	iblic notice. When two	notices are required, th
may be given at the sa	<u>me time.</u>		
(from Closed or	$12 \text{G}_{}(1 - \pi 10(4))$	Dali Para di sa sha 11 ha	the state of the s
methods:	13, Section 19(d))	Public notice snall be	e given by the following
methous:			
(from Chaptor	16, Section 13(e)) (e)	Dublic notice shall be	given by:
	<u>10, Section 15(c)) (c)</u>		<u>given by.</u>
(from	Chapter 13, Section 19(d)(i) and Chapter 16 Se	ection $13(e)(i)$ (i) B
	notice to the following p		<u>νασπ το(ν/(1)) (1)</u> σγ
maning a copy of the		<u>0150115.</u>	
	(from Chapter 13 Sec	tion 19(d)(i) and Chapt	er 16. Section 13(e)(i)(
(A) The applicant.	by certified or registere		
	is includes all persons re		
	ill be covered by the ger		
	(from Chapter 13, Sec	tion 19(d)(i)(B) and Ch	apter 16, Section
13(e)(i)(B)) (B) The U	.S. Environmental Prote		<u> </u>
		<u>0'</u>	
	(from Chapter 13, Sec	tion 19(d)(i)(D) and Ch	apter 16, Section
13(e)(i)(C)) (C) Wyon	ning Game and Fish Dep	partment.	
		tion 19(d)(i)(E) and Ch	apter 16, Section
13(e)(i)(D)) (D) Wyon	ning State Engineer.		
		tion 19(d)(i)(G) and Ch	apter 16, Section
13(e)(i)(E)) (E) State 1	Historical Preservation (Officer.	
_	(from Chapter 13, Sec	tion 19(d)(i)(C)) (F)	Wyoming Oil and
Conservation.			
			T 10 "
D	(from Chapter 13, Sec	tion 19(d)(1)(F)) (G)	Land Quality
Division.			
		(here 10(4)(h) = 1.01 = 1	
(II) D 4		tion 19(d)(i) and Chapt	
	mailing list developed	· · · · · · · · · · · · · · · · · · ·	
the list and soliciting r	ersons for "area lists" fr	om participants in proce	eedings in that area.
p	(from Charter 12, 9-	tion 10(d)(i) and Class	an 16 Contine 12(a)(!)(
		tion 19(d)(i) and Chapt	
	cal government having j		

2995 2996	(from Chapter 13, Section 19(d)(ii) and Chapter 16, Section 13(e)(ii)) (ii) Publication of a-the notice in a newspaper of general circulation in the location of the
2997	<u>facility or operation</u> . and
2998 2999 3000 3001 3002 3003 3004 3005	(from Chapter 13, Section 19(d)(iii)) At the discretion of the administrator, posting in a post office, public place of the nearest municipality or near the entrance to the facility. (from Chapter 16, Section 13(e)(iii)) (iii) At the discretion of the administrator, any other method reasonably expected 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.
3006 3007 3008 3009	(from Chapter 13, Section 19(e) and Chapter 16, Section 13(f)) (f) All public notices issued under this chapter shall contain the following minimum information:
3010 3011	(from Chapter 13, Section 19(e)(i) and Chapter 16, Section 13(f)(i)) (i) Name, and address of the department.
3012 3013 3014 3015 3016 3017 3018	(from Chapter 13, Section 19(e)(ii) and Chapter 16, Section 13(f)(ii)) (ii) Name and address of permittee or permit applicant, and, if different, of the facility or activity regulated by the permit. (From Chapter 16, Section 13(f)(ii)) For general permits, this includes a list of existing facilities and the location of each facility which will be covered by the general permit. If new facilities may be covered under a general permit as they are constructed, then that fact will also be stated.
3019 3020 3021 3022 3023	(from Chapter 13, Section 19(d)(iii) and Chapter 16, Section 13(f)(iii)) (iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit. (from Chapter 16, Section 13(f)(iii)) For general permits a generic statement of the type of facility to be covered is all that is required.
3024 3025 3026 3027 3028	(from Chapter 13, Section 19(d)(iv) and Chapter 16, Section 13(f)(iv)) (iv) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit, as the case may be, statement of basis or fact sheet, and the application.
3029 3030 3031 3032 3033	(from Chapter 13, Section 19(d)(ii) and Chapter 16, Section 13(f)(v)) (v) A brief description of comment procedures, procedures to request a hearing, and other procedures which the public may use to participate in the final permit decision. and
3034 3035	(from Chapter 13, Section 19(d)(vi) and Chapter 16, Section 13(f)(vi))) (vi) Any additional information considered necessary and proper.
3036 3037 3038 3039 3040	(from Chapter 13, Section 19(f) and Chapter 16, Section 13(g)) (g) In addition to the information required in (e) (from Chapter 16, Section 13(g) (f) (from Chapter 13, Section 19(f) and Chapter 16, Section 13(g)) of this section, any notice for public hearing shall contain the following:
3041 3042 3043	(from Chapter 13, Section 19(f) and Chapter 16, Section 13(g)(i)) (i) Reference to the date of previous public notices relating to the permit.

2044	
3044 3045	(from Chapter 13, Section 19(f) and Chapter 16, Section 13(g)(ii)) (ii) Date,
3043 3046	(from Chapter 13, Section 19(f) and Chapter 16, Section 13(g)(ii)) (ii) Date, time and place of hearing. and
3046 3047	unie and prace of hearing. and
	(for an Observation 12, Gradiers 10(f) and Observation 16, Gradiers 12(a)(iii)) (iii)
3048	(from Chapter 13, Section 19(f) and Chapter 16, Section 13(g)(iii)) (iii) A
3049	brief description of the nature and purpose of the hearing, including applicable rules and
3050	procedures.
3051	
3052	(from Chapter 13, Section 19(g) and Chapter 16, Section 13(H)) (h) The
3053	department shall provide an opportunity for the applicant, permittee, or any interested person to
3054	submit written comments regarding any aspect of a permit including, but not limited to, permit
3055	issuance, denial, modification, revocation and reissuance, termination, or transfer and/or to
3056	request a public hearing.
3057	
3058	(from Chapter 13, Section 19(h) and Chapter 16, Section 13(i)) (i) All
3059	information received on or with the permit application shall be made available to the public for
3060	inspection and copying except such information as has been determined to constitute trade
3061	secrets or confidential information pursuant to W.S. 35-11-1101. (from Chapter 13, Section
3062	19(h)) The department shall provide facilities for inspection and copying of all non-confidential
3063	documents. Copying shall be at the expense of the person requesting copies.
3064	
3065	(from Chapter 16, Section 13(j) (j) During the public comment period, any
3066	interested person may submit written comments on the draft permit and may request a public
3067	hearing. (from Chapter 13, Section 19(i) and Chapter 16, Section 13(j)) Requests for public
3068	hearings on permit applications or modifications must be made in writing to the administrator
3069	and shall state the reasons for the request. Requests for public hearings on permit issuance,
3070	denial, revocation, termination, or any other department action appealable to the Council, shall
3071	be made in writing to the chairman of the council and the department and state the grounds for
3072	the request.
3073	
3074	(from Chapter 13, Section 19(i)(i)) (i) Requests for public hearings based on
3075	contested issues may be filed at any stage of the permitting process; and
3076	
3077	(from Chapter 13, Section 19(i)(ii)) (ii) After notice is given for public
3078	comment, requests for public hearings must be filed within thirty (30) days after the last
3079	publication of the public notice.
3080	
3081	(from Chapter 13, Section 19(j)) The administrator shall render a
3082	decision on the action within thirty (30) days after the completion of the comment period if no
3083	hearing is requested.
3084	
3085	(from Chapter 13, Section 19(k) and Chapter 16, Section 13(k)) (k) The
3086	administrator shall hold a hearing whenever from Chapter 13, Section 19(k) he the administrator
3087	finds, on the basis of requests, a significant degree of public interest in a draft permit. from
3088	Chapter 13, Section 19(k) The administrator may hold a hearing at his or her discretion The
3089	administrator has the discretion to hold a hearing whenever such a hearing may clarify issues
3090	involved in a permit decision.
3091	
0001	

3092	(from Chapter 13, Section 19(1)) (1) The Council shall hold hearings pursuant to the
3093	department Wyoming Department of Environmental Quality Rules of Practice and Procedure.
3094	
3095	(from Chapter 13, Section 19(m)) (m) Public hearings will be held in the geographic
3096	area wherein the proposed discharge is located, or as nearby as reasonable. Public hearings will
3097	be held pursuant to the department Wyoming Department of Environmental Quality Rules of
3098	Practice and Procedure.
3099	
3100	(from Chapter 16, Section 13(1)) (n) The public comment period shall automatically
3100	extend to the close of any public hearing. The administrator may also extend the comment
3102	period by so stating at the public hearing.
3103	
3104	(from Chapter 13, Section 19(n)) The director shall make a decision on any depart-
3105	ment hearing as soon as practicable after receipt of the office transcript or after the expiration of
3106	the time set to receive written comments.
3107	
3108	(from Chapter 16, Section 13(m)) (o) The director shall render a decision on the draft
3109	permit within thirty (30) days after the completion of the comment period if no hearing is
3110	requested. If a hearing is held, the director shall make a decision on any department hearing as
3111	soon as practicable after receipt of the transcript or after the expiration of the time set to receive
3112	written comments.
3113	
3114	(from Chapter 13, Section 19(o) and Chapter 16, Section 13(n)) (p) At the time a
3115	final decision is issued, the department shall respond, in writing, to those comments received
3116	during the public comment period or comments received during the allotted time for a hearing
3117	held by the department. This response shall:
3118	nett by the department. This response shan.
3119	(from Chapter 13, Section 19(0)(i) and and Chapter 16, Section 13(n)(i)) (i)
3120	Specify any changes that have been made to the permit. and
	Specify any changes that have been made to the permit.
3121	(for a Charten 12, for the $10(-)(1)$ and -1 Charten 16, for the $12(-)(1)$ (1)
3122	(from Chapter 13, Section 19(0)(ii) and and Chapter 16, Section 13(n)(ii)) (ii)
3123	Briefly describe and respond to all comments voicing a legitimate regulatory concern
3124	that is within the authority of the department to regulate.
3125	
3126	(from Chapter 13, Section 19(m) and Chapter 16, Section 13(o)) (q) The response
3127	to comments shall also be available to the public.
3128	
3129	(from Chapter 13, Section 19(q)) All comments received on contested issues before the
3130	council will be responded to in accordance with department Rules of Practice and Procedures.
3131	
3132	(from Chapter 16, Section 13(p)) (r) Requests for a contested case hearing on a
3133	permit issuance, denial, revocation, termination, or any other final department action appealable
3134	to the Council, shall be made in writing to the chairman of the Environmental Quality Council
3135	and the director and state the grounds for the request pursuant to the Wyoming Department of
3136	Environmental Quality Rules of Practice and Procedure.
3130	Environmental Quality Rules of Flactice and Flocedule.
	Section 22 Class I Dormits Issued Deferre the Effective Date of These
3138	Section 22. Class I Permits Issued Before the Effective Date of These
3139	Regulations.

- 3141 (from Chapter 13, Section 20) Any Class I well permitted before the effective date of these
- 3142 regulations shall be reviewed pursuant to Section 9 (b) and (c) 6(h).

3144	
3145	
3146	(from Chapter 13, Appendix A) APPENDIX A
3147 3148	

	MAXIMUM ALLOWABLE
PARAMETER	CONCENTRATION
ACETONE	<u>.05 mg/ł L</u>
N-BUTYL ALCOHOL	<u>5.00 mg/4 L</u>
CARBON DISULFIDE	1.05 mg/ 4 L
CARBON TETRACHLORIDE	<u>.05</u> <u>mg/</u> <u>4</u> <u>L</u>
<u>CHLOROBENZENE</u>	<u>.05</u> <u>mg/</u> <u>4</u> <u>L</u>
<u>CRESOLS AND CRESYLIC</u> <u>ACID</u>	<u>.75 mg/4L</u>
<u>CYCLOHEXANONE</u>	$\begin{array}{c c} \underline{.05} & \underline{mg/4 L} \\ \underline{.05} & \underline{mg/4 L} \\ \underline{.75} & \underline{mg/4 L} \\ \underline{.125} & \underline{mg/4 L} \end{array}$
<u>1,2-DICHLOROBENZENE</u>	<u>.65</u> <u>mg/-1 L</u>
ETHYL ACETATE	<u>.05</u> <u>mg/-1 L</u>
ETHYL BENZENE	<u>.05</u> <u>mg/4 L</u>
ETHYL ETHER	<u>.05</u> <u>mg/-1 L</u>
ISOBUTANOL	$\begin{array}{cccc} \underline{5.00} & \underline{mg/4L} \\ \underline{.25} & \underline{mg/4L} \\ \underline{.20} & \underline{mg/4L} \\ \underline{.05} & \underline{mg/4L} \\ \underline{.05} & \underline{mg/4L} \\ \underline{.05} & \underline{mg/4L} \\ \underline{.66} & \underline{mg/4L} \end{array}$
<u>METHANOL</u>	<u>.25 mg/4 L</u>
METHYLENE CHLORIDE	$\underline{.20}$ mg/4 L
METHYL ETHYL KETONE	<u>.05</u> <u>mg/4 L</u>
METHYL ISOBUTYL KETONE	$\underline{.05}$ mg/4 L
NITROBENZENE	<u>.66 mg/4 L</u>
PYRIDINE	$\overline{\underline{.33}}$ $\overline{\underline{mg/4}L}$
TETRACHLOROETHYLENE	$\frac{105}{.33} \frac{\text{mg}/4}{\text{mg}/4} \frac{\text{L}}{\text{L}}$
TOLUENE	$\underline{.33}$ mg/4 L
1,1,1-TRICHLOROETHANE	$\underline{\underline{.41}}$ $\underline{\underline{mg/4L}}$
1,2,2-TRICHLORO-1,2,2 TRIFLUOROETHANE	<u>.96</u> <u>mg/4 L</u>
TRICHLOROETHYLENE	<u>.062</u> <u>mg/4 L</u>
TRICHLOROFLUOROMETHANE	$\frac{.05}{.05}$ mg/4 L
XYLENE DOL VCHLODINATED DIDUENOLS	$\underline{.05}$ $\underline{mg/4L}$
POLYCHLORINATED BIPHENOLS	<u>500.00</u> <u>mg/-1 L</u>

3150	
3151	(from Chapter 13, Appendix B) APPENDIX B
3152	
3153	

PARAMETER	<u>MAXIMUM</u> <u>ALLOWABLE</u> <u>CONCENTRATION</u>
HXCDD-ALL HEXACHLORODIBENZO-P-DIOXINS	1 PPB ppb
HXCDF-ALL HEXACHLORODIBENZOFURANS	1 PPB ppb
PECDD- ALL PENTACHLORODIBENZO-P-DIOXINS	1 PPB ppb
PECDF-ALL PENTACHLORODIBENZOFURANS	1 PPB ppb
TCDD-ALL TETRACHLORODIBENZO-P-DIOXINS	<u>1</u> PPB ppb
TCDF-ALL TETRACHLORODIBENZOFURANS	<u>1</u> PPB ppb
2,4,5 TRICHLOROPHENOL	50 PPB ppb
2,4,6 TRICHLOROPHENOL	50 PPB ppb
2,3,4,6 TETRACHLOROPHENOL	<u>100</u> PPB ppb
PENTACHLOROPHENOL	<u>10</u> PPB_ppb

31	55	
31	56	

3157 3158

(from Chapter 16, Appendix A) APPENDIX C SUBCLASSES OF CLASS V FACILITIES

SUBCLASS	DESCRIPTION
HEATI	NG AND COOLING FACILITIES
<u>5A1</u>	Direct Heat Reinjection Facilities - Reinject geothermal fluids used to provide direct heat for large buildings, developments or aquiculture facilities.
<u>5A2</u>	Heat Pump/Air Conditioner Return Flow Facilities - Reinject groundwater used to heat or cool a building in a ground based heat pump system, or used to inject heat only using a closed loop heat pump system
<u>5A3</u>	Cooling Water Return Flow Facilities - Receive non-contact cooling water from industrial processes, both open and closed loop processes.
BENEFIC	CIAL USE INJECTION FACILITIES
<u>5B1</u>	Mining, Sand or Backfill Facilities - Used to inject a fluid mixture of sand, cement, fly ash used as a pozzalin, or mill tailings into mined out portions of underground mines.
<u>5B2</u>	Aquifer Recharge Facilities - Receive water specifically for storage of water underground. Must be coupled with the ability to withdraw stored water at a later date for beneficial use. Coal bed methane operators cannot dispose of their produced water in class 5B2 injection wells after the effective date of these rules.
<u>5B3</u>	Saline Water Intrusion Barrier Facilities - Receive fresh water to prevent the continued migration of saline water into a fresh water aquifer. Includes projects installed to control contaminant plumes by injection of clean water.
<u>5B4</u>	Subsidence Control Facilities - Receive fresh water for the purpose of controlling subsidence caused by an overdraft of water, oil or natural gas.
<u>5B5</u>	Facilities which inject fluids and are used to prevent, control or remediate aquifer pollution, which are not owned or controlled by the Department of Environmental Quality. All 5B5 facilities are covered under Article 16 of the Environmental Quality Act

SUBCLASS 5B6	DESCRIPTIONDepartment Controlled Facilities - Facilities which inject fluids and are used to prevent, control or remediate pollution, remediate subsiding mine sites, or produce other beneficial results which are owned or controlled by the Department of
<u>5B7</u>	Air sparging facilities - Facilities used to inject only air for the purpose of either encouraging microbial breakdown of hydrocarbons or removing of volatile chemicals by vapor extraction.
COMMERCIAL A	ND INDUSTRIAL FACILITIES
<u>5C1</u>	Air Scrubber Waste Disposal Facilities - Inject wastes from air scrubbers used to remove sulphur, fly ash, or other contaminants.
<u>5C2</u>	Water Treatment Brine Disposal Facilities - Receive brine from water softening or other water treatment.
<u>5C3</u>	Industrial Process Water and Waste Disposal Facilities - <u>Receive wastes generated by industrial and commercial</u> processes. Examples include but are not limited to wastes from car washing, taxidermy, metal plating, printing, silk screening, refining, slaughter houses, and chemical manufacturing companies.
<u>5C4</u>	Automotive Waste Disposal Facilities - Inject waste from floor drains or sinks where repair work is done on machinery of any description.
<u>5C5</u>	Coal Bed Methane Injection Facilities - Inject groundwater produced in the process of coal bed methane extraction into a receiving aquifer containing water of the same or lower class of use.
<u>5C6</u>	Small Commercial Disposal Systems - Inject wastewater which is of similar quality to domestic sewage which does not technically meet the definition of domestic sewage, in quantities of less than 2,000 gallons per day.

SUBCLASS

DESCRIPTION

DRAIN	NAGE FACILITIES
<u>5D1</u>	Agricultural Drainage Facilities - Receive irrigation tailwaters, other field drainage, animal yard, feedlot, or dairy runoff, and other agricultural wastewater.
<u>5D2</u>	Storm Water Drainage Facilities - Receive storm water runoff from paved areas, including parking lots, streets, residential subdivisions, building roofs, highways, etc.
<u>5D3</u>	Improved Sinkholes - Receive storm water runoff from developments located in karst topographic areas.
<u>5D4</u>	Industrial Drainage Facilities - Receive storm runoff from areas susceptible to spills, leaks, and other chemical discharges.
<u>5D5</u>	Special Drainage Facilities - Receive water from sources other than direct precipitation. Examples of thistype include landslide control drainage facilities, potable water tank overflow drainage facilities, swimming pool drainage facilities, and lake level control drainage facilities.
<u>SEWAGE</u> I	DISPOSAL FACILITIES
<u>SEWAGE I</u>	DISPOSAL FACILITIES Aquaculture Return Flow Facilities - Receive injectate from aquaculture operations.
	Aquaculture Return Flow Facilities - Receive injectate from
<u>5E1</u>	Aquaculture Return Flow Facilities - Receive injectate from aquaculture operations.Untreated Domestic sewage Disposal Facilities - Receive untreated domestic sewage from single or multiple sources. Does not include subsurface fluid distribution systems with septic tanks ahead of the subsurface fluid distribution system.

	SUBCLASS 5E5	DESCRIPTION Small Domestic Subsurface Fluid Distribution Systems - Receive less than 2,000 gallons per day as an average of a typical week, of domestic sewage with only primary treatment in a septic tank. These systems are designed to accept more than 2,000 gallons per day at a peak and are not small wastewater systems. No class 5E5 system has a required design capacity in excess of 5,000 gallons per day.
		MISCELLANEOUS CLASS V FACILITIES
	<u>5F1</u>	Cathodic Protection Facilities -Facilities constructed with coke breeze and dust control oil for use as a permanent anode in a
	<u>5F2</u>	cathodic protection system for a fluid conveyor system or fluid containment system composed of metallic material. All other facilities that inject fluids into or above an underground source of drinking water which do not fall into Classes I, II, III, or IV injection facilities.
3159 3160		<u>Classes I, II, III, OF IV Injection facilities.</u>

3161 3162 3163 3164	(from Chapter 16, Appendix B) APPENDIX D <u>TYPES OF PERMITS REQUIRED</u> <u>TIMING OF COMPLIANCE</u>			
	<u>TYPE</u>	DESCRIPTION	<u>TYPE OF</u> <u>PERMIT</u>	WHEN REQUIRED
	<u>5A1</u>	Direct Heat Reinjection Facilities	<u>General</u> <u>Permit</u>	2 years after date of general permit
	<u>5A2</u>	Heat Pump/Air Conditioner Return Flow Facilities	<u>General</u> <u>Permit</u>	2 years after date of general permit
	<u>5A3</u>	Cooling Water Return Flow Facilities	<u>Individual</u> Permit	<u>April 14, 2000</u>
	<u>5B1</u>	Mining, Sand or Backfill Facilities	<u>General</u> <u>Permit</u>	2 years after date of general permit
	<u>5B2</u>	Aquifer Recharge Facilities	<u>Permit by</u> <u>Rule</u>	register by April 14, 1999
	<u>5B3</u>	Saline Water Intrusion Barrier Facilities	<u>Individual</u> <u>Permit</u>	<u>April 14, 2000</u>
	<u>5B4</u>	Subsidence Control Facilities	<u>Permit by</u> <u>Rule</u>	<u>register by April14,</u> 1999
	<u>5B5</u>	Facilities used to prevent, control or remediate aquifer pollution, which are not owned or controlled by the Department of Environmental Quality	<u>General</u> <u>Permit</u>	2 years after the date of the general permit
	<u>5B6</u>	Department Controlled Facilities	<u>Permit by</u> <u>Rule</u>	<u>Register by April 14</u> <u>1999</u>
	<u>5B7</u>	Air Sparging Facilities	<u>Permit by</u> <u>Rule</u>	<u>Register by April 14</u> <u>1999</u>
	<u>5C1</u>	Air Scrubber Waste Disposal Facilities	<u>Individual</u> <u>Permit</u>	<u>April 14, 2000</u>
	<u>5C2</u>	Water Treatment Brine Disposal Facilities	<u>Individual</u> <u>Permit</u>	<u>April 14, 2000</u>
	<u>5C3</u>	Industrial Process Water and Waste	<u>Individual</u> <u>Permit</u>	<u>April 14, 2000</u>

<u>TYPE</u>	DESCRIPTION	TYPE OF	WHEN REQUIRED
		PERMIT	

<u>5C4</u>	Existing Automotive Waste Disposal Facilities	<u>General</u> <u>Permit</u>	2 years after date of general permit
<u>5C4</u>	New Automotive Waste Disposal Facilities	<u>Ban</u>	<u>April 14, 1998</u>
<u>5C5</u>	Coal Bed Methane Injection Facilities	<u>General</u> <u>Permit</u>	Within 6 months of the date of issue for the general permit for existing facilities, and before injection for all new facilities
<u>5C6</u>	Small Commercial Disposal Systems	<u>General</u> <u>Permit</u>	2 years after the date of the general permit
<u>5D1</u>	Agricultural Drainage Facilities	<u>General</u> <u>Permit</u>	2 years after the date of the general permit
<u>5D2</u>	Storm Water Drainage Facilities	<u>General</u> <u>Permit</u>	2 years after the date of the general permit
<u>5D3</u>	Improved Sinkholes	<u>Individual</u> <u>Permit</u>	<u>April 14, 2000</u>
<u>5D4</u>	Industrial Drainage Facilities	<u>Individual</u> <u>Permit</u>	<u>April 14, 2000</u>
<u>5D5</u>	Special Drainage Facilities	<u>Permit by</u> <u>Rule</u>	<u>Register by April</u> 14, 1999
<u>5E1</u>	Aquaculture Return Flow Facilities	<u>General</u> <u>Permit</u>	2 years after date of general permit
<u>5E2</u>	Existing Untreated Domestic sewage Disposal Facilities (Cesspools)	<u>Ban</u>	<u>April 14, 1998</u>
<u>5E3</u>	Existing Domestic Subsurface Fluid Distribution Systems	<u>General</u> <u>Permit</u>	2 years after date of general permit
<u>5E3</u>	Existing Domestic Subsurface Fluid Distribution Systems - Permitted as a small wastewater facility	<u>Permit by</u> <u>Rule</u>	register by April 14, 1999
<u>5E4</u>	<u>New Domestic Wastewater Treatment Plant</u> <u>Disposal Facilities</u>	<u>Individual</u> Permit	<u>April 14, 2000</u>
<u>5E5</u>	Small Domestic Subsurface Fluid Distribution Systems	<u>General</u> <u>Permit</u>	2 years after the date of the general permit

TYPE	DESCRIPTION	TYPE OF	WHEN REQUIRED
		PERMIT	

<u>5F1</u>	Cathodic Protection Facilities	<u>Permit by</u> <u>Rule</u>	register by April 14, 1999
<u>5F2</u>	<u>All other facilities that inject fluids into or</u> <u>above an underground source of drinking water</u> <u>which do not fall into Classes I, II, III, or IV</u> <u>injection facilities</u>	<u>Individual</u> <u>Permit</u>	<u>April 14, 2000</u>

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1				CHAPTER 27			
2							
3 4	UNDERGROUND INJECTION CONTROL PROGRAM CLASS I AND V WELLS						
5		a					
6		Section	n 1.	Authority.			
7 8	Those r	amilatio	na ara n	romulated pursuant to W.S. 25, 11, 101 through 1412 specifically 202			
8 9	These regulations are promulgated pursuant to W.S. 35-11-101 through 1413, specifically 302, and no person shall cause, threaten or allow violations of any provision contained herein. These						
10		•		ning state obligations under Section 1422 of the Federal Safe Drinking			
11				Underground Injection Control regulations found in 40 CFR 124 and 40			
12				of December 7, 1999).			
13		,					
14		Section	n 2.	Definitions.			
15							
16	The foll	lowing d	lefinition	ns supplement those definitions contained in Section 35-11-103 of the			
17	Wyomi	ng Envi	ronment	al Quality Act.			
18							
19		(a)		er" means a zone, stratum or group of strata that can store and transmit			
20	water ir	n sufficie	ent quan	tities for a specific use.			
21		<i></i>					
22		(b)		of review" means the area for which information and analyses shall be			
23				underground injection control permit application, and reviewed for			
24 25				he area of review must include all portions of an aquifer which will be a way within ten (10) ways of the granting of a parmit assuming that the			
25 26			ied with	e way within ten (10) years of the granting of a permit, assuming that the			
20	permit	is compi	lieu with				
28		(c)	"Backo	round" means the constituents or parameters and the concentrations or			
29	measurements which describe water quality and water quality variability prior to the subsurface						
30	discharge.						
31		0					
32		(d)	"Bore/c	casing annulus" means the space between the well bore and the well			
33	casing.						
34							
35		(e)	"Casing	g/tubing annulus" means the space between the well casing and the			
36	tubing.						
37		(6)	"0				
38		(f)		nting" means to seal the annular space around the outside of a casing			
39 40	string using a specially formulated Portland cement mixture or other hydraulic cement mixture to hold the casing in place and prevent any movement of fluid in this annular space. Cementing also						
40	includes operations to seal the well at the time of abandonment.						
42	menuae	soperad		ear the wen at the time of abandonment.			
43		(g)	"Cessp	ool" means a drywell that receives solely untreated domestic sewage, and			
44	which s	-	-	a open bottom and/or perforated sides.			
45							
46		(h)	"Class	I well" means a well used to inject hazardous or non-hazardous industrial,			
47	commercial or municipal waste beneath the lowermost formation containing, within one- quarter						
48	(1/4) m	ile of the	e well bo	ore, an underground source of drinking water.			
49							

50 "Class II well" means a well regulated by the Wyoming Oil and Gas (i) Conservation Commission, other than a Class II commercial disposal well, which injects fluids: 51 52 53 (i) Which are brought to the surface in connection with natural gas storage 54 operations, or conventional oil or natural gas production. Non-hazardous gas plant wastes may 55 be disposed of in a class II well pending Environmental Protection Agency co-approval. 56 57 (ii) For enhanced recovery of oil or natural gas. 58 59 (iii) For storage of hydrocarbons which are liquid at standard temperature 60 and pressure. 61 62 "Class III well" means a well used for in situ mining which injects for (i) extraction of minerals, or products, or recovers recovery fluids, minerals or products, including 63 64 a well used in: 65 66 (i) Mining of sulfur by the Frasch process. 67 68 In situ mining of uranium or other metals; this category includes in situ (ii) 69 production from ore bodies that have not been conventionally mined by means of an open pit or 70 underground excavation. 71 72 (iii) In situ mining of salts, trona, or potash. 73 74 (iv) Underground coal gasification operations. 75 76 Solution mining of open pits or underground excavations used for the (v) 77 production of minerals, such as stopes leaching. 78 79 (vi) Fossil fuel recovery including coal, lignite, oil shale, and tar sands. 80 81 Experimental technologies, such as pilot scale in situ mining wells in (vii) 82 previously unmined areas. 83 84 "Class IV well" means a well used to dispose of hazardous waste or radioactive (k) 85 waste into or above a formation which contains, within one-quarter (1/4) mile of the well bore, an underground source of drinking water. Class IV wells are prohibited by this Chapter. 86 87 88 Except that a well is not class IV if it is used to inject contaminated 89 groundwater that has been treated and reinjected into the same formation from which it is drawn 90 for the purpose of aquifer remediation where the ultimate cleanup criteria is protective of 91 groundwater standards of these regulations. 92 93 (1)"Class V facility" means any property which contains an injection well, 94 drywell, or subsurface fluid distribution system which is not defined as a Class I, II, III, or IV 95 well in this chapter. The Class V facility includes all systems of collection, treatment, and 96 control which are associated with the subsurface disposal. Appendix C of this chapter contains 97 a list of Class V facilities. 98

27-4

99 (m) "Cone of influence" means that area around a well within which increased
 100 discharge zone pressures caused by the injection would be sufficient to force fluids into an
 101 under- ground source of drinking water.
 102

(n) "Confining zone" means the zone in the well designated in the permit
 application to provide hydrologic separation between the receiver and any underground source
 of drinking water.

107 (o) "Domestic sewage" means liquids or solid wastes obtained from humans and
108 domestic activities including wastewater from activities such as showers, toilets, human wash
109 basins, food preparation, clothes washing, and dishwashers.
110

106

117

121

136

(p) "Draft permit" means a document indicating the tentative decision by the
department to issue or deny, modify, revoke and reissue, or terminate a permit. A notice of
intent to terminate a permit and a notice of intent to deny a permit are types of draft permits. A
denial of a request for modification, revocation and reissuance, or termination is not a draft
permit. A draft permit for issuance shall contain all conditions and content, compliance
schedules and monitoring requirements required by this chapter.

(q) "Drywell" means a well, other than an improved sinkhole or subsurface
 distribution system, completed above the water table so that its bottom and sides are typically
 dry, except when receiving fluids.

(r) "Duly authorized representative" means a specific individual or a position
having responsibility for the overall operation of the regulated facility or activity. The
authorization shall be made in writing by a responsible corporate officer and shall be submitted
to the administrator.

127 (s) "Endangerment" means exposure to actions or activities which could pollute
128 groundwaters of the State.
129

(t) "Fact sheet" means a document briefly setting forth the principal facts and the
significant factual, legal, methodological, and policy questions considered in preparing the draft
permit. Fact sheets for Class I wells are incorporated into the public notice.

(u) "Fluid" means any material which flows or moves, whether semisolid, liquid,
 sludge, gas or any other form or state.

(v) "General permit" means a permit issued to a class of operators, all of which
inject similar types of fluids for similar purposes. General permits require less information to be
submitted by the applicant than individual permits and do not require public notice for a facility
to be included under the authorization of a general permit.

(w) "Groundwater" means subsurface water that fills available openings in rock or
soil materials such that they may be considered water saturated under hydrostatic pressure.

145 (x) "Groundwaters of the state" are all bodies of underground water which are
146 wholly or partially within the boundaries of the state.
147

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148 149	(y)	"Hazardous waste" means a hazardous waste as defined in 40 CFR 261.3.					
149	(z)	"Improved sinkhole" means a naturally occurring karst depression which has					
150	been modified by man for the purpose of directing and emplacing fluids into the subsurface.						
152							
153 154	(aa)	"Individual permit" means a permit issued for a specific facility operated by an rator, company, municipality, or agency. An individual permit may be					
155	established as an area permit and include multiple points of discharge that are all operated by						
156	the same perso	on.					
157							
158	(bb)	"Injectate" means the wastewater being disposed of through any underground					
159	injection facili	ty after it has received whatever pretreatment is done.					
160							
161	(cc)	"Lithology" means the description of rocks on the basis of their physical and					
162	chemical chara	acteristics.					
163							
164	(dd)	"Long string casing" means a casing which is continuous from at least the top					
165	of the injection	n interval to the surface and which is cemented in place.					
166	5						
167	(ee)	"Log" means to make a written record progressively describing the strata and					
168		ydrologic character thereof to include electrical, radioactivity, radioactive tracer,					
169		ement bond and similar surveys, a lithologic description of all cores, and test data.					
170	······································	······································					
171	(ff)	"Mechanical integrity" means the sound and unimpaired condition of all					
172		f the well or facility or system for control of a subsurface discharge and associated					
173	activities.	the wen of facility of system for control of a substituce discharge and associated					
174	dett vittes.						
175	(gg)	"Permit" means a Wyoming Underground Injection Control permit, unless					
176	otherwise spec						
177	other wise spee	incu.					
178	(hh)	"Permit by rule" means an authorization included in these rules which does not					
	· · ·	an individual permit or a general permit. A facility which is permitted by rule					
179							
180		requirements found in this chapter, but is not required to apply for and obtain a					
181	permit to cons	truct and operate the facility.					
182	(::)						
183	(ii)	"Permittee" means the named permit holder.					
184	<i>(</i> ! •)						
185	(jj)	"Point of compliance" means a point at which the permittee shall meet class of					
186	use standards f	for the receiver.					
187							
188	(kk)	"Point of injection" means the last accessible sampling point prior to waste					
189		leased into the subsurface environment through a Class V injection well. For					
190		point of injection' of a Class V septic system might be the distribution box - the					
191		sampling point before the waste fluids drain into the underlying soils. For a dry					
192	well, it is likel	y to be the well bore itself.					
193							
194	(11)	"Public hearing" means a non-adversary hearing held by the administrator or					
195	director of the	department. The hearing is conducted pursuant to Chapter 3 of the Wyoming					
196	Department of	Environmental Quality Rules of Practice and Procedure.					

197 198 "Radioactive waste" means any waste which contains radioactive material in (mm) 199 concentrations that exceed those listed in 10 CFR Part 20, Appendix B, Table II, Column 2 as of 200 December 22, 1993. 201 202 "Receiver" means any zone, interval, formation or unit in the subsurface into (nn) 203 which fluids and pollutants are discharged. 204 205 (00)"Responsible corporate officer" means a president, secretary, treasurer, or vice 206 president of the corporation in charge of a principal business function, or any other person who 207 performs similar policy- or decision-making functions for the corporation. 208 209 "Secondarily affected aquifer" means any aquifer affected by migration of (pp)210 fluids from an injection facility, when the aquifer is not directly discharged into. 211 212 "Septic system" means a facility that is used solely to emplace domestic sewage (qq)below the surface and is comprised of a septic tank and subsurface fluid distribution system. 213 214 215 "Source water protection area" means the area delineated for the protection of (rr) 216 ground and surface water sources for a public water supply under a department approved plan 217 developed pursuant to Section 1453 of the Safe Drinking Water Act. 218 219 (ss) "Subsurface discharge" means a discharge into a receiver. 220 "Subsurface fluid distribution system" means an assemblage of perforated pipes 221 (tt) or drain tiles used to distribute fluids below the surface of the ground. Subsurface fluid 222 223 distribution systems include but are not limited to drain fields, leach fields, mounded leach 224 fields, leach lines, bed type distribution systems, and gravel-less chamber type distribution 225 systems. 226 227 (uu) "Underground source of drinking water" means those aquifers or portions 228 thereof which have a total dissolved solids content of less than 10,000 mg/L, and are classified 229 as either Class I, II, III, IV (a), or Special (A), pursuant to Chapter 8, Quality Standards for 230 Wyoming Groundwaters, Water Quality Rules and Regulations. 231 232 (vv) "Vadose Zone" means the unsaturated zone in the earth, between the land surface and the top of the first saturated aquifer which is not a perched water aquifer. The 233 234 vadose zone characteristically contains liquid water under less than atmospheric pressure, and 235 water vapor and air or other gases at atmospheric pressure. Perched water bodies exist within 236 the vadose zone. 237 238 "Water quality management area" means the area delineated for the protection (ww)239 of water quality under a department approved plan developed under Sections 303, 208 and/or 240 201 of the Federal Clean Water Act, as amended. 241 242 "Well" means an opening, excavation, shaft or hole in the ground allowing or (xx)243 used for an underground injection or for the purpose of extracting a fluid, mineral, product or 244 pollutant from the subsurface or for monitoring. 245

(yy) "Wellhead protection area" means the area delineated for the protection of a
public water supply utilizing a groundwater source under a department approved plan developed
pursuant to Section 1428 of the federal Safe Drinking Water Act.

(zz) "Workover" means to pull the tubing, packer, or any downhole hardware from
the well and inspect, replace, or refurbish it prior to placing that hardware back in service, or to
enter the hole with any drilling tool.

253 254 255

Section 3. Applicability.

These regulations shall apply to all Class I, Class IV, Class V, commercial oil field waste
disposal wells and those gas plant waste wells not regulated by the Wyoming Oil and Gas
Conservation Commission. In addition, these regulations shall apply to any discharge to the
subsurface, including the vadose zone, for all of the types of discharges listed in Appendix C of
this chapter.

- 261
- 262 263

Section 4. Timing of Compliance with These Regulations for Class V Wells.

Any Class V permit issued under Chapters 9 or 16, Water Quality Rules and Regulations, prior to the effective date of these regulations shall remain in effect until replaced by an individual permit, a general permit or permit by rule pursuant to this chapter. Existing individual permits issued under Chapters 9 or 16 will be reviewed on a five (5) year basis pursuant to Section 6 (c) of this chapter. Any individual permit issued pursuant to Chapters 9 or 16 prior to the effective date of these regulations fulfills all of the requirements to obtain a permit under this chapter.

(a) All operators of existing systems which are required to obtain an individual
permit under these regulations shall obtain a permit by April 14, 2000.

- 274 (b) General permits275
- (i) Within two (2) years of the effective date of the general permit, all
 operators of existing facilities which require coverage shall:
- 278 279 (A) Apply for coverage under the general permit. 280 281 **(B)** Apply for an individual permit for the facility. 282 283 (C) Retain an existing permit issued under Chapter 9. 284 285 (D) Cease discharging fluids to the subsurface. 286 287 All operators of facilities which are required to be covered by a general (ii) 288 permit which are constructed after the effective date of these regulations shall apply for and 289 obtain coverage prior to the construction of the facility. 290 291 (iii)
- (iii) Facilities will be covered by general permits as soon as the department
 has issued a written statement of acceptance to construct and operate the facility under the
 general permit. The department will issue a statement either accepting the operation for

294 295	coverage under a general permit, or denying coverage under a general permit within 60 days of the date when the operator has requested coverage.				
296		•			
297	(c)	(c) Permit by rule			
298	(•)	- •			
299		(i)	All operators of existing facilities permitted by rule shall submit		
300	invontory info	~ /	to the department within one (1) year of the effective date of this chapter.		
	inventory into	mation	to the department within one (1) year of the effective date of this chapter.		
301		(**)			
302	C	(ii)	All operators of facilities permitted by rule which are to be constructed		
303			of these regulations shall submit inventory information to the department		
304	prior to constr	ucting th	e facility.		
305					
306	Section	on 5.	Control of Class I well subsurface discharges; permit required;		
307	aquifer exem	ptions.			
308	-	-			
309	(a)	Class	I wells shall be allowed only pursuant to the Wyoming Environmental		
310			, Wyoming Water Quality Rules and Regulations, and this chapter.		
311	Quality Hot, (onupter o	, "Johning Water Quarty Mares and Regulations, and this empteri		
312	(b)	Disch	arges into or construction of Class I wells are prohibited unless a permit		
313			the Department of Environmental Quality through the Water Quality		
314	Division.		The Department of Environmental Quanty through the water Quanty		
	DIVISIOII.				
315		т·,			
316	(c)	5	ons from Class I wells shall be restricted to those receivers defined as		
317			by the department pursuant to Chapter 8, Quality Standards for		
318			ers, Water Quality Rules and Regulations and receivers which have		
319	obtained an ad	quifer exe	emption pursuant to this section.		
320					
321	(d)	Permi	ts may be issued for individual wells or on an area basis except Class I		
322	hazardous wa	ste wells	, which shall have individual permits.		
323			-		
324	(e)	The p	cocedure for obtaining an aquifer exemption from the U.S. Environmental		
325	• • •	-	ll be as follows:		
326	6	j			
327		(i)	Water Quality Division shall submit one complete copy of the		
328	application th	()	Permit, and the public notice to the U.S. Environmental Protection		
329	Agency, Region 8. This submission shall be made so that EPA receives the complete				
330	application at least twenty (20) days prior to the scheduled start of the public comment period.				
	application at	icast two	sity (20) days prior to the scheduled start of the public confinent period.		
331		(::)			
332	(*	(ii)	When the aquifer exemption request is for an aquifer containing 3,000		
333	mg/L or more of total dissolved solids, the following procedure shall be used: Within forty five				
334	(45) days of EPA receipt of a complete aquifer exemption request, EPA shall provide the				
335	department a written interim determination of intention to issue or deny the aquifer exemption				
336	pending receipt and review of the results of the public participation process conducted by the				
337	department. The interim response will become final if there are no comments relating to the				
338			lest during the comment or hearing process. If comments are received		
339	during the public comment or hearing process, the interim response will become final if not				
340	modified by EPA in writing within thirty (30) days of receipt of all comments.				
341	2		· · · -		

342 An aquifer exemption request for an aquifer containing less than 3,000 (iii) mg/L of total dissolved solids requires the aquifer exemption request to be processed as a 343 344 program revision pursuant to 40 CFR 145.32. 345 Section 6. **Permits and Permit Applications.** 346 347 (a) It is the operator's responsibility to make application for and obtain a permit in 348 accordance with these regulations. Each application must be submitted with all supporting data. 349 350 (b) All permits issued under this chapter, whether individual permits, or general 351 permits, shall be for no more than ten (10) years duration. 352 353 (c) Each permit shall be reviewed by the department at least once every five (5) 354 years for continued validity of all permit conditions and contents. Permits that do not satisfy the 355 requirements of these regulations are subject to modification, revocation and reissuance, or 356 termination pursuant to this chapter. 357 Sections of permit applications filed under this chapter which represent 358 (d) 359 engineering work shall be sealed, signed, and dated by a licensed professional engineer as required by Wyoming Statutes, Title 33, Chapter 29. 360 361 362 (e) Sections of permit applications filed under this chapter which represent geologic work shall be sealed, signed, and dated by a licensed professional geologist as required 363 364 by Wyoming Statutes, Title 33, Chapter 41. 365 A complete application for a Class I well shall include: 366 (f) 367 (i) A brief description of the nature of the business and the activities to be 368 369 conducted that require the applicant to obtain a permit under this chapter. 370 371 (ii) The name, address and telephone number of the operator, and the operator's 372 ownership status and status as a Federal, State, private, public or other entity. 373 374 (iii) The name address and telephone number of the facility. Additionally, the 375 location of the facility shall be identified by section, township, range and county, and whether or not it is located on Indian lands. 376 377 378 (iv) A calculation of the area of review, which requires the calculation of the 379 cone of influence and the area of the ultimate limit of emplaced waste. 380 381 (A) The formula for determining the cone of influence is: 382 $r = \left(\frac{2.25 \, KHt}{S10^x}\right)^{\frac{1}{2}}$ 383 384 Where: $x = \left(\frac{W}{G} - B\right) \left(\frac{4PKH}{230}\right)$ 385 386 387 388 r = Radius of the cone of influence of an injection well (feet)

389	K = Hydraulic conductivity of the injection zone (feet/day)			
390	H = Thickness of the injection zone (feet)			
391	t = Time of injection (days)			
392	S = Storage coefficient (dimensionless)			
393	Q = Injection rate (cubic feet/day)			
394	B = Original hydrostatic head of injection zone (feet) measured from the base of the			
395	injection zone			
	-			
396	W = Hydrostatic head of underground source of drinking water (feet) measured from			
397	the base of the injection zone			
398	G = Specific gravity of fluid in the injection zone (dimensionless)			
399	P = 3.142 (dimensionless)			
400 401 402 403 404	(B) A volume calculation to determine the maximum area that the injected waste could occupy shall be submitted on all new Class I wells. This calculation determines the total amount of void space around the well and assumes that the injected fluid completely displaces the formation water.			
405 406 407 408	(C) A Class I non-hazardous waste well's area of review shall never be less than one-quarter (1/4) mile, the cone of influence, or the area of emplaced waste, whichever is greatest.			
409 410 411	(D) A Class I hazardous waste well's area of review shall never be less than two (2) miles, the cone of influence, or the area of emplaced waste, whichever is greatest.			
412 413	(E) All Areas of Review shall be legally described by township, range and section to the nearest quarter quarter of a section.			
414 415 416	(v) Information about the proposed facility, including:			
417 418 419	(A) A description of the substances proposed to be discharged, including type, source, and chemical, physical, radiological and toxic characteristics; and			
420 421 422	(B) Construction and engineering details in accordance with Section 12 of this chapter.			
423 424 425 426	(vi) Information, including the name, description, depth and geology of the receiver and confining zone and the hydrology, fluid chemistry, fluid pressure, temperature, fracture pressure and the total dissolved solids (TDS) in the receiver.			
427 428 429 430 431 432	(vii) Water quality information, including background water quality data, which will facilitate the classification of any groundwaters which may be affected by the proposed discharge. This must include information necessary for the Water Quality Division to classify the receiver as class VI under Chapter 8 Section 4(d)(9) of the Wyoming Water Quality Rules and Regulations.			

433 A topographic and other pertinent maps, extending at least one (1) mile (viii) beyond the property boundaries of the facility, but never less than the area of review, depicting: 434 435 436 (A) The facility and each of its intake and discharge structures; 437 438 (B) Each of its hazardous waste treatment, storage, or disposal 439 facilities; 440 441 (C) Each well where fluids from the facility are injected 442 underground; 443 444 (D) Other wells, springs, and surface water bodies, and drinking 445 water wells listed in public records or otherwise known to the applicant within a minimum onequarter (1/4) mile of the facility property boundary, or further, as the administrator may 446 447 determine is necessary; and 448 449 (E) General geology and hydrogeology in the area. 450 451 A list of other relevant permits, whether federal or state, that the facility (ix) 452 has been required to obtain, such as construction permits. 453 454 A listing of all wells that penetrate the confining zone and are within (x) 455 the area of review, and records of plugging or completion, sufficient to satisfy the administrator 456 as to the adequacy of the plugging or completion. 457 458 (A) For those wells that the administrator determines have not been 459 adequately plugged, completed, or abandoned, or for wells which lack supporting information, 460 the applicant shall also submit a plan to prevent movement of fluids into Underground Source of Drinking Waters through these wells, and this plan, after approval or modification by the 461 administrator, shall be incorporated as a permit condition. 462 463 464 Detailed plans for: (xi) 465 466 Monitoring volume and chemistry of the discharge, and water (A) quality of water wells within the area of review; 467 468 469 **(B)** Monitoring injection and annular pressures in the well, to 470 minimize the potential for fracturing of the confining zone and below the receiver; and 471 472 (C) Corrective action to cope with alarms, shut-downs, 473 malfunctions or well failures, so as to prevent endangerment of groundwater. 474 475 Information sufficient to demonstrate mechanical integrity of the well, (xii) 476 and compatibility between the proposed discharge and the well material. 477 478 (xiii) Information sufficient to demonstrate compliance with Sections 12, 14, 479 15, 16, 17 and 19 of this chapter. 480

481		(xiv)	All applications for permits shall be signed by a responsible officer as	
482	follows:			
483				
484			(A) <u>For a corporation</u> - by a responsible corporate officer. For the	
485	purpose of this	section,	a responsible corporate officer means:	
486				
487			(1) A President, Secretary, Treasurer, or Vice President of	
488	the corporation	in charg	e of a principal business function, or any other person who performs	
489	similar policy of	or decisio	on making functions for the corporation; or	
490				
491			(2) The manager of one or more manufacturing,	
492	production, or	operating	facilities employing more than 250 persons or having gross annual	
493			ceeding \$25 million (in second quarter 1980 dollars), if authority to sign	
494	·		igned or delegated to the manager in accordance with corporate	
495	procedures.			
496	1			
497			(B) For a partnership or sole proprietorship by a general partner	
498	or the proprieto	or, respec		
499				
500			(C) For a municipality, state, federal or other public agency by either	
501	the principal ex	ecutive (officer or ranking elected official.	
502			, , , , , , , , , , , , , , , , , , ,	
503		(xv)	The application shall contain the following certification by the person	
504	signing the app	lication:		
505	0 0 11			
506	"I certify under	penalty	of law that this document and all attachments were prepared under my	
507	direction or supervision in accordance with a system designed to assure that qualified personnel			
508	properly gather	and eva	luate the information submitted. Based on my inquiry of the person or	
509	persons who m	anage th	e system, or those persons directly responsible for gathering the	
510	information, th	e inform	ation submitted is, to the best of my knowledge and belief, true,	
511	accurate, and complete. I am aware that there are significant penalties for submitting false			
512	information, in	cluding t	he possibility of fine and imprisonment for knowing violations."	
513				
514		(xvi)	All relevant data used to complete permit applications shall be kept for	
515	a minimum of	three (3)	years from the date of signing.	
516				
517	(g)	For Cla	ss V facilities the following are applicable:	
518				
519		(i)	A permit is required.	
520				
521		(ii)	Construction, installation, modifications or operation of Class V	
522	facilities shall b	be allowe	ed only in accordance with these regulations.	
523				
524		(iii)	Discharges into, or construction of, any Class V facility are prohibited	
525	unless permitted pursuant to this chapter.			
526				
527		(iv)	Every facility shall be covered by one of the three types of permitting	
528			neral; or permit by rule. The following sections of these regulations	
529	describe the permitting method for and subclasses of facilities. The owner or operator of a			

530 facility that can be covered by a general permit or authorized under permit by rule may apply 531 for and be permitted by an individual permit if the owner or operator desires. Operators who do 532 not meet the requirements for a general permit or permit by rule must obtain an individual 533 permit prior to installation or construction of the Class V facility. 534 535 Permits may be issued for individual facilities or they may be issued on (v) 536 an area basis for multiple points of discharge operated by the same person. 537 538 (vi) A separate permit to construct is not required under Chapter 3, Water 539 Quality Rules and Regulations for any Class V facility. Requirements of the Chapter 3 permit 540 to construct will be included in the underground injection control permit issued under this 541 chapter. 542 543 Permit conditions and contents. (h) 544 545 (i) All Class I permits issued under this chapter shall contain the following conditions: 546 547 548 (A) A requirement that the injection pressure shall be limited to the 549 fracture pressure of the receiver, except as necessary during well stimulation, and, within one 550 (1) year of the issuance of the permit, the operator shall conduct a step-rate injection test to 551 determine the actual fracture pressure of the receiver. 552 553 A requirement that mechanical integrity shall be maintained **(B)** continuously and be reviewed at least every five (5) years. The test used to determine 554 555 mechanical integrity shall be a two-part test approved by the administrator, who shall approve 556 only those tests that have been approved first by the U.S. Environmental Protection Agency's 557 Office of Drinking Water. 558 559 (I) Part one of the mechanical integrity test shall 560 demonstrate the absence of leaks through the packer, tubing, casing, and well head. 561 562 (II) Part two of the mechanical integrity test shall 563 demonstrate the absence of fluid movement behind the casing. 564 565 (III) Proposed mechanical integrity tests that have not yet been approved shall be submitted to the administrator who shall forward the information to the 566 567 U.S. Environmental Protection Agency's Office of Drinking Water along with a request for 568 approval, if, in the administrator's opinion, it will adequately determine mechanical integrity of 569 the well system. A previously unauthorized mechanical integrity test submitted for approval 570 shall include: 571 572 (1.)The proposed method for demonstrating the 573 lack of significant leaks in the well; 574 575 (2.)The proposed method for showing the absence 576 of significant fluid movement; and 577

578 579	(3.) Any technical data supporting the use of this test.
580 581 582 583	(C) A Class I well that cannot demonstrate mechanical integrity shall be shut down until such time as the mechanical integrity has been restored.
584 585 586 587 588	(D) A requirement that the packer be set within five-hundred (500) feet of the top of the receiver, unless the administrator allows some other specific interval to be used to set the packer, but always within the zone covered by excellent cement bond as shown by the cement bond log.
589 590 591	(ii) Special conditions for Class I hazardous waste wells.
592 593 594 595	(A) All Class I hazardous waste wells permitted under this chapter shall be subject to the special permit conditions listed below in addition to the conditions applicable to all Class I well permits in this chapter.
596 597	(B) All hazardous waste injection permits issued under this chapter shall include the following conditions:
598 599 600 601 602 603	(I) A requirement that the operator shall maintain a casing/tubing annulus pressure that exceeds the operating injection pressure, unless the administrator determines that such a requirement might harm the integrity of the well. The fluid used in the casing/tubing annulus shall be noncorrosive, and shall contain a corrosion inhibitor.
603 604 605 606 607 608 609 610	(II) A requirement that the operator shall follow special procedures when wastes have the potential to react with the injection formation or to generate gases either during or after injection. These procedures may take the form of special permit conditions that limit the temperature or pH of the injected waste and require the operator to follow procedures necessary to assure that pressure imbalances which might cause a backflow or blowout do not occur.
611 612 613 614 615 616	(III) A requirement that the operator shall install, maintain, and use continuous recording devices to monitor the injection pressure, flow rate, temperature, of injected fluids and pressure on the casing/tubing annulus, and shall install and use automatic alarm and shut-off systems designed to shut down the well when pressures, flow rates, and other parameters approved by the administrator exceed the range specified in the permit.
617 618	(IV) A requirement that the operator have a trained operator onsite at all times the well is operating.
619 620 621 622 623	(V) A requirement that if an automatic alarm or shutdown is triggered, the operator shall immediately investigate and identify as early as possible, the cause of the alarm or shutdown. If, upon such investigation, or if required monitoring indicates, that the well is lacking in mechanical integrity, the operator shall:
624 625 626	(1.) Cease all injections of waste fluids

627			
628		(2.)	Take all necessary steps to determine the
629	presence or absence of a leak.		
630			
631		(3.)	Notify the administrator within twenty-four
632	(24) hours after the alarm or shutdown,	using pro	ocedures and criteria listed in paragraph
633	(h)(iii)(Q) of this section.		
634			
635		(4.)	The operator shall restore and demonstrate, to
636	the satisfaction of the administrator, med	chanical	integrity prior to resuming injection activities.
637			
638	(VI)	A requi	rement that whenever the operator obtains
639	evidence that there may have been a rele	ease of in	njected wastes into an unauthorized zone,
640	regardless of whether or not an automati	ic alarm	or shutdown was triggered, the operator shall:
641			
642		(1.)	Immediately cease all injection activities.
643			
644		(2.)	Notify the administrator pursuant to the
645	procedures outlined in paragraph (h)(iii)	(Q) of th	nis section. In addition to the information
646	required by paragraph (h)(iii)(Q) of this	section,	the operator shall also include, as part of the
647	written submission, a proposed remedia	l action j	plan, designed to minimize the adverse impact
648	of the unauthorized release.		
649			
650		(3.)	Comply with the requirements of any remedial
651	action plan approved by the administrate	or.	
652			
653		(4.)	Where the unauthorized release is into a Class
654			Standards for Wyoming Groundwaters, Water
655	· · ·		ly serving as a water supply, the operator shall
656			se and the actions taken, in a newspaper of
657	general circulation in the locality of the	release.	
658			
659		(5.)	The administrator may allow the operator to
660			operations if the operator demonstrates, to the
661		e injectio	n activity will not endanger any Underground
662	Source of Drinking Waters.		
663			
664	(VII)		rement that the operator notify the administrator
665	and obtain his approval prior to conduct	ing any	well workover.
666			
667	(VIII)		rement that the operator comply with the
668		in 40 CF	FR 264 or applicable state hazardous waste
669	regulations:		
670		(1)	
671		(1.)	Identification numbers.
672		(2)	Depending and monorting for manifest 1
673	wester	(2.)	Recordkeeping and reporting for manifested
674 675	wastes.		
075			

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676		(3.)	Manifest discrepancies.
677 678		(4.)	Operating record requirements.
679		(4.)	operating record requirements.
680	upmonifested wests remarks	(5.)	Annual reporting requirements and
681 682 683	unmanifested waste reports.	(6.)	Personnel training requirements.
684	(IX)	When a	abandonment is completed, the operator must
685		•	perator and certification by an independent
686 687	registered professional engineer that the		
688	specifications detailed in the closure pla	in in Sec	tion 17 of this chapter.
689	(iii) All individual a	and gene	ral permits issued under this chapter shall
690	contain the following conditions:	U	1 1
691			
692			that the permittee comply with all conditions of
693 694			tutes a violation of these regulations and is
694 695	grounds for enforcement action, permit	terminat	ion, revocation, or modification.
696	(B) A requi	irement	that if the permittee wishes to continue injection
697	-		rmittee must apply to the administrator for, and
698	obtain, a new permit.		
699			
700			at it shall not be a defense for a permittee in an
701 702	order to maintain compliance with the c		essary to halt or reduce the permitted activity in
702	order to maintain compnance with the c	onunion	s of this permit.
704	(D) A requi	irement	that the permittee shall take all reasonable steps
705			e environment resulting from noncompliance
706	with this permit.		
707	_		
708			that the permittee properly operate and maintain
709 710			bl which are installed or used by the permittee to permit. Proper operation and maintenance
710			g and operator staffing and training, and
712			ing appropriate quality assurance procedures.
713			or auxiliary facilities or similar systems only
714	when necessary to achieve compliance	with the	conditions of the permit.
715			
716			at the filing of a request by the permittee, or at
717			modification, revocation, termination, or
718 719	condition.	ipated no	on-compliance, shall not stay any permit
720	condition.		
721	(G) A stipu	lation th	at this permit does not convey any property
722	rights of any sort, or any exclusive privi		
723	· · · ·	-	

724 (H) A stipulation that the permittee shall furnish to the 725 administrator, within a specified time, any information which the administrator may request to 726 determine whether cause exists for modifying, revoking and reissuing, or terminating the 727 permit, or to determine compliance with the permit. The permittee shall also furnish to the 728 administrator, upon request, copies of records required to be kept by the permit. 729 730 **(I)** A requirement that the permittee shall allow the administrator, 731 or an authorized representative of the administrator, upon the presentation of credentials, during normal working hours, to enter the premises where a regulated facility is located, or where 732 733 records are kept under the conditions of this permit, and inspect the discharge and related 734 facilities, review and copy reports and records required by the permit, collect fluid samples for 735 analysis, measure and record water levels, and perform any other function authorized by law or 736 regulation. 737 738 (J) A requirement that the permittee furnish any information 739 necessary to establish a monitoring program pursuant to Section 15 of this chapter. 740 741 (K) A requirement that all samples and measurements taken for the 742 purpose of monitoring shall be representative of the monitored activity, and records of all 743 monitoring information be retained by the permittee. The monitoring information to be retained 744 shall be that information stipulated in the monitoring program established pursuant to the 745 criteria in Section 15 of this chapter. 746 747 (L) A requirement that all applications, reports, and other 748 information submitted to the administrator contain certifications as required in Section 6 (f) (xv)749 of this chapter, and be signed by a person who meets the requirements to sign permit 750 applications found in Section 6 (f) (xiv), or for routine reports, a duly authorized representative; 751 752 A requirement that the permittee give advance notice to the (\mathbf{M}) 753 administrator as soon as possible of any planned physical alteration or additions, other than 754 authorized operation and maintenance, to the permitted facility and receive authorization prior 755 to implementing the proposed alteration or addition. 756 757 A requirement that any modification which may result in a (N) 758 violation of a permit condition shall be reported to the administrator, and any modification that 759 will result in a violation of a permit condition shall be reported to the administrator through the 760 submission of a new or amended permit application. 761 762 A requirement that any transfer of a permit must first be (O) 763 approved by the administrator, and that no transfer will be approved if the facility is not in 764 compliance with the existing permit unless the proposed permittee agrees to bring the facility into compliance. 765 766 767 (P) A requirement that monitoring results shall be reported at the intervals specified elsewhere in the permit. 768 769 770 A requirement that reports of compliance or non-compliance (Q) with, or any progress reports on interim and final requirements contained in any compliance 771

772 schedule, if one is required by the administrator, shall be submitted no later than thirty (30) days 773 following each schedule date. 774 775 (R) A requirement that confirmed noncompliance resulting in the migration of injected fluid into any zone outside of the permitted receiver must be orally 776 777 reported to the administrator within 24 hours, and a written submission shall be provided within 778 five (5) days of the time the permittee becomes aware of the excursion. The written submission 779 shall contain: 780 781 (I) A description of the noncompliance and its cause. 782 783 (II) The period of noncompliance, including exact dates and times, and, if the noncompliance has not been controlled, the anticipated time it is expected 784 785 to continue; and 786 787 (III) Steps taken or planned to reduce, eliminate, and 788 prevent reoccurrence of the noncompliance. 789 790 A requirement that the permittee report all instances of **(S)** 791 noncompliance not already required to be reported under paragraphs (h) (iii) (P) through (R) of 792 this section, at the time monitoring reports are submitted. The reports shall contain the 793 information listed in paragraph (h) (iii) (R) of this section. 794 795 A requirement that in the situation where the permittee (T) 796 becomes aware that it failed to submit any relevant facts in a permit application, or submitted 797 incorrect information in a permit application or in any report to the administrator, the permittee 798 shall promptly submit such facts or information. 799 800 (U) A requirement that the injection facility meet construction requirements outlined in Section 10 of this chapter, and that the permittee submit notice of 801 802 completion of construction to the administrator and allow for inspection of the facility upon 803 completion of construction, prior to commencing any injection activity. 804 805 A requirement that the permittee notify the administrator at (V) 806 such times as the permit requires before conversion or abandonment of the facility. 807 808 (W) A requirement that an abandonment report, detailing the 809 compliance abandonment procedures outlined in the original permit application, or describing 810 any deviations from the original plan, be submitted as soon as practicable after abandonment, 811 and is complete. 812 813 (X) A requirement that injection may not commence until 814 construction is complete. 815 In addition to the conditions required of all permits, the 816 (Y) administrator may establish, on a case-by-case basis, conditions as required for monitoring, 817 818 schedules of compliance, and such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water. 819 820

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822			
823			
824	Section	n 7.	Permit Processing Procedures.
825			
826 827	(a)	For Cl	ass I wells the following are applicable:
828 829 830	the Water Qual	(i) lity Divi	The applicant shall file seven (7) copies of the permit application with sion.
831 832 833 834	determined con	nplete w	Within sixty (60) days of submission of the application, the ke an initial determination of completeness. An application shall be when the administrator receives an application and any supplemental to determine compliance with these regulations.
835 836 837		(iii)	An incomplete application will be processed in the following manner:
837 838 839 840 841			(A) For an extremely incomplete application, additional quested in detail or the application will be returned to the applicant. lications will result in permit denial.
842 843 844 845 846	months to com	ply with	(B) If an application is denied because of incompleteness for additional information, the applicant shall have a maximum of six (6) the requests. If the applicant fails to provide the requested information entire incomplete application shall be returned.
847 848 849	application will	l begin t	(C) Resubmittal of information by an applicant on an incomplete the process described in subsection (a)(ii) of this section.
850 851 852	determined con	(iv) nplete, t	During any sixty (60) day review period where an application is he administrator shall take one of the following actions:
853 854 855	sheet on the pro	oposed o	(A) Prepare a draft permit for issuance or denial, prepare a fact operation, and provide public notice pursuant to Section 21; or
856 857 858	state the deficie	encies ir	(B) Provide the applicant notice that the permit is deficient and in the application.
859 860 861 862 863 864 865 866	the reasons for Quality Counci public notice re	appeal, il. A de equirema informa	Determinations of deficiency by the Department are appealable by the nmental Quality Council. Requests for appeal must be in writing, state and be made to both the Director and the Chairman of the Environmental ficient application is considered a permit denial but is not subject to the ents of Section 22 unless a hearing is requested by the applicant. ation for a deficient application will start the sixty (60) day review period
867 868 869	in paragraph (d	(vi) l) of this	Denials of permit applications will be pursuant to procedures outlined section.

870 (vii) All draft permits for Class I wells require public notice pursuant to Section 21 of this chapter. 871 872 873 (b) For Class V wells that require an Individual Permit, the following are 874 applicable: 875 876 (i) The applicant shall submit five (5) copies of the permit application to 877 the division. 878 879 (A) Within 60 days of submission of the application, the 880 administrator shall make an initial determination of completeness. An application shall be 881 determined complete when the administrator receives an application and any supplemental 882 information necessary to determine compliance with these regulations. 883 884 (ii) Resubmittal of information by an applicant on an incomplete 885 application will begin the process described in paragraph (b)(i)(A) of this section. 886 887 During any 60 day review period where an application is determined (iii) complete, the administrator shall prepare a draft permit for issuance or denial, prepare a fact 888 889 sheet on the proposed operation, and provide public notice pursuant to Section 21. 890 891 A denial of the application by the department is appealable by the (iv) 892 applicant to the Environmental Quality Council in accordance with the Rules of Practice and 893 Procedure. Requests for appeal must be in writing, state the reasons for appeal, and be made to 894 both the director and the chairman of the Environmental Quality Council. 895 896 For Class V wells that require a General Permit, the following are applicable: (c) 897 898 In order to be covered by a general permit, an operator must submit all (i) 899 information required in Section 9 (c) (i), (ii), and (iii), plus any additional information required 900 to be submitted or reported in the issued general permit. The submittal requesting coverage by a 901 general permit shall be signed by a person meeting the same signatory requirements of Section 6 902 (f) (xiv) and shall be certified in accordance with Section 6 (f) (xv). Facilities will be covered 903 by general permits as soon as the department has issued a written statement of acceptance to 904 allow the construction and operation of the facility under the general permit. The department 905 will issue an authorization accepting the operation for coverage under the general permit or 906 denying coverage under the general permit, within 60 days of the date when the operator 907 requested coverage. Requests for coverage under a general permit, which do not meet the 908 requirements for general permit pursuant to this chapter, may be denied by the administrator. 909 910 If a general permit has been issued by the department, an operator of a (ii) 911 facility must register the facility with the department and sign a statement agreeing to be bound by the conditions of that permit. Failure to register for general permit coverage, when available, 912 913 is the same as operation of a facility without a permit, unless an individual permit has been 914 obtained. 915 916 Once issued, general permits must remain the same for all persons (iii) covered by the permit. A general permit may be modified in accordance with Section 7 (d) 917 (vii). Any such modification must cover all persons covered by the permit. 918

920 (d) Permit modification, denial, revocation, termination and transfer. 921 922 (i) Permits may be modified, revoked and reissued, or terminated either at 923 the request of any interested person (including the permittee or licensee) or upon the 924 administrator's initiative. However, permits may only be modified, revoked and reissued, or 925 terminated for the reasons specified in this section. All requests shall be in writing and shall 926 contain facts or reasons supporting the request. 927 928 If the Administrator decides the request is not justified, he or she shall (ii) 929 send the requester a brief written response giving the reason for the decision. A request for 930 modification, revocation and reissuance, or termination shall be considered denied if the 931 Administrator takes no action within 60 days after receiving the written request. Denials of 932 requests for modification, revocation and reissuance, or termination are not subject to public 933 notice and comment. Denials by the administrator may be appealed for hearing to the 934 Environmental Quality Council by a letter briefly setting forth the relevant facts. 935 936 If the administrator tentatively decides to modify or revoke and reissue (iii) 937 a permit, a draft permit incorporating the proposed changes shall be prepared. The 938 administrator may request additional information and, in the case of a modified permit, may 939 require the submission of an updated application. In the case of revoked and reissued permits, 940 the administrator shall require the submission of a new application. 941 942 (iv) In a permit modification under Section 7 (d) (vii) of this chapter, only 943 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 944 945 permit and the modified permit shall expire on the date when the original permit would have 946 expired. When a permit is revoked and reissued under this section, the entire permit is reopened 947 as if the permit has expired and is being reissued. When the entire permit is reopened, the 948 modified permit shall be issued for no more than ten (10) years. During any revocation and 949 reissuance proceeding, the permittee shall comply with all conditions of the existing permit until 950 a new final permit is issued. 951 952 Proposed permit modifications, revocations or terminations shall be (v) 953 developed as a draft permit and are subject to the public notice and hearing requirements 954 outlined in Section 21. 955 956 For Class I wells the administrator shall modify a permit or license (vi) 957 when: 958 959 (A) Any material or substantial alterations or additions to the facility occur after permitting or licensing, which justify the application of permit conditions 960 961 that are different or absent in the existing permit; or 962 963 **(B)** Any modification in the operation of the facility is capable of 964 causing or increasing pollution in excess of applicable standards or permit conditions. 965

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966 (C) Information warranting modification is discovered after the operation has begun that would have justified the application of different permit conditions at 967 968 the time of permit issuance; 969 970 Regulations or standards upon which the permit or license was (D) 971 based have changed by promulgation of amended standards or regulations or by judicial 972 decision after the permit was issued; 973 974 (E) Cause exists for termination, as described in this section, but 975 the department determines that modification is appropriate; or 976 977 (F) Modification is necessary to comply with applicable statutes, 978 standards or regulations. 979 980 For Class V wells the administrator **may** modify a permit when: (vii) 981 982 (A) Any material or substantial alterations or additions to the facility occur after permitting or licensing, which justify the application of permit conditions 983 984 that are different or absent in the existing permit; 985 986 **(B)** Any modification in the operation of the facility is capable of 987 causing or increasing pollution in excess of applicable standards or permit conditions; 988 989 (C) Information warranting modification is discovered after the 990 operation has begun that would have justified the application of different permit conditions at the time of permit issuance; 991 992 993 (D) Regulations or standards upon which the permit was based 994 have changed by promulgation of amended standards or regulations, or by judicial decision after 995 the permit was issued; 996 997 Cause exists for termination, as described in this section, but (E) 998 the department determines that modification is appropriate; or 999 1000 (F) Modification is necessary to comply with applicable statutes, 1001 standards or regulations. 1002 1003 Minor modifications of permits may occur with the consent of the (viii) 1004 permittee without following the public notice requirements. Minor modifications will become 1005 final twenty (20) days from the date of receipt of such notice. For the purposes of this chapter, 1006 minor modifications may only: 1007 1008 (A) Correct typographical errors; 1009 1010 **(B)** Require more frequent monitoring or reporting by the permittee; 1011 1012

1013 (C) Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the 1014 1015 existing permit and does not interfere with attainment of the final compliance date requirement; 1016 1017 (D) Allow for a change in ownership or operational control of a 1018 facility where the administrator determines that no other change in the permit is necessary, 1019 provided that a written agreement containing a specific date for transfer of permit responsibility, 1020 coverage, and liability between the current and new permittees have been submitted to the 1021 administrator: 1022 1023 Change quantities or types of fluids injected that are within the (E) 1024 capacity of the facility as permitted and, in the judgment of the administrator, would not 1025 interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification; 1026 1027 1028 (F) Change construction requirements approved by the administrator pursuant to department rules and regulations provided that any such alteration 1029 1030 shall comply with the requirements of this chapter; or 1031 1032 (G) Amend an abandonment plan. 1033 1034 For a Class I well the administrator may deny a permit for any of the (ix) 1035 following reasons: 1036 (A) 1037 The application is incomplete; or 1038 1039 Other justifiable reasons necessary to carry out the provisions (B) 1040 of the Wyoming Environmental Quality Act. 1041 1042 (C) If the applicant has been and continues to be in violation of the 1043 provisions of the Wyoming Environmental Quality Act. 1044 1045 (x) For Class I wells the administrator shall deny a permit for any of the 1046 following reasons: 1047 1048 (A) The project, if constructed and/or operated, will cause violation of applicable state surface or groundwater standards; 1049 1050 1051 (B) The application contains a proposed construction or operation 1052 which does not meet the requirements of this chapter; or 1053 1054 The application does not provide documentation to comply (C) 1055 with financial responsibility requirements of Section 19. 1056 1057 The administrator shall deny any permit for which the U.S. (D) 1058 Environmental Protection Agency has denied an aquifer exemption. 1059

1060 (E) When the department intends to deny a permit for any reason other than an incomplete or deficient application, a draft permit shall be prepared and public 1061 1062 notice issued pursuant to Section 21. 1063 1064 For Class V wells the director may deny an individual permit for any of (xi) 1065 the following reasons: 1066 (A) The application is incomplete; 1067 1068 **(B)** The project, if constructed and/or operated, will cause violation 1069 of applicable state surface or groundwater standards; 1070 1071 (C) The application contains a proposed construction or operation 1072 which does not meet the requirements of this chapter; 1073 1074 (D) The permitted facility would be in conflict with or is in conflict 1075 with a state approved local wellhead protection plan, state approved local source water protection plan, or state approved water quality management plan; or 1076 1077 1078 Other justifiable reasons necessary to carry out the provisions (E) 1079 of the Wyoming Environmental Quality Act. 1080 1081 If the director intends to deny an individual permit for any (F) 1082 reason other than an incomplete or deficient application, a draft permit shall be prepared and public notice issued pursuant to Section 21 of this chapter. 1083 1084 1085 (xii) The administrator may revoke and reissue or terminate a permit for any 1086 of the following reasons: 1087 1088 (A) Noncompliance with terms and conditions of the permit; 1089 1090 (B) Failure in the application or during the issuance process to disclose fully all relevant facts, or misrepresenting any relevant facts at any time; or 1091 1092 1093 (C) A determination that the activity endangers human health or the 1094 environment and can only be regulated to acceptable levels by a permit modification or 1095 termination. 1096 1097 The administrator may modify a permit or license to resolve issues that (xiii) 1098 could lead to the revocation or consider any of the reasons in the preceding paragraph as 1099 sufficient justification to terminate a permit or license. The administrator as part of any 1100 notification of intent to terminate a permit or license shall order the permittee or licensee to 1101 proceed with reclamation on a reasonable time period. 1102 1103 (xiv) Permits for Class I wells will be automatically terminated after closure 1104 and release of the financial responsibility requirements of Section 19 by the department. 1105 1106 (xv)Transfer of a permit is allowed only upon approval by the administrator. When a permit transfer occurs pursuant to this section, the permit rights of the 1107 previous permittee will automatically terminate. 1108

1109							
1110			(A) The proposed permit holder shall apply in writing as though				
1111	that person was the original applicant for the permit and shall further agree to be bound by all of						
1112			as of the permit.				
1113			1				
1114			(B) Transfer will not be allowed if the permittee is in				
1115	noncomplianc	e with an	y term and conditions of the permit, unless the transferee agrees to bring				
1116			ompliance with the permit.				
1117	the fueling but		inplance with the perint.				
1118			(C) When a permit transfer occurs, the administrator may modify a				
1110	permit nursua	nt to this	section. The administrator shall provide public notice pursuant to				
1120			lification other than a minor modification defined by this section.				
1120	Section 21 Ior	any mou	incation other than a minor modification defined by this section.				
1122			(D) The potential transferee shall file a statement of qualifications				
1122	to hold a norm	it with th					
1125	to note a perm	lit with th	ne administrator.				
	Coot:		Decends and Demonts				
1125	Sectio	011 ð.	Records and Reports.				
1126		Manita	aning approximate as suring a last the anomality shall be surhuritted to the				
1127	(a)	Monito	oring reports required by the permit shall be submitted to the				
1128	administrator.						
1129							
1130	(b)	Monito	oring results shall be reported in the annual reports unless otherwise				
1131	specified.						
1132							
1133	(c)	-	rmittee shall submit a written report to the administrator of all remedial				
1134		•	ilure of equipment or operational procedures which resulted in a				
1135	violation of a	permit co	ondition, at the completion of the remedial work.				
1136							
1137	(d)		y aborted or curtailed operation, in lieu of an annual report, a complete				
1138	•		ed within thirty (30) days of complete termination of the discharge or				
1139	associated acti	ivity.					
1140							
1141	(e)	Routin	e periodic reports required by the permit shall be submitted to the				
1142	administrator	within thi	irty (30) days following the end of the period covered in the report.				
1143	Reports shall i	nclude, i	f applicable, the following information:				
1144	_						
1145		(i)	An accounting of the total volume of fluid injected for the period				
1146	covered by the	e report, t	he year to date, and the life of the well to date.				
1147	•	•					
1148		(ii)	An analysis of the physical, chemical and other relevant characteristics				
1149	of the injected	. ,					
1150							
1151		(iii)	A complete description of any event that triggered any alarm or				
1152	shutdown the	. ,	the response taken.				
1153		, unu					
1154		(iv)	A complete description of any event where maximum annular or				
1155	injection press	. ,	specified in the permit, were exceeded.				
1156	injection press		results in the period, were encoulded.				

1157 1158 1159	month.	(v)	The average, maximum and minimum injection pressures for each			
1160 1161		(vi)	Any well workover.			
1162 1163 1164 1165 1166	(f) Quarterly and annual reports for hazardous waste wells shall also include a description of any change in the volume of fluid in the casing/tubing annulus of the well, and an explanation of the temperature/volume relationships covering the fluid. Any addition or withdrawal of fluids from the casing/tubing annulus shall be noted.					
1167 1168 1169 1170	(g) The results of any mechanical integrity test, or any other testing done on a well, shall be submitted to the administrator within thirty (30) days or with the next quarterly report, whichever comes later, following the completion of the test.					
1171 1172	(h) period of three		rmittee shall retain all monitoring records required by the permit for a s following facility closure.			
1173 1174	Section	n 9.	Individual Permits for Class V Facilities.			
1175						
1176	(a)		erator shall submit an application and obtain a permit prior to the			
1177			n, modification or operation of any facility in the following subclasses:			
1178			C2; 5C3; 5D1; 5D3; 5D4; 5E3, 5E4 and 5F2 unless the facility is			
1179			rmit. In addition, any facility not authorized under Sections 10 and 11,			
1180	and operators of	lirected b	by the administrator to obtain an individual permit, shall obtain an			
1181	individual perr	nit under	this section.			
1182						
1183	(b)	The op	erator is responsible to make application for and obtain a permit. Each			
1184	application mu	st be sub	mitted with all supporting data required in this chapter.			
1185						
1186	(c)	A comp	plete application for a Class V facility individual permit shall include:			
1187						
1188		(i)	A brief description of the nature of the business and the activities to be			
1189	conducted that	require t	he applicant to obtain a permit under this chapter.			
1190						
1191		(ii)	The name, address and telephone number of the operator, and the			
1192	operator's own	ership sta	atus and status as a federal, state, private, public or other entity.			
1193						
1194		(iii)	The name address and telephone number of the facility. Additionally,			
1195	the location of	the facili	ty shall be identified by section, township, range and county.			
1196						
1197		(iv)	A calculation of the area of review including:			
1198		× /				
1199			(A) A calculation to determine the maximum area affected by the			
1200	injected waste	for all C	ass V facilities constructed or modified after the effective date of these			
1201			lation determines the total amount of void space around and down			
1202			of injection and uses accepted groundwater theory to determine the			
1203			roundwater around the facility.			
1204	······································	B	· · · · · · · · · · · · · · · · · · ·			

1205 **(B)** A Class V area of review shall never be less than the area of 1206 potentially impacted groundwater. 1207 1208 (C) All areas of review shall be legally described by township, range and section to the nearest ten (10) acres as described under the general land survey 1209 1210 system. 1211 1212 Information about the proposed facility including: (v) 1213 1214 (A) A description of the substances proposed to be discharged, 1215 including type, source, and chemical, physical, radiological and toxic characteristics; and 1216 1217 **(B)** Construction and engineering details in accordance with Section 13 of this chapter and Chapter 11 Water Quality Rules and Regulations. 1218 1219 1220 Information, including the name, description, depth, geologic structure, (vi) faulting, fracturing, lithology, hydrology, and fluid pressure of the receiver and any relevant 1221 1222 confining zones. The fracture pressure of the receiver shall be submitted only if the injection is 1223 under pressure into a confined aquifer. 1224 1225 Water quality information including background water quality data (vii) 1226 which will facilitate the classification of any groundwaters which may be affected by the 1227 proposed discharge. This must include information necessary for the division to classify the 1228 receiver and any secondarily affected aquifers under Chapter 8, Wyoming Water Quality Rules and Regulations. 1229 1230 1231 A topographic and other pertinent maps, extending at least one (1) mile (viii) 1232 beyond the property boundaries of the facility, but never less than the area of review, depicting: 1233 (A) 1234 The facility and each of its intake and discharge structures; 1235 1236 Each well, drywell or subsurface fluid distribution system **(B)** where fluids from the facility are injected underground; 1237 1238 1239 (C) Other wells, springs, and surface water bodies, and drinking 1240 water wells listed in public records or otherwise known to the applicant within the area of review: and 1241 1242 1243 (D) Bedrock and surficial geology, geologic structure, and 1244 hydrogeology in the area. 1245 1246 1247 A list of other relevant permits, whether federal or state, that the facility (ix) 1248 has been required to obtain, such as construction permits. This includes a statement as to 1249 whether or not the facility is within a state approved water quality management plan area, a state 1250 approved wellhead protection area or a state approved source water protection area. 1251

1252 (x) Detailed plans for monitoring the volume and chemistry of the
1253 discharge, and water quality of selected water wells within the area of review in accordance
1254 with Section 15 of this chapter.

1256(xi)All applications for permits, reports, or information to be submitted to1257the administrator shall be signed by a responsible officer as described in Section 6(f)(xiv) and1258the application shall contain the certification contained in Section 6(f)(xv) of this chapter.

1260 (xii) All data used to complete permit applications shall be kept by the1261 applicant for a minimum of three (3) years from the date of signing.

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Section 10. General Permits for Class V Facilities.

1265 The department may develop and issue general permits pursuant to these (a) regulations which cover Class V facilities for the following subclasses: 5A1, 5A2, 5B1, 5C4, 1266 1267 5C5, 5C6, 5D1, 5D2, 5E1, 5E3, and 5E5. The administrator may issue general permits in other categories as the need arises. 5E3 facilities which were permitted as small wastewater systems 1268 1269 prior to April 14, 1998 are permitted by rule under Section 8(c)(v) and are not covered by this section. Facilities in these subclasses which have already been issued individual permits under 1270 1271 Chapter 9 or Chapter 16, Water Quality Rules and Regulations may continue under these permits until they are terminated, revoked and reissued, or canceled at the request of the 1272 1273 operator. Coverage shall not be extended to any facility if such a facility would be in violation 1274 of any state approved source water protection area. Facilities in these subclasses not presently covered by an individual permit will be authorized by permit by rule until the general permit for 1275 the specific subclass is issued. The operator of a facility listed in this section shall have two (2) 1276 years after the date of issuance of the general permit to: 1277

1279 (i) Obtain coverage under the issued general permit; 1280 1281 (ii) Submit an application and receive an individual permit under this 1282 chapter. Continue to be covered by a permit issued pursuant to Chapter 9 of 1283 (iii) these regulations. 1284 1285 1286 (iv) Abandon the facility in accordance with Section 18. 1287 1288 (b) General permits shall also include: 1289 1290 (i) The permit conditions required in Section 6(h)(iii). 1291 1292 (ii) A requirement to submit information necessary for the department to 1293 make an assessment of the vulnerability of the environment and public health to the injection from the Class V well. Such information may include the depth to the groundwater table at the 1294 1295 disposal field, groundwater quality or existing available information on the lithology, geology, 1296 hydrogeology and the location of the following items within 1/4 mile of the Class V facility: 1297 1298 (A) All water supply wells and the uses of each respective well; 1299 1300 (B) All property boundaries and land uses;

1301			
1302		(C)	All surface water bodies or springs; and
1303			
1304		(D)	All known sources of groundwater contamination or pollution.
1305			
1306		(E)	All state approved source water protection areas, wellhead
1307	protection areas, 201 se	rvice are	eas, or water quality management plan areas.
1308	•		
1309	(iii)	Depth	below the ground surface for the point of injection and for the
1310	well screening in all we	lls withi	in the area of review;
1311			
1312	(iv)	A requi	irement for facilities constructed after April 14, 1998 that the
1313	operator certifies the fa	cility wi	ll meet the design, construction, and operational performance
1314	requirements in Section	13 for t	he specific subclass of facility.
1315	-		
1316	(v)	A requi	irement that the operator submit the disposal capacity of the
1317	facility in gallons per da		culated using Tables 1 and 2, Water Quality Rules and
1318			facilities may be required to monitor the volume of injectate
1319			me of water used in the area served by the Class V facility.
1320			
1321	(c) The add	ministra	tor may require any operator covered by a general permit to
1322	obtain an individual per	mit for t	the facility when a review of the information submitted under
1323			neral permit would not be protective of groundwater in that
1324			vered by a general permit may at any time apply for and obtain
1325			ne facility. Once issued, an individual permit will replace
1326	coverage by the general		
1327		1	
1328	(d) Genera	l permit	s will contain the subclass of injection facility covered, the
1329			neral nature of the fluids to be discharged, and the location of
1330		•	e will be allowed. General permits will follow the public notice
1331			nis chapter. During each five (5) year review of a general
1332	permit, a public notice	shall be	issued by the department stating that a five (5) year review has
1333			covered by a general permit, and stating where the public may
1334	obtain a copy of the per		
1335			
1336	(e) Operate	ors of ne	w injection facilities who believe that their facility may be
1337	covered by a general pe	rmit in c	class 5C6 facilities may apply for coverage under the general
1338	permit for that subclass	. If not a	accepted for coverage under this general permit, the operator
1339			rmit under subclass 5C3.
1340		•	
1341	(f) Operate	ors of ne	w injection facilities who believe that their facility may be
1342			class 5E5 facilities may apply for coverage under the general
1343			accepted for coverage under this general permit, the operator
1344	shall apply for an indivi	idual per	rmit under subclass 5E3.
1345		•	
1346	(g) In orde	r to obta	in coverage under the general permit all operators of class 5C6
1347			onstruction drawings and an abbreviated groundwater study
1348			to groundwater and a list of water wells within one half mile of
1349	the facility.	-	

(h) General permits may be written to require the operator to monitor the water
quality of the injected fluid and to submit the information to the department. Existing facilities
under this section may be required to monitor injectate quality on a one time basis, on a
quarterly basis, a semi-annual basis or annual basis depending on the ability of the facility to
cause adverse environmental damage or affect human health.

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(i) General permits for Class 5C5 coal bed methane injection facilities shall require that:

1360 (i) Each operator provide background information showing that the class
1361 of use under Chapter 8 for each injection zone will not be violated by the injection of coal bed
1362 methane produced water.

(ii) A valid pressure falloff curve be recorded for each well within one (1)
year of the start of injection into that well.

(iii) The pressure of injection be continuously recorded and that the pressure
of injection be limited to no more than the fracture pressure of the receiving formation. This
requirement can be met by assuming that the fracture gradient of the receiver is .70 psi/foot of
depth and using the depth of the topmost perforation in making the calculation.

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Section 11. Permit by Rule for Class V Facilities.

1374 The types of Class V facilities listed in this section represent minimal threats to pollute 1375 groundwater. The referenced facilities which meet the requirements of this section are 1376 permitted by rule. A permit by rule requires the owner or operator to submit information 1377 contained in this section before construction, installation or modification of a facility and to 1378 meet the performance standards contained in this section and in Section 13 of this Chapter. No facility shall be located within a state approved local wellhead protection area, state approved 1379 1380 source water protection area or a state approved water quality management area which is in 1381 conflict with any of those plans. 1382

1383(a)A facility permitted by rule under this section shall meet the following1384conditions:

1386 In addition to the information listed in Section 9 (c) (i), (ii) and (iii) of (i) 1387 this chapter, the operator shall submit the following inventory information to the department 1388 prior to construction for facilities constructed after the effective date of these regulations and within one (1) year of the effective date of these regulations for existing facilities: (Facilities 1389 1390 which are already registered with the Underground Injection Control Program, or which were issued a permit under Chapters 3, 9 or 16, need not send a new registration, but may be asked 1391 1392 for updated information from time to time.) 1393

1394 (A) The location of the facility, either a complete legal description1395 or latitude and longitude preferably within a (ten) 10 meter accuracy.

1397(B)Type and general description of the quality of the injected1398fluid.

1399				
1400			(C)	The disposal capacity of the facility in gallons per day.
1401				
1402			(D)	Depth of injection zone.
1403				
1404			(E)	Whether or not the facility is operating, temporarily abandoned,
1405	or permanently a	abandon	ed.	
1406				ility shall be designed, constructed and operated to protect
1407	groundwater star			d in Chapter 8, Water Quality Rules and Regulations and
1408				this section and in Section 13 of this chapter.
1409	•			*
1410		(iii)	Chemic	al, bacteriological, radiological additives, hazardous substances
1411	or toxic substand			all not be mixed in the injected fluid at any time during use of
1412	the water, prior t			• • •
1413		5		
1414		(iv)	Any vic	blation of the requirements of these regulations by a Class V
1415			•	le shall be reported to the department by telephone within
1416				ne when the operator becomes aware of the violation. A written
1417	-			ator with the department within seven (7) days detailing steps
1418				be taken to eliminate the violation.
1419				
1420	(b)	All facil	lities. rei	ferenced in this section, which do not meet the requirements of
1421				dividual permit under this chapter. For facilities constructed or
1422				of these regulations requiring an individual permit, the owner
1423				nit prior to any construction.
1424			I.	I I I I J I I I I I I I I I I I I I I I
1425	(c)	The foll	lowing c	classes of facilities are permitted by rule under this section:
1426			0	I I I I I I I I I I I I I I I I I I I
1427		(i)	5B2 fac	cilities, except any facility which injects wastewater or contains
1428				water in concentrations above the receiver use standards
1429				Puality Rules and Regulations.
1430			······ •	
1431		(ii)	After th	e effective date of these regulations, coal bed methane operators
1432				er recharge rule authorizations. All coal bed methane disposal
1433		•	-	eneral permit or an individual permit under this chapter if they
1434				rce of Drinking Water, or a Class II permit issued by the
1435				ation Commission if they inject into a Class VI aquifer.
1436	<i>.</i>			j, i i i i i i i i i i i i i i i i i i i
1437		(iii)	5B4 fac	cilities, provided that the water injected will not cause a
1438				under Chapter 8, Water Quality Rules and Regulations.
1439	8			· · · · · · · · · · · · · · · · · · ·
1440		(iv)	5B6 and	d 5B7 facilities;
1441		(1)	020 uii	
1442		(v)	5D5 fac	cilities, except those facilities receiving water polluted above the
				use standards contained in Chapter 8, Water Quality Rules and
1444				ing swimming pool wastes into a Class I groundwater.
1445		140111110	.s injeen	
1446		(vi)	5E3 fac	ilities which were originally permitted under a small wastewater
1447				partment of Environmental Quality or a local government
± · · /	System permit is	Saca by	Dop	Section of Environmental Quanty of a four government

delegated the authority to issue small wastewater system permits, located within any five (5)
acres of land where the cumulative maximum peak daily wastewater flow injected from other
small wastewater system permitted facilities under the same ownership would exceed 2,000
gallons per day.

(vii) 5F1 facilities, provided that information contained in Section 13 (m) of
this chapter is submitted.

1455
1456 (d) A permit by rule where the operator has provided the necessary information
1457 shall be valid until the facility is properly closed pursuant to these regulations or until a permit
1458 has been issued or denied under this chapter.

(e) The administrator may request information from the owner or operator of a well
or facility permitted by rule to determine whether the facility may be causing a violation of
groundwater use standards in Chapter 8, Water Quality Rules and Regulations, the construction
standards found in this chapter and in Chapter 11, Water Quality Rules and Regulations, or any
other requirements of this chapter. Such information may include, but is not limited to:

1466 Analysis of injected fluids and periodic submission of reports of such (i) 1467 monitoring. 1468 1469 (ii) Groundwater monitoring and periodic submission of reports of such 1470 monitoring. 1471 1472 (iii) Description of receiving strata. 1473

(iv) Well locations and down gradient use of groundwater.

1476 (f) Any request for information under this section shall be made in writing and
1477 include a brief statement of the reasons for requesting the information. An owner or operator
1478 shall submit the information within the time frames provided in the request for information.

(g) The administrator may require any operator permitted by rule to obtain an
individual permit for the facility when a review of the information submitted under paragraph
(e) of this section indicates that the permit by rule would not be protective of groundwater in
that specific case.

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Section 12. Construction Standards for Class I Wells.

1487 (a) All existing and new Class I wells shall be constructed to prevent the movement
1488 of fluids into any underground source of drinking water, permit the use of testing devices and
1489 workover tools, and permit continuous monitoring of injection tubing and long string casing, as
1490 required under Sections 6 (h)(i) and 6 (h)(ii) of this chapter.

(b) All well materials shall be compatible with the wastes that may be contacted.
The applicant shall submit data necessary to document compatibility.

1495 Casing and cement used in the construction of each newly drilled well shall be (c) 1496 designed for the life expectancy of the well. The applicant shall provide all information 1497 required to make a determination based on these factors: 1498 1499 (i) Depth to the injection zone. 1500 1501 (ii) Injection pressure, external pressure, internal pressure, and axial 1502 loading. 1503 1504 (iii) Hole size. 1505 Size and grade of all casing strings (wall thickness, diameter, nominal (iv) 1506 weight, length of joints, joint specifications and construction material). 1507 1508 (v) Corrosiveness of injected fluid, formation fluids, and temperatures. 1509 Lithology of injection and confining intervals. 1510 (vi) 1511 1512 (vii) Type or grade of cement. 1513 1514 (d) Construction requirements for Class I hazardous waste wells. 1515 1516 For casing and cementing requirements, the applicant shall provide all (i) 1517 information necessary to make a determination of adequacy based on quantity and chemical 1518 composition of injected fluids. 1519 1520 (ii) One surface casing string shall, at a minimum, extend into the 1521 confining zone below the lowest Underground Source of Drinking Water and be cemented by 1522 circulating cement from the base of the casing to the surface, using a minimum of one-hundred 1523 twenty percent (120%) of the calculated annular volume. The administrator may require more than one- hundred twenty percent (120%) when the geology or other circumstances warrant a 1524 1525 greater percentage. 1526 1527 (iii) At least one long string casing, using a sufficient number of centralizers, 1528 shall extend to the receiver and shall be cemented by circulating cement to the surface in one or 1529 more stages: 1530 1531 (A) Of sufficient quantity and quality to withstand the maximum 1532 operating pressure. 1533 1534 (B) In a quantity no less than one hundred twenty percent (120%) of the calculated volume necessary to fill the annular space. The administrator may require 1535 more than one hundred twenty percent (120%) when the geology or other circumstances warrant 1536 1537 a greater percentage. 1538 1539 Circulation of cement may be accomplished by staging. The (iv) administrator may approve an alternative method of cementing in cases where the cement 1540 1541 cannot be recirculated to the surface, provided the operator can demonstrate by logs that the cement is continuous and does not allow fluid movement behind the casing. 1542 1543

1544 Casings, including any casing connections, must be rated to have (v) 1545 sufficient structural strength to withstand, for the life the well, the maximum burst and collapse 1546 pressures which may be experienced during the construction, operation, and closure of the well. 1547 Casings shall also be rated to withstand the maximum tensile stress which may be experienced at any point along the entire length of the casing during construction, operation, and closure of 1548 1549 the well. 1550 1551 At a minimum, cement and cement additives shall be of sufficient (vi) 1552 quantity and quality to maintain mechanical integrity over the design life of the well. 1553 1554 For tubing and packer, the applicant shall provide all information (vii) 1555 necessary to make a determination of adequacy based on these factors: 1556 1557 (A) Depth of setting. 1558 **(B)** 1559 Characteristics of the injection fluid, including chemical content, corrosiveness, temperature, and density. 1560 1561 (C) 1562 Injection pressure. 1563 1564 (D) Annular pressure. 1565 1566 (E) Rate (intermittent or continuous), temperature, and volume of injected fluid. 1567 1568 1569 (F) Size of casing; and 1570 1571 (G) Tubing tensile, burst, and collapse strengths. 1572 1573 (viii) During the drilling and construction of a Class I hazardous waste well, 1574 appropriate logs and tests shall be run to determine or verify the depth, thickness, porosity, permeability, and rock type of, and the salinity of any entrained fluids in all relevant geologic 1575 1576 units to assure compliance with the performance standards of Section 16 of this chapter, and to compile baseline data against which future measurements may be compared. A descriptive 1577 report interpreting results of such logs and tests shall be prepared by the operator and submitted 1578 1579 to the administrator. At a minimum, such logs shall include: 1580 1581 Deviation checks made during drilling of all Class I hazardous (A) 1582 waste wells. Such checks shall be done at sufficiently frequent intervals to determine the 1583 location of the borehole. 1584 1585 **(B)** Such other logs and tests as may be needed after taking into 1586 account the availability of similar data in the area of the drilling site, the construction plan and the need for additional information that may arise as construction of the well progresses. At a 1587 minimum, the following logs shall be required: 1588 1589 1590 When installing the surface casing: resistivity, **(I)** spontaneous potential, and caliper logs shall be run before the installation of the casing. A 1591

1592 cement bond log and variable density log and temperature log are required after the surface casing is installed and before the well is deepened. 1593 1594 1595 (II) When installing the long string casing: resistivity, spontaneous potential, porosity, caliper, gamma ray and fracture finder logs are required before 1596 1597 the casing is installed. After the casing is installed and cemented, a cement bond log and 1598 variable density log are required before the well is completed. 1599 1600 (III) The administrator may allow the use of an alternative 1601 to the logs described above, when, in the administrator's opinion, the alternative will provide 1602 equivalent or better information. 1603 (C) A mechanical integrity test as described in Section 6(h)(i) of 1604 this chapter. 1605 1606 (D) Whole core or sidewall cores of the confining zone and 1607 receiver and formation fluid samples from the receiver shall be taken. The administrator may accept cores from nearby wells if the operator can demonstrate, to the administrator's 1608 satisfaction, that core retrieval is not possible, and the other cores are representative of the 1609 conditions in the well. The administrator may require the operator to core other formations in 1610 1611 the borehole. 1612 The fluid temperature, pH, conductivity, pressure, and static fluid level 1613 (ix) 1614 of the discharge zone shall be recorded during construction. 1615 1616 (x) At a minimum, the following information about the injection and confining zones shall be calculated or determined during construction: 1617 1618 1619 (A) The physical and chemical characteristics of the rock itself; and 1620 Physical and chemical characteristics of the formation fluids. 1621 (B) 1622 Upon completion of construction, but still prior to operation, 1623 (C) 1624 the operator shall conduct either pump tests or injectivity tests to verify the hydrogeologic characteristics of the discharge zone. 1625 1626 1627 (e) Fluid seals are not allowed in place of a packer in any Class I well. 1628 1629 Section 13. **Construction and Operation Standards for Class V Wells.** 1630 All Class V facilities must meet or exceed the design standards of these 1631 (a) regulations including Part B of Chapter 11 and Chapter 26, Water Quality Rules and 1632 1633 Regulations. 1634 1635 (b) All Class V facilities shall be constructed to permit the use of testing devices, and allow monitoring of injected fluid quality. Class V facilities shall be constructed to provide 1636 1637 for metering of the injectate volume if the individual or general permit requires such metering. 1638 1639 (c) All heating and cooling facilities (5A1, 5A2 and 5A3) shall include: 1640

1641 Provision for the use of non-toxic circulating medium in closed loop (i) systems or an operating system which cannot be made to operate with fluid leaking. 1642 1643 1644 (ii) Provision for operations without the use of corrosion inhibitors, biocides, or other toxic additives in open loop systems. 1645 1646 1647 Provisions to control the total dissolved solids of waters injected into (iii) 1648 open loop systems to the class of use standard. 1649 1650 (iv) Provisions for automatic shutdown of the system in the event of a fluid 1651 loss from a closed loop system or a loss of any product to an open loop system. 1652 1653 Provisions to ensure that injected water does not come to the surface or (v) flood any subsurface structure in the immediate vicinity of the injection system. 1654 1655 1656 (vi) Provisions to ensure that known groundwater contamination is not spread by the direct injection of contaminated water or by movement of contamination from one 1657 1658 zone to another caused indirectly by the injection. 1659 1660 (d) All mining, sand and backfill facilities (5B1) shall include: 1661 Provision for insuring mechanical integrity of any well designed to 1662 (i) 1663 remain in service for more than 60 days. 1664 Provision for controlling the type of material injected and to insure that 1665 (ii) 1666 no hazardous waste is injected. 1667 1668 (iii) Provision for leak detection in all surface piping. 1669 1670 (iv) Provision for insuring that the backfill remains within the permitted 1671 area of injection. 1672 1673 (v) Provision to insure that the injection does not cause a groundwater 1674 standards violation for the class of use of the receiver. 1675 1676 (e) All beneficial use injection facilities (5B2, 5B3, 5B4, 5B5, 5B6, and 5B7) shall 1677 include: 1678 1679 (i) Plans to insure that contaminants do not enter the injection stream. 1680 Information to show that the injection will accomplish the desired goal 1681 (ii) 1682 stated in the application. 1683 1684 (iii) Target restoration values for the groundwater in the affected area being remediated for 5B5 facilities. 1685 1686 1687 (f) All commercial and industrial Class V facilities (5C1, 5C2, 5C3 and 5C4) shall: 1688

1689 Include a pre-treatment plan to insure that toxic materials (substances) (i) 1690 are not discharged to the groundwater at concentrations higher than the class of use standards 1691 found in Chapter 8, Wyoming Water Quality Rules and Regulations or any primary drinking water standard found in 40 CFR 141 (as of June 6, 2001), whichever is more stringent; 1692 1693 1694 Conform to applicable construction standards found in Chapter 25, (ii) 1695 Wyoming Water Quality Rules and Regulations; and 1696 1697 (iii) Include, at a minimum, annual sampling of the waste injected as part of 1698 the monitoring plan for the facility. 1699 1700 (g) When a 5C3 facility receiving slaughter house wastes can demonstrate that no 1701 violations of groundwater standards will occur, the facility shall be: 1702 1703 (i) Designed for the following minimum disposal capacities: 1704 (A) 1705 300 gallons per day for plant cleanup plus. 1706 1707 **(B)** 25 gallons per head of cattle slaughter capacity. 1708 1709 (C) 40 gallons per head of hog slaughter capacity. 1710 1711 (D) 35 gallons per head of sheep slaughter capacity. 1712 1713 (E) Appropriate capacity for any other species slaughtered on a per 1714 head basis. 1715 1716 (ii) Designed to prevent the disposal of blood and viscera into the septic 1717 system except as a small incidental portion of the total flow. Blood and viscera shall be sent to a rendering plant or other approved disposal or recycling system. 1718 1719 1720 A grease trap shall be provided ahead of the septic system with a total (iii) capacity equal to one half of the total required capacity of the septic tank. 1721 1722 1723 (h) All drainage facilities (those with the code number 5D on Appendix C) shall 1724 include: 1725 1726 A plan to preclude the inadvertent introduction of contaminants into the (i) 1727 wastewater stream. 1728 1729 An operations and maintenance manual detailing maintenance required, (ii) reporting requirements for known spills affecting the facility, and steps to be taken to prevent 1730 the introduction of contaminants in the event of a spill within the area served by the facility. 1731 1732 1733 (iii) Maps showing the area where runoff will be transported to the drainage 1734 facility. 1735 1736 All agricultural drainage facilities (5D1) injecting surface runoff from animal (i) 1737 waste piles, feedlots, or dairy operations for which a demonstration can be made that the

1738 groundwater standards can be met, shall be designed for treatment in a septic tank, lagoon, or other treatment technology prior to injection. The following requirements apply to these 1739 1740 systems: 1741 1742 The treatment facility shall be sized for the strength and solids content (i) 1743 of the wastewater to be treated. 1744 1745 The flow capacity requirements shall include all runoff from operations (ii) 1746 within the collection area and all runoff from precipitation up to and including a 25 year, 24 1747 hour design storm. 1748 1749 (iii) The flow capacity requirements for drainage from a fully enclosed 1750 dairy or feeding operation shall be as follows: 1751 (A) 20 gallons per day per animal up to 50 pounds. 1752 1753 1754 (B) 100 gallons per day per animal up to 500 pounds. 1755 1756 (C) 200 gallons per day per animal over 500 pounds. 1757 1758 (iv) The subsurface fluid distribution system shall be designed in 1759 accordance with general design requirements found in Chapter 25. 1760 1761 (i) All sewage disposal (5E) facilities shall: 1762 1763 (i) Conform to applicable construction standards found in Chapter 25, 1764 Wyoming Water Quality Rules and Regulations; 1765 1766 (ii) Comply with applicable sections of Chapter 11, Parts B and C, Water Quality Rules and Regulations for all piping systems or storage facilities feeding existing or 1767 1768 Class V facilities constructed after the effective date of these regulations; and 1769 1770 (iii) Be designed for the maximum daily peak flow determined from Tables 1771 1 and 2 of Chapter 25, Water Quality Rules and Regulations. In addition, whenever multiple points of discharge under one owner within any five (5) acres of land have a design capacity 1772 1773 under Chapter 25 to inject more than a total of 2,000 gallons per day of domestic sewage, they 1774 shall be permitted under this chapter in the same manner that they would be permitted if all the 1775 waste were delivered to a single point of discharge. 1776 All aquaculture return flow facilities (5E1) shall include pretreatment in a 1777 (k) lagoon, septic tank, or oxidation ditch sized for the strength and volume of the wastes to be 1778 1779 disposed of. 1780 1781 (1) All domestic wastewater treatment plant disposal facilities (5E4) shall also include: 1782 1783 1784 (i) Provisions for filtering of the waste and disinfection of the injectate. 1785

1786 An environmental monitoring program, including pre-discharge, (ii) operational monitoring, and post discharge monitoring. 1787 1788 1789 (iii) Monitoring of the injectate on at least a weekly basis for nitrate as N, ammonia as N. and coliform bacteria. 1790 1791 1792 Design to prevent groundwater standards violations as defined by (iv) 1793 Chapter 8, Water Quality Rules and Regulations. 1794 1795 The points of compliance shall be at down gradient monitor wells (v) 1796 installed on land owned by the same utility that operates the treatment plant and injection 1797 facilities whenever the point of injection is not the point of compliance. 1798 1799 Requirements for the submission, approval and conformance with an (vi) 1800 operational and maintenance manual. 1801 1802 (m) All cathodic protection facilities (5F1) shall include: 1803 1804 A seal of sodium bentonite or sodium bentonite grout is required from (i) 1805 the surface to a minimum depth of three (3) feet. A second sodium bentonite or sodium 1806 bentonite grout seal is required for a minimum thickness of three (3) feet, just above the top of 1807 the coke breeze. After the sodium bentonite has been placed in the hole, it shall be hydrated to 1808 insure a proper seal. The remainder of the hole between these seals may be backfilled with 1809 cuttings. The above seals may be placed directly in the hole or may be placed outside of a surface pipe of sufficient length to reach down to the anodes. If a surface pipe is used, no seals 1810 1811 are required inside the pipe except during final abandonment. 1812 1813 (ii) All aquifers encountered while drilling shall be isolated from one another using a bentonite seal of at least two (2) feet in vertical dimension. 1814 1815 1816 The coke breeze shall be a high quality product containing a minimum (iii) of leachable metals or organic pollutants. The coke breeze shall not discharge any pollutant 1817 1818 which will cause a groundwater standard violation. 1819 1820 Surface access to the anode shall be kept sealed and locked at all times (iv) 1821 when the anode is not actually being serviced. 1822 1823 Each separate aquifer penetrated shall require a separate breather pipe. (\mathbf{v}) 1824 Each aquifer shall remain in hydrologic isolation from each other if they were isolated prior to 1825 installation. 1826 1827 If it becomes necessary to wet any anode installed under this section, (vi) 1828 only water from a public water supply or water meeting all of the standards for Class I groundwater of the state shall be used unless the division is first supplied with an analyses of the 1829 1830 water for approval. 1831 1832 Each 5F1 facility shall be marked in the field with a sign showing the (vii) name, address, and telephone number of the operator who installed the system. Upon 1833 1834 abandonment, such markers shall remain in place.

(viii) A 5F1 facility shall not be installed within 200 feet of any pipeline,						
wellhead, storage tank, mud pit or other potential source of pollution unless the operator's						
surface rights prevent this requirement from being met.						
surrace rights prevent uns requirement from being met.						
(n) Export for boneficial use facilities Class V facilities shall not be leasted within						
(n) Except for beneficial use facilities, Class V facilities shall not be located within						
200 feet of any active public water supply well, regardless of whether or not the well is						
completed in the same aquifer. This minimum distance may increase or the existence of a Class						
V facility may be prohibited within a state approved wellhead protection area, source water						
protection area or water quality management plan area.						
(o) Class 5C6 and 5E5 facilities shall meet the construction standards and						
separation distances appropriate for the design flow as shown in Chapter 25.						
(p) Class 5C5 coal bed methane injection facilities shall:						
(i) Provide for metering of water injected into each well.						
(ii) Be constructed to insure that the water injected reaches the intended						
receiver and only the intended receiver. The intended receiver shall be identified by geologic						
formation and/or member name as well as the depth of that receiver below ground surface.						
tormation and/or member name as wen as the depth of that receiver below ground sufface.						
(iii) Dravida for disinfaction of the materializated if an alusis all set						
(iii) Provide for disinfection of the water injected if analysis shows that						
coliform bacteria, sulfate reducing bacteria or iron fixing bacteria are present in the water as						
pumped from the coal seam. Treatment methods must be methods that would be appropriate for						
treating water in a public water supply system.						
(iv) Provide for injection at a pressure of less than the fracture pressure of						
the receiver.						
(v) Provide for monitoring of the quality of the injected water on a periodic						
basis.						
(vi) Provide notification of the intent to obtain coverage under the general						
permit to all surface owners, mineral owners or water rights owners, oil and gas owners and the						
owners of coal leases within one-half mile of the proposed point of injection.						
(vii) Provide for pressure testing of the casing before injection and at least						
once every five (5) years thereafter. The casing shall be pressure tested up to an indicated						
surface pressure of 700 psi and held for 15 minutes. A passing result is indicated if the casing						
still has 690 psi at the end of the 15 minute shut in time.						
Section 14. Siting conditions for Class I Wells.						
(a) All Class I wells shall be situated such that they inject into a formation that is						
(a) All Class I wells shall be situated such that they inject into a formation that is beneath the lowermost Underground Source of Drinking Water within one-quarter (1/4) mile of						
(a) All Class I wells shall be situated such that they inject into a formation that is						
(a) All Class I wells shall be situated such that they inject into a formation that is beneath the lowermost Underground Source of Drinking Water within one-quarter (1/4) mile of						
(a) All Class I wells shall be situated such that they inject into a formation that is beneath the lowermost Underground Source of Drinking Water within one-quarter (1/4) mile of the well or within two (2) miles for Class I hazardous waste injection wells, and the discharge						

1884 1885 Class I wells shall be limited to areas that are determined by the administrator (b) 1886 to be geologically suitable for the prevention of migration of fluids into underground source of 1887 drinking waters. In determining geological suitability, the administrator shall consider the following information submitted by the applicant: 1888 1889 1890 An analysis of the structural and stratigraphic geology, hydrogeology, (i) 1891 and seismicity of the region. 1892 1893 An analysis of the local geology and hydrogeology of the well site, (ii) 1894 including, at a minimum, detailed information regarding the stratigraphy, structure, and rock 1895 properties, aquifer hydrodynamics, and mineral resources. 1896 1897 A determination that the geology of the area can be described (iii) 1898 confidently, and, for hazardous waste wells only, that the waste fate and transport can be 1899 accurately predicted through the use of models. 1900 1901 The operator shall demonstrate to the satisfaction of the administrator that: (c) 1902 1903 (i) The confining zone is free from faults or fractures over an area 1904 sufficient to prevent the migration of fluids into a underground source of drinking water, and 1905 contains at least one formation of sufficient thickness and characteristics capable of preventing 1906 vertical propagation of fractures; and 1907 1908 (ii) The confining zone is separated from the base of the lowermost 1909 underground source of drinking water by at least one (1) sequence of permeable and less 1910 permeable strata that will provide an added layer of protection in the event of fluid movement 1911 through an unlocated borehole or fault. 1912 1913 (iii) Within the area of review, the piezometric surface of the fluid in the 1914 receiver is less than the piezometric surface of the lowermost underground source of drinking 1915 water considering density effects, injection pressures, and any significant pumping of the overlying aquifer; or 1916 1917 1918 (iv) There are no underground sources of drinking waters present. 1919 1920 (d) The administrator may approve a site which does not meet the above requirements, if the operator can demonstrate that because of the site's geology, nature of the 1921 1922 waste, or other considerations, it would not cause endangerment to any underground source of 1923 drinking waters. 1924 1925 Section 15. **Environmental Monitoring Program.** 1926 1927 (a) The monitoring program shall be adequate to ensure knowledge of migration 1928 and behavior of the discharge in the receiver. 1929 1930 Monitoring may be required for any circumstance where groundwaters (i) of the state could be affected. 1931 1932

1933		(ii)	The ext	tent and design of a monitoring system shall be sufficient to deal
1934	with the pollut	ion poten	tial of th	ne proposed discharge.
1935				
1936		(iii)	Before	construction or installation of a Class I or V facility, a
1937	monitoring pro	gram, wl	hen requ	ired, shall be adequate to establish baseline conditions of the
1938	receiver.	-	_	-
1939				
1940	(b)	The mo	onitoring	program shall consist of any or all of the following:
1941				
1942		(i)	Pre-dise	charge or pre-operational monitoring.
1943				
1944		(ii)	Operati	ional monitoring.
1945				
1946		(iii)	Post-di	scharge or post-operational monitoring.
1947				
1948		(iv)	Record	keeping and reporting.
1949				
1950		(v)		dditional requirements established by the administrator to meet
1951	the purposes of	f the Wyo	oming E	nvironmental Quality Act and these regulations.
1952				
1953	(c)			g program shall include maps and cross-sections, where
1954	appropriate, sh	owing th	e locatio	on, lithology, and screening interval of each monitoring site.
1955		-		
1956	(d)			responsible for properly installing, operating, maintaining and
1957	removing all no	ecessary	monitor	ing equipment.
1958		-		
1959	(e)			all develop and follow a written waste analysis plan that
1960				arried out to obtain detailed chemical and physical analyses of a
1961				ste, including quality assurance procedures to be used. Once
1962	**	.		e operator shall not deviate from the plan without filing an
1963			ning dep	partment approval for that amended plan. At a minimum, any
1964	plan shall inclu	ide:		
1965		(\cdot)	Theme	non-stars for which the moster will be exclored the retionals for
1966	the coloction of	(i)		rameters for which the waste will be analyzed, the rationale for
1967 1968	the selection of	t these pa	irameter	s, and the test methods to be used to test for these parameters.
		(;;)	The cor	mpling method that will be used to obtain a representative
1969 1970	sample of the v	(ii)	The sai	npling method that will be used to obtain a representative
1970	sample of the v	vasie.		
1972		(iii)	The on	erator shall repeat the analysis of the injected wastes in the
1972	manner and on	· · ·		cribed in the waste analysis plan, and when process or operating
1974				antly alter the characteristics process, or operating changes occur
1975				characteristics of the waste stream.
1976	that may signi	icantiy a		indiacteristics of the waste stream.
1977			(A)	The operator shall conduct continuous or periodic monitoring
1978	of selected par	ameters		ed by the administrator.
1979	or servered para		lo requili	ed by the administrator.
1979			(B)	The operator shall ensure that the plan remains accurate and the
1981	analyses remai	n renrese	. ,	The sportator share onsare that the plan remains accurate and the
	analy see remai			

1002	
1982	(f) Dequirements for Class I Wells
1983	(f) Requirements for Class I Wells:
1984	() At a minimum the manufactor that manifest the management of the initiation
1985	(i) At a minimum, the permittee shall monitor the pressure in the injection
1986	zone annually, including at a minimum, a shutdown of the well for a time sufficient to conduct a
1987	valid observation of the pressure falloff curve.
1988	
1989	(ii) When prescribing a monitoring system, the administrator may also
1990	require:
1991	(A) Continuous monitoring for pressure changes in the first aquifer
1992	overlying the confining zone. When such a well is installed, the operator shall, on a quarterly
1993	basis, sample the aquifer and analyze for constituents specified by the administrator.
1994	
1995	(B) The use of indirect, geophysical techniques to determine the
1996	position of the waste front, the water quality in a formation designated by the administrator, or
1997	to provide other site specific data.
1998	
1999	(C) Periodic monitoring of the groundwater quality in the first
2000	aquifer overlying the receiver.
2001	
2002	(D) Periodic monitoring of the groundwater quality in the
2003	lowermost underground source of drinking water; and
2004	
2005	(E) Any additional monitoring necessary to determine whether
2006	fluids are moving into or between any aquifers penetrated by the well.
2007	
2008	(F) The administrator may require seismicity monitoring when he
2009	has reason to believe that the injection activity may have the capacity to cause seismic
2010	disturbances.
2011	
2012	(iii) Testing and monitoring requirements for all Class I hazardous waste
2012	wells shall include:
2013	wens shan mendee.
2014	(A) Submission of information by the applicant demonstrating that
2015	the waste stream and its anticipated reaction products will not alter the permeability, thickness,
2010	or other relevant characteristics of the confining or discharge zones such that they would no
2017	longer meet the requirements specified when the area of review was calculated.
	longer meet the requirements spectfied when the area of review was calculated.
2019 2020	(B) Submission of information by the applicant demonstrating that
2021	the waste will be compatible with the well materials with which the waste is expected to come
2022	into contact and a description of the methodology used to make that determination.
2023	Compatibility for purposes of this requirement is established if contact with injected fluids will
2024	not cause the well materials to fail to satisfy any design requirement imposed under Section 12
2025	of this chapter.
2026	
2027	(C) The administrator shall require continuous corrosion
2028	monitoring of the construction materials in the well for all wells where the pH of the injection
2029	fluid is less than two (2) or greater than eleven (11), and may require such monitoring of other
2030	wastes. This monitoring may be conducted by placing samples of the well construction

2031 materials in contact with the waste stream or routing the waste stream through a loop 2032 constructed of the same materials used in the well, or by using an alternative method approved 2033 by the administrator. 2034 2035 (D) If a corrosion monitoring program is required, the test shall use 2036 identical materials to those used in the construction of the well, and such materials shall be continuously exposed to the operating pressures, temperatures, and flow rates of the injection 2037 2038 operation as measured at the well head. The operator shall monitor the materials for loss of mass, thickness, pitting, and other signs of corrosion on a quarterly basis to ensure that the well 2039 2040 components meet the minimum standards for material strength and performance set forth in 2041 Section 12 of this chapter. 2042 2043 (iv) In addition to the above-mentioned requirements, operators of Class I hazardous waste wells shall also conduct mechanical integrity testing as follows: 2044 2045 2046 (A) The long string casing, injection tubing, and annular seals shall be tested by means of an approved pressure test with liquid or gas on an annual basis and 2047 whenever there has been a well workover. 2048 2049 2050 (B) The bottom-hole cement shall be tested by means of an 2051 approved radioactive tracer survey annually. 2052 2053 An approved temperature, noise, or other approved log shall be (C) 2054 run at least once every five (5) years to test for movement of fluid along the borehole. The administrator may require such tests whenever the well is worked over. 2055 2056 2057 Casing inspection logs shall be run at least once every five (5) (D) 2058 years, unless the administrator waives this requirement due to well construction or other factors 2059 which limit the test's reliability. 2060 2061 (E) Any other test approved by the administrator may also be used. 2062 Procedures for approval of unauthorized mechanical integrity tests are outlined in Section 2063 6(h)(i)(B) of this chapter. 2064 2065 (F) The administrator shall be given the opportunity to witness all 2066 logging and drill stem testing done by the operator at any time during the permitting of any well under this chapter. The operator shall submit a schedule of such planned logging and testing to 2067 2068 the administrator at least thirty (30) days prior to the first test. 2069 2070 Requirements for Class V Wells: (g) 2071 2072 All Class V permits shall contain a point of compliance. The point of (i) 2073 compliance shall be the point of injection or specific monitor wells located down gradient of the 2074 injection facilities. 2075 2076 For facilities where the point of compliance is the point of (A) 2077 injection, the fluid to be injected shall be limited to the class of use standards for the receiver as found in Chapter 8 of these regulations or any primary drinking water standard found in 40 CFR 2078 2079 141, (as of June 6, 2001) whichever is more stringent. The permittee may be required to

2080 maintain monitor wells in the vicinity of the discharge for the purpose of monitoring flow 2081 direction and monitoring groundwater quality in the event of non-compliance with the permit. 2082 2083 **(B)** For facilities where the point of compliance is at one or more 2084 down gradient monitor wells, the department shall establish permit limitations at the monitor 2085 well(s) consistent with the class of use of the receiver or any secondarily affected aquifer or 2086 surface water. Where necessary to protect existing or future uses, permit limitations may be 2087 established at the point of compliance which are more stringent than the class of use standard. 2088 2089 Facilities where subsurface treatment is anticipated may be (C) 2090 required to monitor the injected fluid at the point of injection. Permit limits may be established 2091 at the point of injection which exceeds the class of use standard for the affected aquifer, 2092 provided that a demonstration is made showing that a class of use standards violation will not occur at a point of compliance downgradient from the point of injection. Permit limits of this 2093 2094 nature are intended to provide early warning of possible non-compliance at the point of 2095 compliance. 2096 2097 (h) Procedures and methods for sample collection and analyses shall be 2098 implemented by the permittee to ensure that the samples are representative of the groundwater, 2099 water, or wastes being sampled. 2100 2101 Sample collection of groundwater shall be of such frequency and of such (i) 2102 variety (season, time, location, depth, etc.) to properly describe the groundwater, and shall be accomplished by the methods and procedures described in the U.S. Environmental Protection 2103 Agency manual RCRA Groundwater Monitoring Technical Enforcement Guidance Document, 2104 September, 1986, unless alternate methods and procedures are approved by the administrator. 2105 2106 2107 Analysis of all samples shall be accomplished pursuant to Chapter 8, Water (i) 2108 Ouality Rules and Regulations, Sections 7 and 8. 2109 2110 Section 16. **Quality Assurance and Quality Control for Sample Collection and** 2111 Analysis. 2112 2113 Procedures and methods for sample collection and analyses shall be (a) implemented by the permittee to ensure that the samples are representative of the groundwater, 2114 2115 water, or wastes being sampled. 2116 2117 Sample collection of groundwater shall be of such frequency and of such (b) 2118 variety (season, time, location, depth, etc.,) to properly describe the groundwater, and shall be 2119 accomplished by the methods and procedures described in the U.S. Environmental Protection 2120 Agency manual RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September.1986, unless alternate methods and procedures are approved by the administrator. 2121 2122 2123 (c) Analysis of all samples shall be accomplished pursuant to Chapter 8, Water Quality Rules and Regulations, Sections 7 and 8. 2124 2125 2126 Section 17. **Closure of Hazardous Waste Wells.** 2127

2128	(a)	·		a Class I hazardous waste well shall prepare, maintain, and	
2129	comply with a plan for closure of the well and post-closure care of the well that meets the				
2130			-	red in paragraph (d) of this section and post-closure care	
2131	· ·	•		section and is acceptable to the administrator. The obligation to	
2132				closure plan survives the termination of a permit or the	
2133				The requirement to maintain and implement an approved plan is	
2134	directly enforce	eable reg	ardless o	of whether the requirement is a condition of the permit.	
2135 2136		(i)		erator shall submit the plan as part of the permit application,	
2137 2138 2139	and, upon appropriate appropriate approximately approximat	oval by t	he admi	nistrator, the plan shall be incorporated as a condition of any	
2139		(ii)	The one	erator shall submit any proposed significant revision to the	
2141 2142		ure refle	cted in th	he plan for approval by the administrator no later than the date quired under paragraph (b) of this section.	
2143		<i>/···</i>	701 1		
2144 2145	of this chapter.	(iii)	The pla	in shall ensure financial responsibility as required in Section 19	
2146 2147		(iv)	The clo	sure plan shall include the following information:	
2147		(\mathbf{IV})	The clo	sure plan shan merude the following mormation.	
2149 2150			(A)	The type and number of plugs to be used.	
2150			(B)	The placement of each plug including the elevation of the top	
2152	and bottom of e	each plug	. ,	I G G G G G G G G G G G G G G G G G G G	
2153		1			
2154			(C)	The type, grade, and quantity of material to be used in	
2155	plugging.				
2156					
2157			(D)	The method of placement of the plugs.	
2158 2159			(E)	Any proposed test or measure to be made.	
2160 2161			(F)	The amount, size, and location (by depth) of casing and any	
2162	other materials	to be lef	· · ·		
2163	other materials	10 00 101	t in the v	, weil,	
2164			(G)	The method and location where casing is to be parted, if	
2165	applicable.		(0)		
2166	appricació				
2167			(H)	The procedure to be used to meet the requirements of	
2168	paragraph (d)(5	5) of this	section;		
2169		, ,			
2170			(I)	The estimated cost of closure.	
2171					
2172			(J)	Any proposed test or measure to be made.	
2173					
2174					
2175		(v)	Post-clo	osure plans shall include the following information:	
2176					

2177	(A)	The pressure in the injection zone before injection began.
2178		
2179	(B)	The anticipated pressure in the injection zone at the time of
2180 2181	closure.	
2181	(C)	The predicted time until pressure in the injection zone decays
2182		one of influence no longer intersects the base of the lowermost
2183	Underground Source Drinki	
2185	(D)	Predicted position of the waste front at closure.
2186	· · · · · · · · · · · · · · · · · · ·	I I I I I I I I I I I I I I I I I I I
2187	(E)	The status of any required cleanups; and
2188		
2189	(F)	The estimated cost of proposed post-closure care.
2190		
2191		administrator may modify a closure plan in accordance with the
2192	procedures outlined in Secti	on 7 of this chapter governing modification of permits.
2193	/ ··· \ •	
2194		operator of a Class I hazardous waste injection well who ceases
2195 2196	injection temporarily, may k	eep the well open provided:
2196 2197	(A)	The operator receives authorization from the administrator.
2197	(A)	The operator receives authorization from the authinistrator.
2199	(B)	The operator has described actions or procedures, satisfactory
2200		operator will take to ensure that the well will not endanger Under-
2201		Waters during the period of temporary disuse. These actions and
2202		npliance with the technical requirements applicable to active
2203	injection wells unless waive	
2204	5	
2205	(viii) The	operator of a well that has ceased operations for more than two
2206	years shall notify the admini	strator at least thirty (30) days prior to resuming operation of the
2207	well.	
2208		
2209		r shall notify the administrator at least sixty (60) days prior to
2210	closure of a well. The admir	istrator may allow a closure period of less than sixty (60) days.
2211		(60) down often alcount on at the time of the next superturburger
2212	• • •	(60) days after closure or at the time of the next quarterly report,
2213 2214		he next quarterly report is due within fifteen (15) days, in which rement will be used, the operator shall submit a closure report to the
2214 2215	administrator.	rement will be used, the operator shall sublint a closure report to the
2215	administrator.	
2210	(i) Suc	h report shall contain a certification by the operator and the person
2218		if different from the operator, of the accuracy of the report, and:
2219	· · · · · · · · · · · · · · · · · · ·	
2220	(A)	A statement that the well was closed in accordance with the
2221		nitted and approved by the administrator.
2222		
2223	(B)	Where actual closure differed from the plan previously
2224		nt specifying the differences between the previous plan and the
2225	actual closure.	

2226 Standards for well closure. 2227 (d) 2228 2229 (i) Prior to well closure, the owner or operator shall observe and record the pressure decay for a time specified by the administrator, who shall then analyze the pressure 2230 2231 decay and the transient pressure observations conducted to determine whether the injection 2232 activity has conformed with predicted values. 2233 2234 (ii) Prior to well closure, appropriate mechanical integrity testing shall be 2235 conducted to ensure the integrity of that portion of the long string casing and cement that will be 2236 left in the ground after closure. Testing methods shall be similar to the mechanical integrity 2237 tests required during the operating life of the well. 2238 2239 (iii) Prior to well closure, the well shall be flushed with a buffer fluid. 2240 2241 Upon closure, a Class I hazardous waste well shall be plugged with (iv) cement in a manner that will not allow the movement of fluids into or between any underground 2242 2243 source of drinking water. 2244 2245 (v) Placement of the cement plugs shall be accomplished by circulating cement to the bottom of the well using a working string. The working string shall be removed as 2246 2247 the cement is pumped. The cement used shall be of a variety such that the working string can be 2248 withdrawn while still allowing the well to be filled with cement. 2249 2250 (vi) Each plug used shall be appropriately tagged and tested for seal and stability before closure is completed. 2251 2252 2253 (vii) The well to be closed shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by 2254 a comparable method described by the administrator, prior to the placement of the cement plugs. 2255 2256 2257 Post-closure care. (e) 2258 2259 (i) The operator shall continue and complete any required cleanup action. 2260 2261 (ii) The operator shall continue to conduct any groundwater monitoring required under the permit until pressure in the injection zone decays to the point that the well's 2262 2263 cone of influence no longer intersects the base of the lowermost Underground Source of 2264 Drinking Water. The administrator may extend the period of post-closure monitoring if he or 2265 she determines that the well may endanger an Underground Source of Drinking Water. 2266 2267 The operator shall submit a survey plat to the local zoning authority (iii) designated by the administrator, indicating the location of the well relative to permanently 2268 surveyed benchmarks. A copy of the plat shall be submitted to the Regional administrator of the 2269 U.S. EPA Region 8, the Wyoming State Engineer's Office, and to the Wyoming Oil and Gas 2270 2271 Conservation Commission. 2272 2273 The operator shall retain for a minimum of three (3) years following (iv) 2274 well closure, records reflecting the nature, composition and volume of all injected fluids. The

2275	administrator shall require the operator to deliver the records to the administrator at the						
2276	conclusion of this retention period.						
2277							
2278	(f) 1	Each ov	wher of a Class I hazardous waste well, and the owner of the surface or				
2279	subsurface prope	erty on o	or in which a Class I hazardous waste well is located, must record a				
2280	notation on the d	leed to t	the facility property or on some other instrument which is normally				
2281	examined during	g title se	arch that will in perpetuity provide any potential purchaser of the				
2282	property the follo						
2283		(i) Č	The fact that the land in question has been used to manage hazardous				
2284	waste.		1 6				
2285							
2286		(ii)	The name of the State agency or local authority with which the plat was				
2287		· /	ress of the Environmental Protection Agency Region 8 to which it was				
2288	submitted.						
2289							
2290		(iii)	The type and volume of waste injected, the injection interval or				
2291		· /	as injected, and the period over which injection occurred.				
2292			5 / 1 5				
2293	Section	18.	Abandonment of Class V Facilities.				
2294							
2295	(a)	After th	e effective date of these regulations, Class V facilities may be				
2296			e following conditions are met and if it can be demonstrated to the				
2297	satisfaction of th		6				
2298	Sulfstuetion of th	e uum					
2299		(i)	No hazardous waste has ever been discharged through the facility.				
2300		(1)					
2301		(ii)	No radioactive waste has ever been discharged through the facility.				
2302		(11)	The fuelouent e waste has ever been discharged unbugh the fuelity.				
2303		(iii)	All piping allowing for the discharge has either been removed or the				
2304		· /	been plugged in such a way that the plug is permanent and will not				
2305	allow for a disch	•	been prugged in such a way that the prug is permanent and with not				
2305	anow for a disch	laige.					
2307		(iv)	All accumulated sludges are removed from any septic tanks, holding				
2307		· /	her waste handling structures prior to abandonment.				
2308	taliks, ilit station	is, or ou	her waste handling structures prior to abandonment.				
2309	(b)	Faciliti	es which cannot demonstrate compliance with subsection (a) (i) or (a)				
2310							
		n, may	be abandoned in place if:				
2312		(\cdot)	Tests are much an aludade accumulated in the continut only helding tenks				
2313		(i) •••• ••••	Tests are run on sludges accumulated in the septic tanks, holding tanks,				
2314			ste handling structures which shows that none of these materials contain				
2315	characteristic na	zardous	waste or radioactive waste.				
2316		(::)	Monitoring of the groundwater in the immediate same fith failth				
2317		(ii)	Monitoring of the groundwater in the immediate area of the facility				
2318			toxic materials (substances) present in the groundwater at levels higher				
2319	man class of use	standai	rds, which are present as a result of the injection.				
2320		/····	а д 11 12 1 12 1				
2321		(iii)	Some other method is determined to be acceptable to the administrator				
2322			npliance with Chapter 8 of these regulations and prevents the movement				
2323	of fluid containing any contaminant into an underground source of drinking water, if the						

presence of that contaminant may cause a violation of any primary drinking water standardfound in 40 CFR 141 (as of June 6, 2001).

(c) Facilities which cannot make the demonstrations required under either
subsection (a) or (b) of this section shall be excavated to the point where contamination is no
longer visible in the soil. At that point, samples shall be taken of the soil for all hazardous
constituents which may have been discharged through the system. Materials excavated shall be
removed from the site for disposal under approval of the Solid and Hazardous Waste
Management Division.

2334 Cathodic protection (5F1) facilities will be considered to have made the (d) 2335 demonstrations required under subsections (a) and (b) if no waste has been disposed of into the 2336 facility. After they have fulfilled their useful purpose, they shall be abandoned by filling all 2337 breather pipes with an impervious material and removing all surface installations down to a 2338 depth of three (3) feet. All anodes where the construction included a surface casing shall also 2339 have the surface casing cut off three (3) feet below grade and a plug or cap shall be installed on 2340 the surface casing. It is not necessary to remove the coke breeze, anodes, and seals during 2341 abandonment. The administrator may approve other alternatives for abandonment if they 2342 provide adequate environmental protection. 2343

(e) Prior to abandoning any class 5C4 automotive waste disposal facility, theoperator shall provide thirty (30) days notice to the administrator.

Section 19. Financial responsibility.

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(a) The operator of any Class I well shall demonstrate and maintain financial
responsibility and resources to close, plug, abandon and maintain post-closure care for the
underground injection operation in a manner prescribed by the administrator. The permittee
shall show evidence of such financial responsibility to the administrator by the submission of a
surety bond, or other adequate assurance such as financial statements or other materials
acceptable to the administrator.

(b) The amount of the funds available shall be no less than the amount identified asthe estimated cost of plugging, abandoning, and post-closure care.

(c) The obligation to maintain financial responsibility survives the termination of a
permit or the cessation of injection. The requirements to maintain financial responsibility is
enforceable regardless of whether the requirement is a condition of the permit.

(d) After plugging operations are completed, the amount of the financial suretyrequired may be reduced by the administrator to the estimated cost of post-closure care.

(e) The owner or operator of a well injecting hazardous waste must comply withthe financial responsibility requirements of 40 CRF 144 Subpart F.

Section 20. Prohibitions.

(a) In addition to the requirements in W.S. 35-11-301 (a), no person shall:

2373 Conduct any authorized injection activity in a manner that results in a (i) 2374 violation of any permit condition or representations made in the application, the request for 2375 coverage under the general permit, individual permit, or permit by rule. A permit condition 2376 supersedes any application content. 2377 2378 Construct, install, modify or improve an authorized injection facility (ii) 2379 except in compliance with the permit requirements. 2380 All Class IV wells are prohibited. (b) 2381 2382 (c) Requirements for Class I Wells: 2383 2384 No person shall conduct any authorized injection activity in a manner (i) 2385 that results in a movement of fluids out of the receiver, including, but not limited to: 2386 2387 (A) No zone or interval other than that represented as the discharge 2388 zone in the permit shall be used as a receiver for the discharge. 2389 2390 **(B)** No uncased hole may be used as a conduit for the discharge, excepting that portion of a hole in the discharge zone. 2391 2392 2393 (C) No annular space between the wall of the hole and casing in the 2394 hole may be used as a conduit for the discharge, excepting in that portion of a hole in the 2395 discharge zone. 2396 2397 (ii) No solvent wastes which are listed hazardous waste numbers F001, 2398 F002, F003, F004, or F005 under 40 CFR 261.31 shall be injected underground in any Class I 2399 well unless those wastes are waste solvent mixtures that do not exceed or are treated to not 2400 exceed the standards listed in Appendix A. 2401 2402 No dioxin containing wastes which are listed hazardous waste number (iii) 2403 F020, F021, F022, F023, F026, F027 or F028 under 40 CFR 261.31 shall be injected 2404 underground in any well unless those wastes do not exceed, or are treated to not exceed the standards listed in Appendix B. 2405 2406 2407 Treatment to meet appendix A or B limitations shall be accomplished (iv) 2408 according to a state hazardous waste treatment permit issued by the department. Dilution is prohibited as a substitute for treatment of wastes listed in subsections paragraphs (ii) and (iii) 2409 2410 above. 2411 2412 No person shall inject any hazardous waste which has been banned (v) 2413 from land disposal pursuant to 40 CFR 268.41 or department regulations, as applicable, unless: 2414 2415 The hazardous waste has first been treated to a concentration of (A) 2416 less than the levels specified in 40 CFR 268.41 or 40 CFR 268 Appendix I, or department 2417 regulations, as applicable. 2418 2419 **(B)** An exemption petition has been submitted and approved by the 2420 U.S. Environmental Protection Agency under 40 CFR 148.20, or department regulations, as

2421 applicable. After approval of such a petition, the operator is required to comply with all conditions contained as part of the granting of the petition. 2422 2423 2424 (d) Requirements for Class V Wells: 2425 2426 No person shall discharge to any zone except the authorized discharge (i) 2427 zone as described in the permit. 2428 2429 (ii) The construction of any Class 5C4 facility after the effective date of 2430 these regulations is prohibited. 2431 2432 (iii) No person shall inject any hazardous waste which has been banned 2433 from land disposal pursuant to Chapter 1, Wyoming Hazardous Waste Rules and Regulations unless the disposal conforms to that chapter. 2434 2435 2436 No drainage facility, subclass 5D1 through 5D5 shall be constructed so (iv) as to directly receive any waste other than natural precipitation or natural groundwater unless 2437 permitted under an individual permit. 2438 2439 2440 (v) No heating and cooling facility, subclass 5A1 through 5A3, shall be 2441 constructed so as to receive any waste other than cooling water. No corrosion inhibitors, scale 2442 inhibitors, biocides, antifreeze agents, salts, or refrigerants shall be added to the water prior to 2443 injection. 2444 2445 (vi) No abandoned drinking water well shall be used as a disposal well unless it can be demonstrated that the waste being disposed of will leave the class of use of the 2446 2447 affected groundwater unchanged. The class of use referred to is determined under Water 2448 Quality Rules and Regulations, Chapter 8 Quality Standards for Wyoming Ground Waters. 2449 2450 No wastewater produced by electric power generation from geothermal (vii) 2451 fluids shall be disposed of in any Class V injection facility. Such wells are Class I injection 2452 wells and are covered by regulations in this chapter. 2453 2454 No wastewater produced by recovery of brines and extraction of (viii) halogens shall be disposed of in any Class V injection facility. Such wells are Class I injection 2455 2456 wells and are covered by regulations in this chapter. 2457 2458 No person shall construct and/or operate any cesspool after April 14, (ix) 2459 1998. No Class V facility which receives domestic sewage shall be constructed and/or operated 2460 after April 14, 1998 unless the waste is first treated in a septic tank, or other pre-treatment device. Prior to closure of any cesspool, the operator shall notify the administrator thirty (30) 2461 davs in advance. 2462 2463 2464 (x) The operation of any Class V septic system with liquid waste visible on 2465 the ground surface shall be considered a failure of the system and a violation of these 2466 regulations. 2467 2468 An operator of a facility which is authorized by rule is prohibited from (xi) 2469 injection into the facility:

2470				
2471 2472 2473	construction fo	(A) Upon failure to submit inventory information prior to or facilities constructed after April 14, 1999.		
2474 2475	(B) Upon failure to comply with a request for information under Section 11 (e) of this chapter.			
2476 2477 2478	than disposal to	(xii) o an appr		ing domestic sewage out of any Class V facility for any use other acility is prohibited.
2479 2480 2481	Section Requirements		Public	e Participation, Public Notice and Public Hearing
2482 2483 2484 2485		ication is	determi	s not required for minor modifications or for a permit denial nined incomplete or deficient in accordance with Section 7 unless ests a hearing before the council pursuant to this section.
2486 2487	(b)	The ad	ministra	ator shall give public notice for any of the following actions:
2488 2489 2490 2491	issuance, denia	(i) l or reiss		lministrator has prepared a draft permit which is intended for
2491 2492 2493		(ii)	The ad	lministrator intends to modify a permit.
2494 2494 2495		(iii)	The ad	lministrator intends to revoke or terminate a permit.
2496 2497	department acti	(iv) ions appo		earing held as a result of a request for hearing on above actions or to the council.
2498 2499 2500 2501 2502		general p	permit.	s not required for any facility permitted by rule or for any facility The department shall issue one public notice creating the general subsequent five (5) year review.
2502 2503 2504 2505 2506		(b)(i), (i	ii) or (iii	ator shall include a thirty (30) day public comment period for any i) or thirty (30) days notice before any hearing date as part of the es are required, they may be given at the same time.
2507 2508	(e)	Public	notice sł	shall be given by:
2509 2510		(i)	Mailing	ng a copy of the notice to the following persons:
2511 2512 2513				The applicant, by certified or registered mail. For general as registered as operators of facilities which the department a general permit.
2514 2515			(B)	The U.S. Environmental Protection Agency.
2516 2517 2518			(C)	Wyoming Game and Fish Department.

2519		(D)	Wyoming State Engineer.
2520			
2521		(E)	State Historical Preservation Officer.
2522			
2523		(F)	Wyoming Oil and Gas Conservation.
2524			
2525		(G)	Land Quality Division.
2526			
2527		(H)	Persons on the mailing list developed by including those who
2528			list and soliciting persons for "area lists" from participants in
2529	proceedings in that area	a.	
2530			
2531		(I)	Any unit of local government having jurisdiction over the area
2532	where the facility is pro-	oposed t	o be located.
2533			
2534	(ii)		ation of the notice in a newspaper of general circulation in the
2535	location of the facility	or opera	tion.
2536			
2537	(iii)		discretion of the administrator, any other method reasonably
2538			of the action in question to the persons potentially affected by it,
2539	including press releases	s or any	other forum or medium to elicit public participation.
2540			
2541			ces issued under this chapter shall contain the following
2542	minimum information:		
2543			
2544		(i)	Name and address of the department.
2545			
2546		(ii)	Name and address of permittee or permit applicant, and, if
2547			vity regulated by the permit. For general permits, this includes a
2548	-		e location of each facility which will be covered by the general
2549	-	-	e covered under a general permit as they are constructed, then that
2550	fact will also be stated.		
2551			
2552		(iii)	A brief description of the business conducted at the facility or
2553	•	.	application or the draft permit. For general permits a generic
2554	statement of the type of	f facility	to be covered is all that is required.
2555			
2556		(iv)	Name, address and telephone number of a person from whom
2557			further information, including copies of the draft permit, as the
2558	case may be, statement	of basis	s or fact sheet, and the application.
2559			
2560		(v)	A brief description of comment procedures, procedures to
2561		other pro	ocedures which the public may use to participate in the final
2562	permit decision.		
2563			
2564		(vi)	Any additional information considered necessary and proper.
2565			
2566			he information required in (f) of this section, any notice for
2567	public hearing shall con	ntain the	e following:

2568			
2569		(i)	Reference to the date of previous public notices relating to the permit.
2570			
2571		(ii)	Date, time and place of hearing.
2572			
2573		(iii)	A brief description of the nature and purpose of the hearing, including
2574	applicable rules	s and pro	ocedures.
2575			
2576	(h)	The de	partment shall provide an opportunity for the applicant, permittee, or any
2577	interested perso	on to sub	omit written comments regarding any aspect of a permit including, but
2578	not limited to,	permit is	suance, denial, modification, revocation and reissuance, termination, or
2579	transfer and/or	to reque	st a public hearing.
2580			
2581	(i)	All info	ormation received on or with the permit application shall be made
2582	available to the	public f	for inspection and copying except such information as has been
2583	determined to c	constitut	e trade secrets or confidential information pursuant to W.S. 35-11-1101.
2584	The departmen	t shall p	rovide facilities for inspection and copying of all non-confidential
2585	documents. Co	opying sl	hall be at the expense of the person requesting copies.
2586			
2587	(j)	During	the public comment period, any interested person may submit written
2588			permit and may request a public hearing. Requests for public hearings
2589			or modifications must be made in writing to the administrator and shall
2590			e request. Requests for public hearings on permit issuance, denial,
2591			, or any other department action appealable to the Council, shall be made
2592	in writing to the	e chairm	an of the council and the department and state the grounds for the
2593	request.		
2594			
2595		(i)	Requests for public hearings based on contested issues may be filed at
2596	any stage of the	e permit	ting process; and
2597			
2598		(ii)	After notice is given for public comment, requests for public hearings
2599	must be filed w	vithin thi	rty (30) days after the last publication of the public notice.
2600			
2601	(k)		ministrator shall hold a hearing whenever the administrator finds, on the
2602			ificant degree of public interest in a draft permit. The administrator has
2603		o hold a	hearing whenever such a hearing may clarify issues involved in a permit
2604	decision.		
2605			
2606	(1)		ouncil shall hold hearings pursuant to the Wyoming Department of
2607	Environmental	Quality	Rules of Practice and Procedure.
2608	<i>.</i>		
2609	(m)		hearings will be held in the geographic area wherein the proposed
2610			as nearby as reasonable. Public hearings will be held pursuant to the
2611	Wyoming Depa	artment	of Environmental Quality Rules of Practice and Procedure.
2612	~ <	751	
2613	(n)	-	blic comment period shall automatically extend to the close of any
2614			ninistrator may also extend the comment period by so stating at the
2615	public hearing.		
2616			

2617 (0)The director shall render a decision on the draft permit within thirty (30) days 2618 after the completion of the comment period if no hearing is requested. If a hearing is held, the 2619 director shall make a decision on any department hearing as soon as practicable after receipt of 2620 the transcript or after the expiration of the time set to receive written comments.

2622 At the time a final decision is issued, the department shall respond, in writing, (p) 2623 to those comments received during the public comment period or comments received during the 2624 allotted time for a hearing held by the department. This response shall:

2625 2626 2627

2621

(i) Specify any changes that have been made to the permit.

2628 (ii) Briefly describe and respond to all comments voicing a legitimate 2629 regulatory concern that is within the authority of the department to regulate. 2630

2631 2632

The response to comments shall also be available to the public. (q)

Requests for a contested case hearing on a permit issuance, denial, revocation, 2633 (r) 2634 termination, or any other final department action appealable to the Council, shall be made in writing to the chairman of the Environmental Quality Council and the director and state the 2635 2636 grounds for the request pursuant to the Wyoming Department of Environmental Quality Rules of Practice and Procedure. 2637 2638

2639 Section 22. **Class I Permits Issued Before the Effective Date of These Regulations.**

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2642 Any Class I well permitted before the effective date of these regulations shall be 2643 reviewed pursuant to Section 6(h).

APPENDIX A

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Parameter

Maximum Allowable Concentration

Acetone	.05	mg/L
N-Butyl alcohol	5.00	mg/L
Carbon disulfide	1.05	mg/L
Carbon tetrachloride	.05	mg/L
Chlorobenzene	.05	mg/L
Cresols and cresylic acid	.75	mg/L
Cyclohexanone	.125	mg/L
1,2-Dichlorobenzene	.65	mg/L
Ethyl acetate	.05	mg/L
Ethyl benzene	.05	mg/L
Ethyl ether	.05	mg/L
Isobutanol	5.00	mg/L
Methanol	.25	mg/L
Methylene chloride	.20	mg/L
Methyl ethyl ketone	.05	mg/L
Methyl isobutyl ketone	.05	mg/L
Nitrobenzene	.66	mg/L
Pyridine	.33	mg/L
Tetrachloroethylene	.05	mg/L
Toluene	.33	mg/L
1,1,1-Trichloroethane	.41	mg/L
1,2,2-Trichloro-1,2,2 Trifluoroethane	.96	mg/L
Trichloroethylene	.062	mg/L
Trichlorofluoromethane	.05	mg/L
Xylene	.05	mg/L
Polychlorinated biphenols	500.00	mg/L
· ·		U

APPENDIX B

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Parameter

Maximum Allowable Concentration

HxCDD-All hexachlorodibenzo-p-dioxins	1 ppb
HxCDF-All hexachlorodibenzofurans	1 ppb
PeCDD- All pentachlorodibenzo-p-dioxins	1 ppb
PeCDF-All pentachlorodibenzofurans	1 ppb
TCDD-All tetrachlorodibenzo-p-dioxins	1 ppb
TCDF-All tetrachlorodibenzofurans	1 ppb
2,4,5 Trichlorophenol	50 ppb
2,4,6 Trichlorophenol	50 ppb
2,3,4,6 Tetrachlorophenol	100 ppb
Pentachlorophenol	10 ppb

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APPENDIX C SUBCLASSES OF CLASS V FACILITIES

SUBCLASS

DESCRIPTION

HEATING AND COOLING FACILITIES			
5A1	Direct Heat Reinjection Facilities - Reinject geothermal fluids used to provide direct heat for large buildings, developments or aquiculture facilities.		
5A2	Heat Pump/Air Conditioner Return Flow Facilities - Reinject groundwater used to heat or cool a building in a ground based heat pump system, or used to inject heat only using a closed loop heat pump system		
5A3	Cooling Water Return Flow Facilities - Receive non-contact cooling water from industrial processes, both open and closed loop processes.		
BENEFICIAL U	SE INJECTION FACILITIES		
5B1	Mining, Sand or Backfill Facilities - Used to inject a fluid mixture of sand, cement, fly ash used as a pozzalin, or mill tailings into mined out portions of underground mines.		
5B2	Aquifer Recharge Facilities - Receive water specifically for storage of water underground. Must be coupled with the ability to withdraw stored water at a later date for beneficial use. Coal bed methane operators cannot dispose of their produced water in class 5B2 injection wells after the effective date of these rules.		
5B3	Saline Water Intrusion Barrier Facilities - Receive fresh water to prevent the continued migration of saline water into a fresh water aquifer. Includes projects installed to control contaminant plumes by injection of clean water.		
5B4	Subsidence Control Facilities - Receive fresh water for the purpose of controlling subsidence caused by an overdraft of water, oil or natural gas.		
5B5	Facilities which inject fluids and are used to prevent, control or remediate aquifer pollution, which are not owned or controlled by the Department of Environmental Quality. All 5B5 facilities are covered under Article 16 of the Environmental Quality Act		

SUBCLASS 5B6	DESCRIPTION Department Controlled Facilities - Facilities which inject fluid and are used to prevent, control or remediate pollution, remediate subsiding mine sites, or produce other beneficial results which are owned or controlled by the Department of Environmental Quality. These facilities include but are not limited to, facilities under the supervision of Water Quality Division's Underground Storage Tank Program, facilities under the control and direction of the Abandoned Mined Lands Program, and facilities under the supervision of the Solid and Hazardous Waste Management Division. Control may be exercised through ownership, operation, or by administrative orders, stipulated settlements, consent decrees or other legal methods which result in control of a facility by the department	
5B7	Air sparging facilities - Facilities used to inject only air for the purpose of either encouraging microbial breakdown of hydrocarbons or removing of volatile chemicals by vapor extraction.	
COMMERCIAL AI	ND INDUSTRIAL FACILITIES	
5C1	Air Scrubber Waste Disposal Facilities - Inject wastes from air scrubbers used to remove sulphur, fly ash, or other contaminants.	
5C2	Water Treatment Brine Disposal Facilities - Receive brine from water softening or other water treatment.	
5C3	Industrial Process Water and Waste Disposal Facilities - Receive wastes generated by industrial and commercial processes. Examples include but are not limited to wastes from car washing, taxidermy, metal plating, printing, silk screening, refining, slaughter houses, and chemical manufacturing companies.	
5C4	Automotive Waste Disposal Facilities - Inject waste from floor drains or sinks where repair work is done on machinery of any description.	
5C5	Coal Bed Methane Injection Facilities - Inject groundwater produced in the process of coal bed methane extraction into a receiving aquifer containing water of the same or lower class of use.	
5C6	Small Commercial Disposal Systems - Inject wastewater which is of similar quality to domestic sewage which does not technically meet the definition of domestic sewage, in quantities of less than 2,000 gallons per day.	

SUBCLASS

DESCRIPTION

DRAINAGE FACILITIES		
5D1	Agricultural Drainage Facilities - Receive irrigation tailwaters, other field drainage, animal yard, feedlot, or dairy runoff, and other agricultural wastewater.	
5D2	Storm Water Drainage Facilities - Receive storm water runoff from paved areas, including parking lots, streets, residential subdivisions, building roofs, highways, etc.	
5D3	Improved Sinkholes - Receive storm water runoff from developments located in karst topographic areas.	
5D4	Industrial Drainage Facilities - Receive storm runoff from areas susceptible to spills, leaks, and other chemical discharges.	
5D5	Special Drainage Facilities - Receive water from sources other than direct precipitation. Examples of thistype include landslide control drainage facilities, potable water tank overflow drainage facilities, swimming pool drainage facilities, and lake level control drainage facilities.	
	SEWAGE DISPOSAL FACILITIES	
5E1	SEWAGE DISPOSAL FACILITIES Aquaculture Return Flow Facilities - Receive injectate from aquaculture operations.	
5E1 5E2	Aquaculture Return Flow Facilities - Receive injectate from	
	Aquaculture Return Flow Facilities - Receive injectate from aquaculture operations. Untreated Domestic sewage Disposal Facilities - Receive untreated domestic sewage from single or multiple sources. Does not include subsurface fluid distribution systems with septic tanks ahead of the subsurface fluid distribution system.	

	SUBCLASS 5E5	DESCRIPTION Small Domestic Subsurface Fluid Distribution Systems - Receive less than 2,000 gallons per day as an average of a typical week, of domestic sewage with only primary treatment in a septic tank. These systems are designed to accept more than 2,000 gallons per day at a peak and are not small wastewater systems. No class 5E5 system has a required design capacity in excess of 5,000 gallons per day.				
		MISCELLANEOUS CLASS V FACILITIES				
	5F1	Cathodic Protection Facilities -Facilities constructed with coke breeze and dust control oil for use as a permanent anode in a cathodic protection system for a fluid conveyor system or fluid				
	5F2	containment system composed of metallic material. All other facilities that inject fluids into or above an underground source of drinking water which do not fall into Classes I, II, III, or IV injection facilities.				
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APPENDIX D TYPES OF PERMITS REQUIRED TIMING OF COMPLIANCE

TYPE	DESCRIPTION	TYPE OF PERMIT	WHEN REQUIRED
5A1	Direct Heat Reinjection Facilities	General Permit	2 years after date of general permit
5A2	Heat Pump/Air Conditioner Return Flow Facilities	General Permit	2 years after date of general permit
5A3	Cooling Water Return Flow Facilities	Individual Permit	April 14, 2000
5B1	Mining, Sand or Backfill Facilities	General Permit	2 years after date of general permit
5B2	Aquifer Recharge Facilities	Permit by Rule	register by April 14, 1999
5B3	Saline Water Intrusion Barrier Facilities	Individual Permit	April 14, 2000
5B4	Subsidence Control Facilities	Permit by Rule	register by April14, 1999
5B5	Facilities used to prevent, control or remediate aquifer pollution, which are not owned or controlled by the Department of Environmental Quality	General Permit	2 years after the date of the general permit
5B6	Department Controlled Facilities	Permit by Rule	Register by April 14 1999
5B7	Air Sparging Facilities	Permit by Rule	Register by April 14 1999
5C1	Air Scrubber Waste Disposal Facilities	Individual Permit	April 14, 2000
5C2	Water Treatment Brine Disposal Facilities	Individual Permit	April 14, 2000
5C3	Industrial Process Water and Waste	Individual Permit	April 14, 2000

ТҮРЕ	DESCRIPTION	TYPE OF PERMIT	WHEN REQUIRED
5C4	Existing Automotive Waste Disposal Facilities	General Permit	2 years after date of general permit
5C4	New Automotive Waste Disposal Facilities	Ban	April 14, 1998
5C5	Coal Bed Methane Injection Facilities	General Permit	Within 6 months of the date of issue for the general permit for existing facilities, and before injection for all new facilities
5C6	Small Commercial Disposal Systems	General Permit	2 years after the date of the general permit
5D1	Agricultural Drainage Facilities	General Permit	2 years after the date of the general permit
5D2	Storm Water Drainage Facilities	General Permit	2 years after the date of the general permit
5D3	Improved Sinkholes	Individual Permit	April 14, 2000
5D4	Industrial Drainage Facilities	Individual Permit	April 14, 2000
5D5	Special Drainage Facilities	Permit by Rule	Register by April 14, 1999
5E1	Aquaculture Return Flow Facilities	General Permit	2 years after date of general permit
5E2	Existing Untreated Domestic sewage Disposal Facilities (Cesspools)	Ban	April 14, 1998
5E3	Existing Domestic Subsurface Fluid Distribution Systems	General Permit	2 years after date of general permit
5E3	Existing Domestic Subsurface Fluid Distribution Systems - Permitted as a small wastewater facility	Permit by Rule	register by April 14, 1999
5E4	New Domestic Wastewater Treatment Plant Disposal Facilities	Individual Permit	April 14, 2000
5E5	Small Domestic Subsurface Fluid Distribution Systems	General Permit	2 years after the date of the general permit

TYPE	DESCRIPTION	TYPE OF PERMIT	WHEN REQUIRED
5F1	Cathodic Protection Facilities	Permit by Rule	register by April 14, 1999
5F2	All other facilities that inject fluids into or above an underground source of drinking water which do not fall into Classes I, II, III, or IV injection facilities	Individual Permit	April 14, 2000