# Notice of Intent to Adopt Rules

Revised October 2014

## 1. General Information

| | | |
|---|---|---|
| a. Agency/Board Name: Environmental Quality | | |
| b. Agency/Board Address: 122 W 25th St | c. City: Cheyenne | d. Zip Code: 82001 |
| e. Name of Contact Person: William Tillman | f. Contact Telephone Number: 307-777-6941 | |
| g. Contact Email Address: william.tillman@wyo.gov | | |
| h. Date of Public Notice: May 5, 2015 | i. Comment Period Ends: June 24, 2015 | |
| j. Program: Water Quality | | |

## 2. Rule Type and Information: For each chapter listed, indicate if the rule is New, Amended, or Repealed.

a. If "New," provide the Enrolled Act numbers and years enacted:

b. Provide the Chapter Number, Short Title, and Rule Type of Each Chapter being Created/Amended/Repealed

*Please use the Additional Rule Information form for more than 10 chapters, and attach it to this certification.*

| Chapter Number: | Chapter Name: | |
|---|---|---|
| 8 | QUALITY STANDARDS FOR WYOMING GROUNDWATERS | ☐ New ☒ Amended ☐ Repealed |
| 13 | CLASS I HAZARDOUS WASTE AND NON-HAZARDOUS WASTE WELLS UNDERGROUND INJECTION CONTROL PROGRAM | ☐ New ☐ Amended ☒ Repealed |
| 16 | Class V Injection Wells and Facilities Underground Injection Control Program | ☐ New ☐ Amended ☒ Repealed |
| 27 | Underground Injection Control Program | ☐ New ☒ Amended ☐ Repealed |
| | | ☐ New ☐ Amended ☐ Repealed |
| | | ☐ New ☐ Amended ☐ Repealed |
| | | ☐ New ☐ Amended ☐ Repealed |
| | | ☐ New ☐ Amended ☐ Repealed |
| | | ☐ New ☐ Amended ☐ Repealed |
| | | ☐ New ☐ Amended ☐ Repealed |

c. ☒ The Statement of Reasons is attached to this Notice and, in compliance with *Tri-State Generation and Transmission Association, Inc. v. Environmental Quality Council*, 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 do not differ from the uniform rules identified in the Administrative Procedure Act, W.S. 16-3-103(j):

_____

(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).

_____

(Provide chapter numbers)

☑ 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 as the proposed amendments are pervasive (Section 5 of the Rules on Rules).

e. A copy of 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: _____

* If Item "d" above is not checked, the proposed 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: |
|---|---|---|---|---|
| | July 8, 2015 | 9:00 a.m. | Cheyenne | Herschler Bldg<br>Room 1699<br>122 W 25th St |

b. What is the manner in which interested persons may present their views on the rulemaking action?

☒ By submitting written comments to the Agency at the physical and/or email address listed in Section 1 above.

☐ At the following URL: _____

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: _____

c. Any person may urge the Agency not to adopt the rules and request the Agency to state its reasons for overruling the consideration urged against adoption. Requests for an agency response must be made prior to, or within thirty (30) days after adoption, of the rule, addressed to the Agency and Contact Person listed in Section 1 above.

## 4. Federal Law Requirements

a. These rules are created/amended/repealed to comply with federal law or regulatory requirements. ☐ Yes ☒ No

If "Yes:" Applicable Federal Law or Regulation 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 *MEETS* minimum substantive statutory requirements.

☐ The proposed rule change *EXCEEDS* 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: _____

☐ Not Applicable.

## 6. Authorization

a. I certify that the foregoing information is correct.

| | |
|---|---|
| *Printed Name of Authorized Individual* | William Tillman |
| *Title of Authorized Individual* | Regulatory and Enforcement Engineer |
| *Date of Authorization* | May 5, 2015 |

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 Criss.Carlson@wyoleg.gov.
- Secretary of State: Electronic version of Notice of Intent sent to Rules@wyo.gov.

**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)(xxvii); 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.

(l) "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), Water Programs, National Interim Primary Drinking Water Regulations, and in the Federal Register for March 13, 1978 (Part II), Water Programs, Hazardous Substances; 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 I

| UNDERGROUND WATER CLASS<br>Use Suitability Constituent or Parameter | I<br>Domestic*<br>Concentration** | II<br>Agriculture<br>Concent.** | III<br>Livestock<br>Concent.** |
|---|---|---|---|
| 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) | --- | 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 (TDS) | 500.0 | 2000.0 | 5000.0 |
| 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 Radium 226 and Radium 228[8] | 5pCi/L | 5pCi/L | 5pCi/L |
| Total Strontium 90 | 8pCi/L | 8pCi/L | 8pCi/L |
| Gross alpha particle radioactivity (including Radium 226 but excluding Radon and Uranium[8] | 15pCi/L | 15pCi/L | 15pCi/L |

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

** mg/L, unless other wise indicated

TABLE I

| UNDERGROUND WATER CLASS | Special (A) 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 ($H_2S$) | 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.u.-9.0s.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

TABLE I

Explanation for Superscripts Used in Table I

[1]Unionized ammonia: When ammonia dissolves in water, some of the ammoniareacts with water to form ammonium ions. A chemical equilibrium is established whichcontains unionized ammonia ($NH_3$), ionized ammonia ($NH_4+$) and hydroxide ions ($OH^-$).The toxicity of aqueous solutions of ammonia is attributed to $NH_3$; therefore, the standard is for unionized ammonia. (Note: 0.02 mg/L $NH_3$ is equivalent to 0.016 $NH_3$ as N.)

[2]Undissociated 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 $H_2S$.

[3]Dependent 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.

[4]Egg hatching

[5]Fish rearing

[6]Fish and aquatic life

[7]Total ammonia nitrogen

[8]Requirements 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 ~~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. 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 8
QUALITY STANDARDS FOR WYOMING GROUNDWATERS

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# 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.

(l) "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), Water Programs, National Interim Primary Drinking Water Regulations, and in the Federal Register for March 13, 1978 (Part II), Water Programs, Hazardous Substances; 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 I

| UNDERGROUND WATER CLASS Use Suitability Constituent or Parameter | I Domestic* Concentration** | II Agriculture Concent.** | III Livestock Concent.** |
|---|---|---|---|
| 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) | --- | 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 (TDS) | 500.0 | 2000.0 | 5000.0 |
| 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 Radium 226 and Radium 228[8] | 5pCi/L | 5pCi/L | 5pCi/L |
| Total Strontium 90 | 8pCi/L | 8pCi/L | 8pCi/L |
| Gross alpha particle radioactivity (including Radium 226 but excluding Radon and Uranium[8] | 15pCi/L | 15pCi/L | 15pCi/L |

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

** mg/L, unless other wise indicated

TABLE I

| UNDERGROUND WATER CLASS<br>Use Suitability Constituent or Parameter | Special (A) Fish/Aquatic Life<br>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 ($H_2S$) | 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.u.-9.0s.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

TABLE I

Explanation for Superscripts Used in Table I

[1]Unionized ammonia: When ammonia dissolves in water, some of the ammoniareacts with water to form ammonium ions. A chemical equilibrium is established whichcontains unionized ammonia ($NH_3$), ionized ammonia ($NH_4$+) and hydroxide ions ($OH^-$).The toxicity of aqueous solutions of ammonia is attributed to $NH_3$; therefore, the standard is for unionized ammonia. (Note: 0.02 mg/L $NH_3$ is equivalent to 0.016 $NH_3$ as N.)

[2]Undissociated 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 $H_2S$.

[3]Dependent 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.

[4]Egg hatching

[5]Fish rearing

[6]Fish and aquatic life

[7]Total ammonia nitrogen

[8]Requirements 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. 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) "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 one-quarter (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.~~

~~(l) "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. Control of Class I well subsurface discharges; 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:~~

$$r = \frac{2.25\,KHt}{S10^{x}}$$

~~where: $x = \frac{W - B}{\frac{G}{2.3Q}}$~~

~~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. Permit modification, revocation, termination 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 modification defined by this section.~~

~~(l) 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.~~

~~(c) 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:~~

~~(A) Cease all injections of waste fluids immediately;~~

~~(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;~~

~~(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 intervals; and~~

~~(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 one-hundred 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 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.~~

~~(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.~~

~~(c) 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 monitoring;~~

~~(ii) Operational monitoring;~~

~~(iii) Post-discharge or post-operational monitoring;~~

~~(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.~~

~~(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.~~

~~(l) 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 RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September, 1986, 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;~~

~~(C) 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~~

~~(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.~~

~~(e) 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.~~

~~(e) 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~~

~~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 registered 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;~~

~~(G) State Historical Preservation Officer;~~

~~(H) 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.~~

~~(e) 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.~~

~~(l) 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

| 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 |

~~APPENDIX B~~

| ~~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~~ |

~~/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 allow violations of any provision contained herein. These regulations fulfill Wyoming state obligations 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 as of 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 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. 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 subsurface discharge.

(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 wash basins, 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 draft permit. 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 subsurface distribution system, completed above the water table so that its bottom and sides are typically dry, 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.~~

~~(l) "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 underground injection facility after it has received whatever pretreatment is done.~~

~~(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, unless otherwise 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 rule must 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 into which fluids and pollutants are discharged.~~

~~(bb) "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.~~

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

~~(dd) "Septic system" means a facility that is used solely to emplace domestic sewage below 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 plan developed 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 fluid distribution systems include but are not limited to drain fields, leach fields, mounded leach fields, leach lines, bed type distribution systems, and gravel-less chamber type distribution systems.

(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 thereof which 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 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 5 (a)(vii) 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.

(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 regulations describe 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 do not meet the requirements for a general permit or permit by rule must obtain an individual permit prior 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 this chapter.

(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 represent geologic work shall be sealed, signed, and dated by a licensed professional geologist as required by 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 following reasons:

(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 protection plan, 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 facility occur 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;

(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 permit and 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 permit and would not change its classification;

(F) Change construction requirements approved by the administrator pursuant to department rules and regulations provided that any such alteration shall comply with the 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 draft permit 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 require the 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 reissuance proceeding, the permittee shall comply with all conditions of the existing permit until a new final permit 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 permittee will 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 contain the 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 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 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;~~

~~(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 rights of 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 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;~~

~~(I) 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;

(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 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 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 compliance with the existing permit unless the proposed permittee agrees to bring the facility into compliance;

(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 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;~~

~~(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 upon completion 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 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.

(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 covered by a general permit. In addition, any facility not authorized under Sections 7 and 8, and operators directed by the administrator to obtain an individual permit, shall obtain an individual permit under 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 is under pressure into a confined aquifer.

(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.

(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 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 11 of 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 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."

(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 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 and 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:

(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 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:

(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 well screening 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 facility in 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 area served 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 this section indicates that the general permit would not be protective of groundwater in that specific case. Any operator covered by a general permit may at any time apply for and obtain an individual permit for the same facility. Once issued, an individual permit will replace coverage by 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 covered by a general permit in class 5C6 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 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 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.

(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 bed 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; 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 section represent 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

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 contains polluted 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 wastewater system permit issued by the Department of Environmental Quality or a local 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; 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 shall be 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 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:

(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 land disposal pursuant to Chapter 13, Wyoming Hazardous Waste Rules and Regulations unless the disposal conforms to that chapter.

(d) No drainage facility, subclass 5D1 through 5D5 shall be constructed so as to directly receive any waste other than natural precipitation or natural groundwater unless permitted 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 fluids 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.

(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 injection into 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.

(l) Pumping domestic sewage out of any Class V facility for any use other than disposal 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 loop systems 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 open loop 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 to another 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 remain in service for more than 60 days;~~

~~(ii) Provision for controlling the type of material injected and to insure that no hazardous 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) shall include:~~

~~(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 being remediated 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 water standard 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 no violations 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 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.

(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 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:~~

~~(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 accordance with 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 waste were 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.~~

~~(l) 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 facilities whenever 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 coke breeze. 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 times when 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 to installation.

(vi) If it becomes necessary to wet any anode installed under this section, 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 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:

(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 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 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 deal with 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 describes the procedures to be carried out to obtain detailed chemical and physical analyses of a representative samples of the waste, including quality assurance procedures to be used. 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. At a minimum, any plan shall include:~~

~~(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.

(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 down gradient 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 surface water. Where necessary to protect existing or future uses, permit limitations may be established at the point of compliance which are more stringent than the class of use standard.

(iii) Facilities where subsurface treatment is anticipated may be required to monitor the injected fluid at the point of injection. Permit limits may be established at the point of 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 Agency manual RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September, 1986, unless alternate methods and procedures are approved by the administrator.

(i) Analysis of all samples shall be accomplished pursuant to Chapter 8, Water

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, holding tanks, 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, lift stations, or other waste handling structures which shows that none of these materials contain characteristic hazardous waste or radioactive waste;

(ii) Monitoring of the groundwater in the immediate area of the facility shows that 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 administrator which demonstrates compliance with Chapter 8 of these regulations and prevents the movement 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 standard found 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.

(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

facility. After they have fulfilled their useful purpose, they shall be abandoned by filling all breather 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 also have 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.

(c) 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 for public 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 draft permit 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 permits this 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;

(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 area where 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 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.

(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 written comments on the draft permit and may request a public hearing. Requests for public hearings must 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.

(l) The public comment period shall automatically extend to the close of any public hearing. The administrator may also extend the comment period by so stating at the public hearing.

(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 | 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 | 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. |
| 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 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 |
|---|---|---|---|
| 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 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 | 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 |

| TYPE | DESCRIPTION | TYPE OF PERMIT | WHEN REQUIRED |
|---|---|---|---|
| 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 |
| 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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July 31, 2012

# CHAPTER 16

## Class V Injection Wells and Facilities Underground Injection Control Program

REPEALED

# CHAPTER 27

# UNDERGROUND INJECTION CONTROL PROGRAM
# CLASS I AND V WELLS

## Section 1. Authority.

(from Chapter 13, Section 1 and Chapter 16, Section 1) 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. (from Chapter 16, Section 1) These regulations fulfill Wyoming state obligations 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 as of December 7, 1999).

## Section 2. Definitions.

(from Chapter 13, Section 2 and Chapter 16, Section 2) The following definitions supplement those definitions contained in Section 35-11-103 of the Wyoming Environmental Quality Act.

(from Chapter 13, Section 2(a) and Chapter 16, Section 2(a)) (a) "Aquifer" means a zone, stratum or group of strata that can store and transmit water in sufficient quantities for a specific use.

(from Chapter 13, Section 2(b) and Chapter 16, Section 2(b)) (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. (from Chapter 16, Section 2) 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.

(from Chapter 13, Section 2(c) and Chapter 16, Section 2(c)) (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.

(from Chapter 13, Section 2(d)) (d) "Bore/casing annulus" means the space between the well bore and the well casing.

(from Chapter 13, Section 2(e)) (e) "Casing/tubing annulus" means the space between the well casing and the tubing.

(from Chapter 13, Section 2(f)) (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.

(from Chapter 16, Section 2(d)) (g) “Cesspool” means a drywell that receives solely untreated domestic sewage, and which sometimes has an open bottom and/or perforated sides.

(from Chapter 13, Section 2(g)) (h) "Class I well" means a well used to inject hazardous or non-hazardous industrial, commercial or municipal waste beneath the lowermost formation containing, within one- quarter (1/4) mile of the well bore, an underground source of drinking water.

(from Chapter 13, Section 2(h)) (i) "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:

(from Chapter 13, Section 2(h)(i)) (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.

((from Chapter 13, Section 2(h)(ii)) (ii) For enhanced recovery of oil or natural gas.

(from Chapter 13, Section 2(h)(iii)) (iii) For storage of hydrocarbons which are liquid at standard temperature and pressure.

(from Chapter 13, Section 2(i)) (j) "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:

(from Chapter 13, Section 2(i)(i)) (i) Mining of sulfur by the Frasch process.

(from Chapter 13, Section 2(i)(ii)) (ii) In situ mining of uranium or other metals; this category includes in situ production from ore bodies ~~which~~ that have not been conventionally mined by means of an open pit or underground excavation.

(from Chapter 13, Section 2(i)(iii)) (iii) In situ mining of salts, trona, or potash.

(from Chapter 13, Section 2(i)(iv)) (iv) Underground coal gasification operations.

(from Chapter 13, Section 2(i)(v)) (v) Solution mining of open pits or underground excavations used for the production of minerals, such as stopes leaching.

(from Chapter 13, Section 2(i)(vi)) (vi) Fossil fuel recovery including coal, lignite, oil shale, and tar sands.

(from Chapter 13, Section 2(i)(vii)) (vii) Experimental technologies, such as pilot scale in situ mining wells in previously unmined areas.

(from Chapter 13, Section 2(j)) (k) "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 this Chapter.

(from Chapter 13, Section 2(j)) 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.~~

~~(from Chapter 13, Section 2(k)) (k) "Class V well" means any included in Classes I, II, III, or IV.~~

(from Chapter 16, Section 2(e)) (l) "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~~ this chapter. (from Chapter 16, Section 2(e)) The Class V facility includes all systems of collection, treatment, and control which are associated with the subsurface disposal. Appendix ~~A~~ C of this chapter contains a list of Class V facilities.

(from Chapter 13, Section 2(l)) (m) "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 under- ground source of drinking water.

(from Chapter 13, Section 2(m)) (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.

(from Chapter 16, Section 2(f)) (o) "Domestic sewage" means liquids or solid wastes obtained from humans and domestic activities including wastewater from activities such as showers, toilets, human wash basins, food preparation, clothes washing, and dishwashers.

(from Chapter 13, Section 2(n) and from Chapter 16, Section 2(g)) (p) "Draft permit" means a document indicating the tentative decision by the department to issue or deny, modify, revoke (from Chapter 16, Section 2(g))and reissue, or terminate a permit ~~(from Chapter 13, Section 2(n))or license~~ . (from Chapter 16, Section 2(g)) A notice of intent to terminate a permit and a notice of intent to deny a permit are types of draft permits. (from Chapter 13, Section 2(n) and from Chapter 16, Section 2(g))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 ~~(fromChapter 13, Section 2(n)) Chapter~~ chapter.

(from Chapter 16, Section 2(h)) (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.

(from Chapter 13, Section 2(o) and Chapter 16, Section 2(i)) (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.

(from Chapter 13, Section 2(p)) (s) "Endangerment" means exposure to actions or activities which could pollute groundwaters of the State.

(from Chapter 13, Section 2(q) and Chapter 16, Section 2(j)) (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.

(from Chapter 13, Section 2(r) and Chapter 16, Section 2(k)) (u) "Fluid" means any material which flows or moves, whether semisolid, liquid, sludge, gas or any other form or state.

(from Chapter 16, Section 2(l)) (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.

(from Chapter 13, Section 2(s) and Chapter 16, Section 2(m)) (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.

(from Chapter 13, Section 2(t) and Chapter 16, Section 2(n)) (x) "Groundwaters of the state" are all bodies of underground water which are wholly or partially within the boundaries of the state.

~~(from Chapter 16, Section 2(o)) "Hazardous waste" means a hazardous waste as defined in Chapter 2, Section 1 (c), Wyoming Hazardous Waste Rules and Regulations.~~

(from Chapter 13, Section 2(u)) (y) "Hazardous waste" means a hazardous waste as defined in 40 CFR 261.3.

(from Chapter 16, Section 2(p)) (z) "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.

(from Chapter 16, Section 2(q)) (aa) "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.

(from Chapter 16, Section 2(r)) (bb) "Injectate" means the wastewater being disposed of through any underground injection facility after it has received whatever pretreatment is done.

(from Chapter 13, Section 2(v) and Chapter 16, Section 2(s)) (cc)"Lithology" means the description of rocks on the basis of their physical and chemical characteristics.

(from Chapter 13, Section 2(w)) (dd) "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.

(from Chapter 13, Section 2(x)) (ee) "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.

(from Chapter 13, Section 2(z)) (ff) "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.

(from Chapter 13, Section 2(aa) and Chapter 16, Section 2(u)) (gg) "Permit" means a Wyoming Underground Injection Control permit, unless otherwise specified.

(from Chapter 16, Section 2(u)) (hh) "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 rule must meet the requirements found in this chapter, but is not required to apply for and obtain a permit to construct and operate the facility.

(from Chapter 13, Section 2(bb) and Chapter 16, Section 2(v)) (ii) "Permittee" means the named permit holder.

(from Chapter 16, Section 2(w)) (jj) "Point of compliance" means a point at which the permittee shall meet class of use standards for the receiver.

(from Chapter 16, Section 2(x)) (kk) "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.

(from Chapter 16, Section 2(y)) (ll) "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.

(from Chapter 13, Section 2(y) and Chapter 16, Section 2(z)) (mm) "Radioactive waste" means any waste ~~which~~ that contains radioactive material in concentrations ~~which~~ that exceed those listed in 10 CFR Part 20, Appendix B, Table II, Column 2 (from Chapter 16, Section 2(z)) as of December 22, 1993.

(from Chapter 13, Section 2(cc) and Chapter 16, Section 2(aa)) (nn) "Receiver" means any zone, interval, formation or unit in the subsurface into which fluids and pollutants are discharged.

(from Chapter 13, Section 2(dd) and Chapter 16, Section 2(bb)) (oo) "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.

(from Chapter 16, Section 2(cc)) (pp) "Secondarily affected aquifer" means any aquifer affected by migration of fluids from an injection facility, when the aquifer is not directly discharged into.

(from Chapter 16, Section 2(dd)) (qq) "Septic system" means a facility that is used solely to emplace domestic sewage below the surface and is comprised of a septic tank and subsurface fluid distribution system.

(from Chapter 16, Section 2(ee)) (rr) "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 plan developed pursuant to Section 1453 of the Safe Drinking Water Act.

(from Chapter 13, Section 2(ee)) (ss) "Subsurface discharge" means a discharge into a receiver.

(from Chapter 16, Section 2(ff)) (tt) "Subsurface fluid distribution system" means an assemblage of perforated pipes or drain tiles used to distribute fluids below the surface of the ground. Subsurface fluid distribution systems include but are not limited to drain fields, leach fields, mounded leach fields, leach lines, bed type distribution systems, and gravel-less chamber type distribution systems.

(from Chapter 13, Section 2(ff) and Chapter 16, Section 2(hh)) (uu) "Underground source of drinking water" means those aquifers or portions thereof (from Chapter 16, Section 2(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 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.~~

(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 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.

(from Chapter 16, Section 2(ii)) (ww) "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.

~~(from Chapter 16, Section 2(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.~~

(from Chapter 13, Section 2(gg)) (xx) "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.

(from Chapter 16, Section 2(kk)) (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.

(from Chapter 13, Section 2(hh)) (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.

**Section 3. Applicability.**

(from Chapter 13, Section 3)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. In addition, (from Chapter 16, Section 3)) 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~~ C of this chapter.

**Section 4. Timing of Compliance with These Regulations for Class V Wells.**

((from Chapter 16, Section 4) 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.

((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, 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 individual permit for the facility.

((from Chapter 16, Section 4(b)(i)(C)) (C) Retain an existing permit issued under Chapter 9.

((from Chapter 16, Section 4(b)(i)(D)) (D) Cease discharging fluids to the subsurface.

((from Chapter 16, Section 44(b)(ii)) (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.

((from Chapter 16, Section 44(b)(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 coverage under a general permit, or denying coverage under a general permit within 60 days of the date when the operator has requested coverage.

((from Chapter 16, Section 4(c)) (c) Permit by rule

((from Chapter 16, Section 4(c)(i)) (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.

((from Chapter 16, Section 4(c)(ii)) (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. Control of Class I well subsurface discharges; permit required; aquifer exemptions.**

(from Chapter 13, Section 4(a)) (a) Class I wells shall be allowed only pursuant to the Wyoming Environmental Quality Act, Chapter ~~VIII~~ 8, Wyoming Water Quality Rules and Regulations, and this chapter.

(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 through the Water Quality Division.

(from Chapter 13, Section 4(c)) (c) Injections from Class I wells shall be restricted to those receivers defined as Class VI groundwaters by the department pursuant to Chapter ~~VIII~~ 8, Quality Standards for Wyoming Groundwaters, Water Quality Rules and Regulations and receivers which have obtained an aquifer exemption pursuant to this section.

(from Chapter 13, Section 4(d)) (d) Permits may be issued for individual wells or on an area basis except Class I hazardous waste wells, which shall have individual permits.

(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:

(from Chapter 13, Section 4(e)(i)) (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~~ 8. 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.

(from Chapter 13, Section 4(e)(ii)) (ii) When the aquifer exemption request is for an aquifer containing 3,000 mg/~~l~~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.

(from Chapter 13, Section 4(e)(iii)) (iii) An aquifer exemption request for an aquifer containing less than 3,000 mg/~~l~~L of total dissolved solids requires the aquifer exemption request to be processed as a program revision pursuant to 40 CFR 145.32.

**Section 6. Permits and Permit Applications.**

(from Chapter 13, Section 5(a)) (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.

(from Chapter 13, Section 9(a) and Chapter 16, Section 5(a)(vi)) (b) All permits issued under this chapter, (from Chapter 16, Section 5(a)(vi)) whether individual permits, or general permits, (from Chapter 13, Section 9(a) and Chapter 16, Section 5(a)(vi)) shall be for no more than ten (10) years duration.

(from Chapter 13, Section 9(b) and Chapter 16, Section 5(a)(vii)) (c) Each permit shall be reviewed by the department at least once every five (5) years for continued validity of all permit conditions and contents. (from Chapter 16, Section 5(a)(vii))) Permits that do not satisfy the requirements of these regulations are subject to modification, revocation and reissuance, or termination pursuant to this chapter.

~~(from Chapter 13, Section 9(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.~~

(from Chapter 16, Section 5(a)(viii)) (d) 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.

(from Chapter 16, Section 5(a)(ix)) (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 by Wyoming Statutes, Title 33, Chapter 41.

(from Chapter 13, Section 5(b)) (f) A complete application for a Class I well shall include:

(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.

(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.

(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.

(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.

(from Chapter 13, Section 5(b)(iv)(A)) (A) The formula for determining the cone of influence is:

$$r = \left(\frac{2.25\,KHt}{S10^{x}}\right)^{\frac{1}{2}}$$

Where: $x = \left(\frac{W}{G} - B\right)\left(\frac{4PKH}{2.3Q}\right)$

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)

(from Chapter 13, Section 5(b)(iv)(B)) (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.

(from Chapter 13, Section 5(b)(iv)(C)) (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.

(from Chapter 13, Section 5(b)(iv)(D)) (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.

(from Chapter 13, Section 5(b)(iv)(E)) (E) All Areas of Review shall be legally described by township, range and section to the nearest quarter quarter of a section.

(from Chapter 13, Section 5(b)(v)) (v) Information about the proposed facility, including:

(from Chapter 13, Section 5(b)(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 13, Section 5(b)(v)(B)) (B) Construction and engineering details in accordance with Section ~~11~~ 12 of this chapter.

(from Chapter 13, Section 5(b)(vi)) (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.

(from Chapter 13, Section 5(b)(vii)) (vii) Water quality information, including ~~back-ground~~ 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~~ 8 Section 4(d)(9) of the Wyoming Water Quality Rules and Regulations.

(from Chapter 13, Section 5(b)(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 13, Section 5(b)(viii)(A)) (A) The facility and each of its intake and discharge structures;

(from Chapter 13, Section 5(b)(viii)(B)) (B) Each of its hazardous waste treatment, storage, or disposal facilities;

(from Chapter 13, Section 5(b)(viii)(C)) (C) Each well where fluids from the facility are injected underground;

(from Chapter 13, Section 5(b)(viii)(D)) (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

(from Chapter 13, Section 5(b)(viii)(E)) (E) General geology and hydrogeology in the area.

(from Chapter 13, Section 5(b)(ix)) (ix) A list of other relevant permits, whether federal or state, that the facility has been required to obtain, such as construction permits.

(from Chapter 13, Section 5(b)(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, sufficient to satisfy the administrator as to the adequacy of the plugging or completion.

(from Chapter 13, Section 5(b)(x)(A)) (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.

(from Chapter 13, Section 5(b)(xi)) (xi) Detailed plans for:

(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;

(from Chapter 13, Section 5(b)(xi)(B)) (B) Monitoring injection and annular pressures in the well, to minimize the potential for fracturing of the confining zone and below the receiver; and

(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 groundwater.

(from Chapter 13, Section 5(b)(xii)) (xii) Information sufficient to demonstrate mechanical integrity of the well, and compatibility between the proposed discharge and the well material.

(from Chapter 13, Section 5(b)(xiii)) (xiii) Information sufficient to demonstrate compliance with Sections 12, 14, 15, 16, 17 and 19 of this chapter.

(from Chapter 13, Section 5(b)(xiv)) (xiv) All applications for permits shall be signed by a responsible officer as follows:

(from Chapter 13, Section 5(b)(xiv)(A) and Chapter 16, Section 6(c)(xi)(A)) (A) For a corporation - by a responsible corporate officer. For the purpose

of this section, a responsible corporate officer means:

(from Chapter 13, Section 5(b)(xiv)(A)(1) and and Chapter 16, 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 policy or decision making functions for the corporation; or

(from Chapter 13, Section 5(b)(xiv)(A)(2) and and Chapter 16, Section 6(c)(xi)(A)(ii)) (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.

(from Chapter 13, Section 5(b)(xiv)(B) and Chapter 16, Section 6(c)(xi)(B)) (B) For a partnership or sole proprietorship -- by a general partner or the proprietor, respectively;

(from Chapter 13, Section 5(b)(xiv)(C) and Chapter 16, Section 6(c)(xi)(C)) (C) For a municipality, state, federal or other public agency -- by either the principal executive officer or ranking elected official.

(from Chapter 13, Section 5(b)(xv) and Chapter 16, Section 6(c)(xii)) (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."

(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 signing.

(g) For Class V facilities the following are applicable:

(i) ~~Permits required.~~ (from Chapter 16, Section 5(a)) A permit is required.

(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 regulations.

(from Chapter 16, Section 5(a)(ii)) (iii) Discharges into, or construction of, any Class V facility are prohibited unless permitted pursuant to this chapter.

(from Chapter 16, Section 5(a)(iii)) (iv) 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 regulations describe the permitting method for and subclasses of facilities. The owner or operator of a facility that 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 do not meet the requirements for a general permit or permit by rule must obtain an individual permit prior to installation or construction of the Class V facility.

(from Chapter 16, Section 5(a)(iv)) (v) 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.

(from Chapter 16, Section 5(a)(v)) (vi) 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 this chapter.

(h) Permit conditions and contents.

(from Chapter 13, Section 9(d)) (i) ~~All permits~~ All Class I permits issued under this chapter shall contain the following conditions:

(from Chapter 13, Section 9(d)(ii)) (A) 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.

(from Chapter 13, Section 9(d)(vii)) (B) 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.

(from Chapter 13, Section 9(d)(vii)(A)) (I) Part one of the mechanical integrity test shall demonstrate the absence of leaks through the packer, tubing, casing, and well head.

(from Chapter 13, Section 9(d)(vii)(B)) (II) Part two of the mechanical integrity test shall demonstrate the absence of fluid movement behind the casing.

(from Chapter 13, Section 9(d)(vii)(C)) (III) 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:

(from Chapter 13, Section 9(d)(vii)(C)(I)) (1.) The proposed method for demonstrating the lack of significant leaks in the well;

(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 9(d)(vii)(C)(III)) (3.) Any technical data supporting the use of this test.

(from Chapter 13, Section 9(d)(viii)) (C) A Class I well that cannot demonstrate mechanical integrity shall be shut down until such time 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 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.

(from Chapter 13, Section 10) (ii) ~~Special permit conditions for hazardous waste wells~~ Special conditions for Class I hazardous waste wells.

(from Chapter 13, Section 10) (A) All Class I hazardous waste wells permitted under this chapter shall be subject to the special permit conditions listed ~~in this section~~ below in addition to the conditions applicable to all Class 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 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 might harm the integrity of the well. The fluid used in the casing/tubing annulus shall be noncorrosive, and shall contain a corrosion inhibitor.

(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.

(from Chapter 13, Section 10(a)(iii)) (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.

(from Chapter 13, Section 10(a)(iv)) (IV) A requirement that the operator have a trained operator onsite at all times the well is operating.

(from Chapter 13, Section 10(a)(v)) (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:

(from Chapter 13, Section 10(a)(v)(A)) (1.) Cease all injections of waste fluids immediately.

(from Chapter 13, Section 10(a)(v)(B)) (2.) Take all necessary steps to determine the presence or absence of a leak.

(from Chapter 13, Section 10(a)(v)(C)) (3.) 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.~~ (h)(iii)(Q) of this section.

(from Chapter 13, Section 10(a)(v)(D)) (4.) The operator shall restore and demonstrate, to the satisfaction of the administrator, mechanical integrity prior to resuming injection activities.

(from Chapter 13, Section 10(a)(vi)) (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:

(from Chapter 13, Section 10(a)(vi)(A)) (1.) Immediately cease all injection activities.

(from Chapter 13, Section 10(a)(vi)(B)) (2.) Notify 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~~ (h)(iii)(Q) of this section, 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.

(from Chapter 13, Section 10(a)(vi)(C)) (3.) Comply with the requirements of any remedial action plan approved by the administrator.

(from Chapter 13, Section 10(a)(vi)(D)) (4.) Where the unauthorized release is into a Class I aquifer, as classified under Chapter ~~VIII~~ 8, 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.

(from Chapter 13, Section 10(a)(vi)(E)) (5.) 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.

(from Chapter 13, Section 10(a)(vii)) (VII) A requirement 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 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 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.) Personnel 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~~;~~.

(from Chapter 13, Section 9(d)(iii) and Chapter 16, Section 5(c)(i)(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 permit ~~;~~.

(from Chapter 13, Section 9(d)(iv) and Chapter 16, Section 5(c)(i)(C))

(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~~;~~.

(from Chapter 13, Section 9(d)(v) and Chapter 16, Section 5(c)(i)(D))

(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~~;~~.

(from Chapter 13, Section 9(d)(v) and Chapter 16, Section 5(c)(i)(E))

(E) 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 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~~;~~.

(from Chapter 13, Section 9(d)(ix) and Chapter 16, Section 5(c)(i)(F))

(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~~;~~.

(from Chapter 13, Section 9(d)(x) and Chapter 16, Section 5(c)(i)(G))

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

(from Chapter 13, Section 9(d)(xi) and Chapter 16, Section 5(c)(i)(H))

(H) 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~~;~~.

(from Chapter 13, Section 9(d)(xii) and Chapter 16, Section 5(c)(i)(I))

(I) 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~~;~~.

(from Chapter 13, Section 9(d)(xiii) and Chapter 16, Section 5(c)(i)(J)) (J) A requirement that the permittee furnish any information necessary to establish a monitoring program pursuant to ~~(from Chapter 13, Section 9(d)(xiii)) Section 13 (from Chapter 16, Section 5(c)(i)(J)) Section 11~~ Section 15 of this chapter~~;~~.

(from Chapter 13, Section 9(d)(xiv) and Chapter 16, Section 5(c)(i)(K))

(K) 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 ~~(from Chapter 13, Section 9(d)(xiv)) Section 13, (From Chapter 16, Section 5(c)(i)(K)) Section 11~~ Section 15 of this chapter~~;~~.

(from Chapter 13, Section 9(d)(xv) and Chapter 16, Section 5(c)(i)(L))
(L) A requirement that all applications, reports, and other information submitted to the administrator contain certifications as required in ~~(from Chapter 13, Section 9(d)(xiii)) Section 5 (c)(14)~~ Section ~~(from Chapter 16, Section 5(c)(L)) 6 (c)(xi)~~ 6 (f) (xv) (from Chapter 13, Section 9(d)(xv) and Chapter 16, Section 5(c)(i)(L)) of this chapter, and be signed by ~~(from Chapter 13, Section 9(d)(xiii)) either a responsible corporate officer or a duly authorized representative.~~ (From Chapter 16, Section 5(c)(i)(L)) a person who meets the requirements to sign permit applications found in ~~(from Chapter 16, Section 5(c)(i)(L)) Section 6 (c)(xii) of this chapter~~ Section 6 (f) (xiv), or for routine reports, a duly authorized representative;

(from Chapter 13, Section 9(d)(xvi) and Chapter 16, Section 5(c)(i)(M)) (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~~;~~.

(from Chapter 13, Section 9(d)(xvii) and Chapter 16, Section 5(c)(i)(N)) (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~~;~~.

(from Chapter 13, Section 9(d)(xviii) and Chapter 16, Section 5(c)(i)(O)) (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 compliance with the existing permit unless the proposed permittee agrees to bring the facility into compliance~~;~~.

(from Chapter 13, Section 9(d)(xix) and Chapter 16, Section 5(c)(i)(P))
(P) A requirement that monitoring results shall be reported at the intervals specified elsewhere in the permit~~;~~.

(from Chapter 13, Section 9(d)(xx) and Chapter 16, Section 5(c)(i)(Q) )
(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 thirty (30) days following each schedule date~~;~~.

(from Chapter 13, Section 9(d)(xxi) and Chapter 16, Section 5(c)(i)(R))
(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 ~~(from Chapter 13, Section 9(d)(xxi)) 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:

(from Chapter 13, Section 9(d)(xxi) and Chapter 16, Section(5)(c)(i)(R)(I)) (I) A description of the noncompliance and its cause.

(from Chapter 13, Section 9(d)(xxi) and Chapter 16, 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

(from Chapter 13, Section 9(d)(xxi) and Chapter 16, Section(5)(c)(i)(R)(III))) (III) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(from Chapter 13, Section 9(d)(xxii) and Chapter 16, Section 5(c)(i)(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, 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 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 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.

(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.

(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.

~~(from Chapter 13, Section 9(d)(xxix)) Injection into a well may not commence until construction is complete.~~

(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 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 7. Permit Processing Procedures.**

(a) For Class I wells the following are applicable:

(from Chapter 13, Section 6(a)) (i) The applicant shall file seven (7) copies of the permit application with the Water Quality Division.

(from Chapter 13, Section 6(b)) (ii) 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.

(from Chapter 13, Section 6(c)) (iii) An incomplete application will be processed in the following manner:

(from Chapter 13, Section 6(c)(i)) (A) 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.

(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 have a maximum of six (6) 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.

(from Chapter 13, Section 6(c)(iii)) (C) Resubmittal of information by an applicant on an incomplete application will begin the process described in subsection ~~(b)~~ (a)(ii) of this section.

(from Chapter 13, Section 6(d)) (iv) During any sixty (60) day review period where an application is determined complete, the administrator shall take one of the following actions:

(from Chapter 13, Section 6(d)(i)) (A) Prepare a draft permit for issuance or denial, prepare a fact sheet on the proposed operation, and provide public notice pursuant to Section ~~19~~ 21; or

(from Chapter 13, Section 6(d)(ii)) (B) Provide the applicant notice that the permit is deficient and state the deficiencies in the application.

(from Chapter 13, Section 6(e)) (v) 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~~ 22 unless a hearing is requested by the applicant. Resubmittal of information for a deficient application will start the sixty (60) day review period again.

(from Chapter 13, Section 6(f)) (vi) Denials of permit applications will be pursuant to procedures outlined in ~~Section 19 of this chapter~~ paragraph (d) of this section.

(from Chapter 13, Section 6(g)) (vii) All draft permits for Class I wells require public notice pursuant to Section ~~19~~ 21 of this chapter.

(b) For Class V wells that require an Individual Permit, the following are applicable:

(from Chapter 16, Section 6(e)) (i) The applicant shall submit five (5) copies of the permit application to the division.

(from Chapter 16, Section 6(f)) (A) 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.

(from Chapter 16, Section 6(g)) (ii) Resubmittal of information by an applicant on an incomplete application will begin the process described in paragraph ~~(f)~~ (b)(i)(A) of this section.

(from Chapter 16, Section 6(h) (iii) 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~~ 21.

(from Chapter 16, Section 6(i)) (iv) 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.

(c) For Class V wells that require a General Permit, the following are applicable:

(from Chapter 16, Section 6(c)) (i) In order to be covered by a general permit, an operator must submit all information required in Section ~~6(c)(i)(ii), and (iii)~~ 9 (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)~~ 6 (f) (xiv) and shall be certified in accordance with Section ~~6 (c)(xii)~~ 6 (f) (xv). 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.

(from Chapter 16, Section 6(b)) (ii) 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.

(from Chapter 16, Section 6(d)) (iii) 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)~~ 7 (d) (vii). Any such modification must cover all persons covered by the permit.

(from Chapter 13, Section 8) (d) Permit modification, denial, revocation, termination and transfer.

(from Chapter 13, Section 8(a) and Chapter 16(b)(iii)) (i) Permits may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee or (from Chapter 13, Section 8(a)) licensee) (from Chapter 13, Section 8(a) and Chapter 16(b)(iii)) or upon the administrator's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in ~~(from Chapter 13, Section 8(a)) Section 5 (b) (vi) of this chapter~~ this section. All requests shall be in writing and shall contain facts or reasons supporting the request.

~~(from Chapter 16, Section 5(b)(iii) 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.~~

(from Chapter 13, Section 8(b)) (ii) 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.

~~(from Chapter 13, Section 8(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.~~

(from Chapter 16, Section 5(b)(vii)) (iii) If the administrator tentatively decides to modify or revoke and reissue a permit, a draft permit 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 require the submission of a new application.

~~(from Chapter 13, Section 8, (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.~~

(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 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 reissuance proceeding, the permittee shall comply with all conditions of the existing permit until a new final permit is issued.

(v) Proposed permit (from Chapter 16, Section 5(b)(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~~ 21.

(from Chapter 13, Section 8(c)) (vi) For Class I wells ~~The~~ the administrator **shall** modify a permit or license when:

(from Chapter 13, Section 8(c)(i)) (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; or

(from Chapter 13, Section 8(c)(ii)) (B) Any modification in the operation of the facility is capable of causing or increasing pollution in excess of applicable standards or permit conditions.

(from Chapter 13, Section 8(c)(iii)) (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;

(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;

(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

(from Chapter 13, Section 8(c)(vi)) (F) Modification is necessary to comply with applicable statutes, standards or regulations.

(vii) For Class V wells (from Chapter 16, Section 5(b)(iv)) ~~The~~ the administrator **may** modify a permit when:

(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;

(from Chapter 16, Section 5(b)(iv)(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;

(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;

(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;

(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

(from Chapter 16, Section 5(b)(iv)) (F) Modification is necessary to comply with applicable statutes, standards or regulations.

(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:

(from Chapter 13, Section 8(d)(i) and Chapter 16, Section5(b)(v)(A)) (A) Correct typographical errors;

(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;

(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

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;

(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 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;

(from Chapter 13, Section 8(d)(v) and Chapter 16, Section 5(b)(v)(E)) (E) Change quantities or types of fluids injected ~~which~~ that 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 permit and would not change its classification;

(from Chapter 13, Section 8(d)(vi) and Chapter 16, Section 5(b)(v)(F)) (F) Change construction requirements approved by the administrator pursuant to department rules and regulations provided that any such alteration shall comply with the requirements of this chapter; or

(from Chapter 13, Section 8(d)(vii) and Chapter 16, Section 5(b)(v)(G)) (G) Amend an abandonment plan.

(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:

(from Chapter 13, Section 7(a)(i)) (A) The application is incomplete; or

(from Chapter 13, Section 7(a)(ii)) (B) Other justifiable reasons necessary to carry out the provisions of the Wyoming Environmental Quality Act.

(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 Environmental Quality Act.

(x) For Class I wells (from Chapter 13, Section 7(b)) ~~The~~ the administrator **shall** deny a permit for any of the following reasons:

(from Chapter 13, Section 7(b)(i)) (A) The project, if constructed and/or operated, will cause violation of applicable state surface or groundwater standards;

(from Chapter 13, Section 7(b)(ii)) (B) The application contains a proposed construction or operation which does not meet the requirements of this chapter; or

(from Chapter 13, Section 7(b)(iii)) (C) The application does not provide documentation to comply with financial responsibility requirements of Section ~~17~~ 19.

(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.

(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 ~~19~~ 21.

~~(from Chapter 16, Section 5(b) Permit processing procedures applicable to all Class V facilities, individual and general permits.~~

(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:

(from Chapter 16, Section 5(b)(i)(A)) (A) The application is incomplete;

(from Chapter 16, Section 5(b)(i)(B)) (B) The project, if constructed and/or operated, will cause violation of applicable state surface or groundwater standards;

(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;

(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

(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.

(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.

~~(from Chapter 13, Section 8(e)) The administrator may revoke a permit for the following reasons:~~

(from Chapter 16, Section 5(b)(vi)) (xii)The administrator may revoke and reissue or terminate a permit for any of the following reasons:

(from Chapter 13, Section 8(e)(i) and Chapter 16, Section 5(b)(vi)(A)) (A) Noncompliance with terms and conditions of the permit;

(from Chapter 13, Section 8(e)(ii) and Chapter 16, Section 5(b)(vi)(B))
(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

(from Chapter 13, Section 8(e)(iii) and Chapter 16, Section 5(b)(vi)(C))
(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.

~~(from Chapter 16, Section 5(b)(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.~~

(from Chapter 13, Section 8(f)) (xiii) The administrator may modify a permit or license to resolve issues that could lead to the revocation or consider any of the reasons in the preceding paragraph 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.

(from Chapter 13, Section 8(i)) (xiv) ~~Permits will be~~ Permits for Class I wells will be automatically terminated after closure and release of the financial responsibility requirements of Section ~~17~~ 19 by the department.

(from Chapter 13, Section 8(k) and Chapter 16, Section 5(b)(x)) (xv) Transfer of a permit is allowed only upon approval by the administrator. (from chapter 16, Section 5(b)(x)) When a permit transfer occurs pursuant to this section, the permit rights of the previous permittee will automatically terminate.

~~(from Chapter 13, Section 8(k)(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;~~

(from Chapter 16, Section 5(b)(x)(A)) (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.

(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 conditions of the permit, unless the transferee agrees to bring the facility back into compliance with the permit.

~~(from Chapter 13, Section 8(j)) When a permit transfer occurs pursuant to this section, the past permit will automatically terminate.~~

(from Chapter 13, section 8(k)(iv)) (C) 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~~ 21 for any modification other than a minor modification defined by this section.

(from Chapter 13, Section 8(k(iv)) (D) The potential transferee shall file a statement of qualifications to hold a permit with the administrator.

~~(from Chapter 13, Section 8(l)) Proposed modifications, revocations or terminations are subject to the public notice and hearing requirements outlined in Section 19 of this chapter.~~

**Section 8. Records and Reports.**

~~(from Chapter 16, Section 5(d)) Records and reports required for general and individual permits.~~

(from Chapter 13, Section 15(a)) (a) Monitoring reports required by the permit shall be submitted to the administrator.

(from Chapter 13, Section 9(d)(xxviii)) (b) Monitoring results shall be reported in the annual reports unless otherwise specified.

(from Chapter 13, Section 15(b) and Chapter 16, Section 5(d)(i)) (c) 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.

(from Chapter 13, Section 15(d) and Chapter 16, Section 5(d)(iii)) (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.

(from Chapter 13, Section 15 (c) and Chapter 16, Section 5(d)(ii)) (e) ~~(from Chapter 13, Section 15(c) Quarterly and annual reports~~ (Chapter 16, Section 5(d)(ii)) Routine periodic reports (from Chapter 13, Section 15 (c) and Chapter 16, Section 5(d)(ii)) required by the permit shall be submitted to the administrator within thirty (30) days following the end of the period covered in the report. ~~(from Chapter 13, Section 15 (d))Reports shall include the following information:~~ (Chapter 16, Section 5(d)(ii))Reports shall include, if applicable, the following information:

(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 of the total volume of fluid injected for the period covered by the report, the year to date, and (from Chapter 13, Section 15 (c)(iv)) the life of the well to date.

(from Chapter 13, Section 15 (c)(v) and Chapter 16, Section 5(d)(i)(B)) (ii) An analysis of the physical, chemical and other relevant characteristics of the injected fluid.

(from Chapter 13, Section 15 (c)(iii)) (iii) A complete description of any event that triggered any alarm or shutdown the well, and the response taken.

(from Chapter 13, Section 15 (c)(ii)) (iv) A complete description of any event where maximum annular or injection pressures, as specified in the permit, were exceeded.

(from Chapter 13, Section 15 (c)(i)) (v) The average, maximum and minimum injection pressures for each month.

(from Chapter 13, Section 15 (c)(vi)) (vi) Any well workover.

(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 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.

(from Chapter 13, Section 15 (f)) (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.

(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 following ~~(from Chapter 13, Section 15(g) well closure, at which time the operator shall deliver the records to the administrator.~~ facility closure.

**Section 9. Individual Permits for Class V Facilities.**

(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 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, shall obtain an individual permit under this section.

(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.

(from Chapter 16, Section 6(c)) (c) A complete application for a Class V facility individual permit shall include:

(from Chapter 16, Section 6(c)(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.

(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, public or other entity.

(from Chapter 16, Section 6(c)(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.

(from Chapter 16, Section 6(c)(iv)) (iv) A calculation of the area of review ~~to include~~ including:

(from Chapter 16, Section 6(c)(iv)(A)) (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.

(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 surficial geology, geologic structure, and hydrogeology in the area.

(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 area of review in accordance with Section 15 of this chapter.

(from Chapter 16, Section 6(c)(xi)) (xi) All applications for permits, reports, or 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 general 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 and 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 general permit;

(from Chapter 16, Section 7(a)(ii)) (ii) Submit an application and receive an individual permit under this chapter.

(from Chapter 16, Section 7(a)(iii)) (iii) Continue to be covered by a permit issued pursuant to Chapter 9 of these regulations.

(from Chapter 16, Section 7(a)) (iv) Abandon the facility in accordance with Section ~~12~~ 18.

(from Chapter 16, Section 7(e)) (b) General permits shall also include:

(from Chapter 16, Section 7(e)(i)) (i) The permit conditions required in Section ~~5 (c) (i)~~ 6(h)(iii).

(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:

(from Chapter 16, Section 7(e)(ii)(A)) (A) All water supply wells and the uses of each respective well;

(from Chapter 16, Section 7(e) )(ii)(B)) (B) All property boundaries and land uses;

(from Chapter 16, Section 7(e) )(ii)(C)) (C) All surface water bodies or springs; and

(from Chapter 16, Section 7(e) )(ii)(D)) (D) All known sources of groundwater contamination or pollution.

(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.

(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;

(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.

(from Chapter 16, Section 7(e)(v)) (v) A requirement that the operator submit 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.

(from Chapter 16, Section 7(f)) (c) 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 this section indicates that the general permit would not be protective of groundwater in that specific case. Any operator covered by a general permit may at any time apply for and obtain an individual permit for the same facility. Once issued, an individual permit will replace coverage by the general permit for that facility.

(from Chapter 16, Section 7(g)) (d) 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~~ 22 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.

(from Chapter 16, Section 7(h)) (e) Operators of new injection facilities who believe that their facility may be covered by a general permit in class 5C6 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 5C3.

(from Chapter 16, Section 7(i)) (f) 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.

(from Chapter 16, Section 7(j)) (g) 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.

(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.

(from Chapter 16, Section 7(l)(iii)) (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 11. Permit by Rule for Class V Facilities.**

(from Chapter 16, Section 8) The types of Class V facilities listed in this section represent 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~~ 13 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.

(from Chapter 16, Section 8(a)) (a) A facility permitted by rule under this section shall meet the following conditions:

(from Chapter 16, Section 8(a)(i)) (i) In addition to the information listed in ~~Section 6 (c)(i), (ii) and (iii)~~ Section 9 (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.)

(from Chapter 16, Section 8(a)(i)(A)) (A) The location of the facility, either a complete legal description or latitude and longitude preferably within a (ten) 10 meter accuracy.

(from Chapter 16, Section 8(a)(i)(B)) (B) Type and general description of the quality of the injected fluid.

(from Chapter 16, Section 8(a)(i)(C)) (C) The disposal capacity of the facility in gallons per day.

(from Chapter 16, Section 8(a)(i)(D)) (D) Depth of injection zone.

(from Chapter 16, Section 8(a)(i)(E)) (E) Whether or not the facility is operating, temporarily abandoned, or permanently abandoned.

(from Chapter 16, Section 8(a)(ii)) (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~~ 13 of this chapter.

(from Chapter 16, Section 8(a)(iii)) (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.

(from Chapter 16, Section 8(a)(iv)) (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.

(from Chapter 16, Section 8(b)) (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.

(from Chapter 16, Section 8(c)) (c) The following classes of facilities are permitted by rule under this section:

(from Chapter 16, Section 8(c)(i)) (i) 5B2 facilities, except any facility which injects wastewater or contains polluted groundwater or surface water in concentrations above the receiver use standards contained in Chapter 8, Water Quality Rules and Regulations.

(from Chapter 16, Section 8(c)(ii)) (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 an Underground Source of Drinking Water, or a Class II permit issued by the Wyoming Oil and Gas Conservation Commission if they inject into a Class VI aquifer.

(from Chapter 16, Section 8(c)(iii)) (iii) 5B4 facilities, provided that the water injected will not cause a groundwater standards violation under Chapter 8, Water Quality Rules and Regulations.

(from Chapter 16, Section 8(c)(iv)) (iv) 5B6 and 5B7 facilities;

(from Chapter 16, Section 8(c)(v)) (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.

(from Chapter 16, Section 8(c)(vi)) (vi) 5E3 facilities which were originally permitted under a small wastewater system permit issued by the Department of Environmental Quality or a local 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.

(from Chapter 16, Section 8(c)(vii)) (vii)5F1 facilities, provided that information 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 provided the necessary information shall be valid until the facility is properly closed pursuant to these regulations or until a permit has been issued or denied under this chapter.

(from Chapter 16, Section 8(e)) (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:

(from Chapter 16, Section 8(e)(i)) (i) Analysis of injected fluids and periodic submission of reports of such monitoring.

(from Chapter 16, Section 8(e)(ii)) (ii) Groundwater monitoring and periodic submission of reports of such monitoring.

(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 of groundwater.

(from Chapter 16, Section 8(f)) (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.

(from Chapter 16, Section 8(g)) (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~~ paragraph (e) of this section indicates that the permit 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 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~~ 6 (h)(i) and 6 (h)(ii) of this chapter.

(from Chapter 13, Section 11(b)) (b) All well materials shall be compatible with the wastes that may be contacted. The applicant shall submit data necessary to document compatibility.

(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:

(from Chapter 13, Section 11(c)(i)) (i) Depth to the injection zone.

(from Chapter 13, Section 11(c)(ii)) (ii) Injection pressure, external pressure, internal pressure, and axial loading.

(from Chapter 13, Section 11(c)(iii)) (iii) Hole size.

(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).

(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.

(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:

(from Chapter 13, Section 11(d)(iii)(A)) (A) Of sufficient quantity and quality 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.

(from Chapter 13, Section 11(d)(iv)) (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.

(from Chapter 13, Section 11(d)(v)) (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.

(from Chapter 13, Section 11(d)(vi)) (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.

(from Chapter 13, Section 11(d)(vii)) (vii) For tubing and packer, the applicant shall provide all information necessary to make a determination of adequacy based on these factors:

(from Chapter 13, Section 11(d)(vii)(A)) (A) Depth of setting.

(from Chapter 13, Section 11(d)(vii)(B)) (B) Characteristics of the injection fluid, including chemical content, corrosiveness, temperature, 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)) (E) Rate (intermittent or continuous), temperature, and volume of injected fluid.

(from Chapter 13, Section 11(d)(vii)(F)) (F) Size of casing; and

(from Chapter 13, Section 11(d)(vii)(G)) (G) Tubing tensile, burst, and collapse strengths.

(from Chapter 13, Section 11(d)(viii)) (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~~ 16 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:

(from Chapter 13, Section 11(d)(viii)(A)) (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.

(from Chapter 13, Section 11(d)(viii)(B)) (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:

(from Chapter 13, Section 11(d)(viii)(B)(I)) (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.

(from Chapter 13, Section 11(d)(viii)(B)(II)) (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.

(from Chapter 13, Section 11(d)(viii)(B)(III)) (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.

(from Chapter 13, Section 11(d)(viii)(C)) (C) A mechanical integrity test as described in Section ~~9~~ 6(h)(i) of this chapter.

(from Chapter 13, Section 11(d)(viii)(D)) (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.

(from Chapter 13, Section 11(d)(ix)) (ix)The fluid temperature, pH, conductivity, pressure, and static fluid level of the discharge zone shall be recorded during construction.

(from Chapter 13, Section 11(d)(x)) (x) At a minimum, the following information about the injection and confining zones shall be calculated or determined during construction:

(from Chapter 13, Section 11(d)(x)(A)) (A) The physical and chemical characteristics of the rock itself; and

(from Chapter 13, Section 11(d)(x)(B)) (B) Physical and chemical characteristics of the formation fluids.

(from Chapter 13, Section 11(d)(x)(C)) (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.

(from Chapter 13, Section 11(e)) (e) Fluid seals are not allowed in place of a packer in any Class I well.

**Section 13. Construction and Operation Standards for Class V Wells.**

(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.

(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.

(from Chapter 16, Section 10)(c)) (c) All heating and cooling facilities (5A1, 5A2 and 5A3) shall include:

(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.

(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.

(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.

(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.

(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.

(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.

(from Chapter 16, Section 10)(d)) (d) All mining, sand and backfill facilities (5B1) shall include:

(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.

(from Chapter 16, Section 10)(d)(ii)) (ii) Provision for controlling the type of material injected and to insure that no hazardous waste is injected.

(from Chapter 16, Section 10)(d)(iii)) (iii) Provision for leak detection in all surface piping.

(from Chapter 16, Section 10)(d)(iv)) (iv) Provision for insuring that the backfill remains within the permitted area of injection.

(from Chapter 16, Section 10)(d)(v)) (v) Provision to insure that the injection does not cause a groundwater standards violation for the class of use of the receiver.

(from Chapter 16, Section 10)(e)) (e) All beneficial use injection facilities (5B2, 5B3, 5B4, 5B5, 5B6, and 5B7) shall include:

(from Chapter 16, Section 10)(e)(i)) (i) Plans to insure that contaminants do not enter the injection stream.

(from Chapter 16, Section 10)(e)(ii)) (ii) Information to show that the injection will accomplish the desired goal stated in the application.

(from Chapter 16, Section 10)(e)(iii)) (iii) Target restoration values for the groundwater in the affected area being remediated for 5B5 facilities.

(from Chapter 16, Section 10)(f)) (f) All commercial and industrial Class V facilities (5C1, 5C2, 5C3 and 5C4) shall:

(from Chapter 16, Section 10)(f)(i)) (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 water standard found in 40 CFR 141 (as of June 6, 2001), whichever is more stringent;

(from Chapter 16, Section 10)(f)(ii)) (ii) Conform to applicable construction standards found in Chapter 25, Wyoming Water Quality Rules and Regulations; and

(from Chapter 16, Section 10)(f)(iii)) (iii) Include, at a minimum, annual sampling of the waste injected as part of the monitoring plan for the facility.

(from Chapter 16, Section 10)(g)) (g) When a 5C3 facility receiving slaughter house wastes can demonstrate that no violations of groundwater standards will occur, the facility shall be:

(from Chapter 16, Section 10)(g)(i)) (i) Designed for the following minimum disposal capacities:

(from Chapter 16, Section 10)(g)(i)(A)) (A) 300 gallons per day for plant cleanup plus.

(from Chapter 16, Section 10)(g)(i)(B)) (B) 25 gallons per head of cattle slaughter capacity.

(from Chapter 16, Section 10)(g)(i)(C)) (C) 40 gallons per head of hog slaughter capacity.

(from Chapter 16, Section 10)(g)(i)(D)) (D) 35 gallons per head of sheep slaughter capacity.

(from Chapter 16, Section 10)(g)(i)(E)) (E) Appropriate capacity for any other species slaughtered on a per head basis.

(from Chapter 16, Section 10)(g)(ii)) (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.

(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.

(from Chapter 16, Section 10)(h)) (h) All drainage facilities (those with the code number 5D on Appendix ~~A~~ C) shall include:

(from Chapter 16, Section 10)(h)(i)) (i) A plan to preclude the inadvertent introduction of contaminants into the wastewater stream.

(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.

(from Chapter 16, Section 10)(h)(iii)) (iii) Maps showing the area where runoff will be transported to the drainage facility.

(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:

(from Chapter 16, Section 10)(i)(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 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.

(from Chapter 16, Section 10)(i)(iii)) (iii) The flow capacity requirements for drainage from a fully enclosed dairy or feeding operation shall be as follows:

(from Chapter 16, Section 10)(i)(iii)(A)) (A) 20 gallons per day per animal up to 50 pounds.

(from Chapter 16, Section 10)(i)(iii)(B)) (B) 100 gallons per day per animal up to 500 pounds.

(from Chapter 16, Section 10)(i)(iii)(C)) (C) 200 gallons per day per animal over 500 pounds.

(from Chapter 16, Section 10)(i)(iv)) (iv) The subsurface fluid distribution system shall be designed in accordance with general design requirements found in Chapter 25.

(from Chapter 16, Section 10)(j)) (j) All sewage disposal (5E) facilities shall:

(from Chapter 16, Section 10)(j)(i)) (i) Conform to applicable construction standards found in Chapter 25, Wyoming Water Quality Rules and Regulations;

(from Chapter 16, Section 10)(j)(ii)) (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

(from Chapter 16, Section 10)(j)(iii)) (iii) Be designed for the maximum daily peak flow determined from ~~Table 1~~ Tables 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 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 waste were delivered to a single point of discharge.

(from Chapter 16, Section 10)(k)) (k) All ~~aquiculture~~ aquaculture 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.

(from Chapter 16, Section 10)(l)) (l) All domestic wastewater treatment plant disposal facilities (5E4) shall also include:

(from Chapter 16, Section 10)(l)(i)) (i) Provisions for filtering of the waste and disinfection of the injectate.

(from Chapter 16, Section 10)(l)(ii)) (ii) An environmental monitoring program, including pre-discharge, operational monitoring, and post discharge monitoring.

(from Chapter 16, Section 10)(l)(iii)) (iii) Monitoring of the injectate on at least a weekly basis for ~~N~~nitrate as N, ~~A~~ammonia as N, and coliform bacteria.

(from Chapter 16, Section 10)(l)(iv)) (iv) Design to prevent groundwater standards violations as defined by Chapter 8, Water Quality Rules and Regulations.

(from Chapter 16, Section 10)(l)(v)) (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 facilities whenever the point of injection is not the point of compliance.

(from Chapter 16, Section 10)(l)(vi)) (vi) Requirements for the submission, approval and conformance with an operational and maintenance manual.

(from Chapter 16, Section 10)(m)) (m) All cathodic protection facilities (5F1) shall include:

(from Chapter 16, Section 10)(m)(i)) (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 coke breeze. 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.

(from Chapter 16, Section 10)(m)(ii)) (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.

(from Chapter 16, Section 10)(m)(iii)) (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.

(from Chapter 16, Section 10)(m)(iv)) (iv) Surface access to the anode shall be kept sealed and locked at all times when the anode is not actually being serviced.

(from Chapter 16, Section 10)(m)(v)) (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 to installation.

(from Chapter 16, Section 10)(m)(vi)) (vi) If it becomes necessary to wet any anode installed under this section, 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 water for approval.

(from Chapter 16, Section 10)(m)(vii)) (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.

(from Chapter 16, Section 10)(m)(viii)) (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.

(from Chapter 16, Section 10)(n)) (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.

(from Chapter 16, Section 10)(o)) (o) Class 5C6 and 5E5 facilities shall meet the construction standards and separation distances appropriate for the design flow as shown in Chapter 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 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.

(from Chapter 16, Section 10)(p)(iii)) (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.

(from Chapter 16, Section 10)(p)(iv)) (iv) Provide for injection at a pressure of less than the fracture pressure of the receiver.

(from Chapter 16, Section 10)(p)(v)) (v) Provide for monitoring of the quality of the injected water on a periodic basis.

(from Chapter 16, Section 10)(p)(vi)) (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.

(from Chapter 16, Section 10)(p)(vii)) (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.**

(from Chapter 13, Section 12(a)) (a) All Class I wells shall be situated such that they inject into a formation that is beneath the lowermost Under- ground 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.

(from Chapter 13, Section 12(b)) (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:

(from Chapter 13, Section 12(b)(i)) (i) An analysis of the structural and ~~strati- graphic~~ stratigraphic geology, hydrogeology, and ~~the~~ seismicity of the region.

(from Chapter 13, Section 12(b)(ii)) (ii) An analysis of the local geology and ~~hydro- geology~~ hydrogeology of the well site, including, at a minimum, detailed information regarding the stratigraphy, structure, and rock properties, aquifer hydrodynamics, and mineral resources.

(from Chapter 13, Section 12(b)(iii)) (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.

(from Chapter 13, Section 12(c)) (c) The operator shall demonstrate to the satisfaction of the administrator that:

(from Chapter 13, Section 12(c)(i)) (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

(from Chapter 13, Section 12(c)(ii)) (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.

(from Chapter 13, Section 12(c)(iii)) (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

(from Chapter 13, Section 12(c)(iv)) (iv) There are no underground sources of drinking waters present.

(from Chapter 13, Section 12(d)) (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 15. Environmental Monitoring Program.**

~~(from Chapter 13, Section 13(a)) (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.~~

(from Chapter 16, Section 11)(a)) (a) The monitoring program shall be adequate to ensure knowledge of migration and behavior of the discharge in the receiver.

(from Chapter 13, Section 13(a)(i) and Chapter 16, Section 11)(a)(i)) (i) Monitoring may be required for any circumstance where groundwaters of the state could be affected (~~from Chapter 16, Section 11)(a)(i)) by a Class V facility~~.

(from Chapter 13, Section 13(a)(ii)) and Chapter 16, Section 11)(a)) (ii) The extent and design of a monitoring system shall be sufficient to deal with the pollution potential of the proposed discharge.

(from Chapter 16, Section 11)(a)(iii)) (iii) Before construction or installation of a (new) Class I (from Chapter 16, Section 11)(a)(iii)) or V facility, a monitoring program, when required, shall be adequate to establish baseline conditions of the receiver.

(from Chapter 13, Section 13(b) and Chapter 16, Section 11)(b)) (b) The monitoring program shall consist of any or all of the following:

(from from Chapter 13, Section 13(b)(i) and Chapter 16, Section 11)(b)(i)) (i) Pre-discharge or pre-operational monitoring.

(from Chapter 13, Section 13(b)(ii) and from Chapter 16, Section 11)(b)(ii)) (ii) Operational monitoring.

(from from Chapter 13, Section 13(b)(iii) and Chapter 16, Section 11)(b)(iii)) (iii) Post-discharge or post-operational monitoring.

(from from Chapter 13, Section 13(b)(iv) and Chapter 16, Section 11)(b)(iv)) (iv) Record keeping and reporting.

(from from Chapter 13, Section 13(b)(v) and Chapter 16, Section 11)(b)(v)) (v) Such additional requirements established by the administrator to meet the purposes of the ~~(from Chapter 16, Section 11)(b)(v)) Environmental Quality Act~~ Wyoming Environmental Quality Act and these regulations.

(from Chapter 13, Section 13(c) and Chapter 16, Section 11)(c)) (c) Each monitoring program shall include maps and cross-sections, where appropriate, showing the location, lithology, and screening interval of each monitoring site.

(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 monitoring equipment.

(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:

(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~~

(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.

(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.

(from Chapter 13, Section 13(i)) (A) The operator shall conduct continuous or periodic monitoring of selected parameters as required by the administrator.

(from Chapter 13, Section 13(j)) (B) The operator shall ~~assure~~ ensure that the plan remains accurate and the analyses remain representative.

(f) Requirements for Class I Wells:

(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.

(from Chapter 13, Section 13(f)) (ii) When prescribing a monitoring system, the administrator may also require:

(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.

(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 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 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 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.

(from Chapter 13, Section 13(l)) (iv) In addition to the above-mentioned requirements, operators of Class I hazardous waste wells shall also conduct mechanical integrity testing as follows:

(from Chapter 13, Section 13(l)(i)) (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 whenever there has been a well workover.

(from Chapter 13, Section 13(l)(ii)) (B) The bottom-hole cement shall be tested by means of an approved radioactive tracer survey annually.

(from Chapter 13, Section 13(l)(iii)) (C) 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.

(from Chapter 13, Section 13(l)(iv)) (D) 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~~ factors which limit the test's reliability.

(from Chapter 13, Section 13(l)(v)) (E) 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)~~ 6(h)(i)(B) of this chapter.

(from Chapter 13, Section 13(l)(vi)) (F) 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.

(g) Requirements for Class V Wells:

(from Chapter 16, Section 11(f)) (i) 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.

(from Chapter 16, Section 11(f)(i)) (A) 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.

(from Chapter 16, Section 11(f)(ii)) (B) For facilities where the point of compliance is at one or more down gradient 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 surface water. Where necessary to protect existing or future uses,

permit limitations may be established at the point of compliance which are more stringent than the class of use standard.

(from Chapter 16, Section 11(f)(iii)) (C) Facilities where subsurface treatment is anticipated may be required to monitor the injected fluid at the point of injection. Permit limits may be established at the point of injection which exceeds 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.

(from Chapter 16, Section 11(g)) (h) 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.

(from Chapter 16, Section 11(h)) (i) 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 RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September, 1986, unless alternate methods and procedures are approved by the administrator.

(from Chapter 16, Section 11(i)) (j) Analysis of all samples shall be accomplished pursuant to Chapter 8, Water Quality Rules and Regulations, Sections 7 and 8.

**Section 16. Quality Assurance and Quality Control for Sample Collection and Analysis.**

(from Chapter 13, Section 14 (a)) (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.

(from Chapter 13, Section 14(b)) (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 RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September,1986, unless alternate methods and procedures are approved by the administrator.

(from Chapter 13, Section 14(c)) (c) Analysis of all samples shall be accomplished pursuant to Chapter 8, Water Quality Rules and Regulations, Sections 7 and 8.

**Section 17. Closure of Hazardous Waste Wells.**

(from Chapter 13, Section 16(a)) (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.

(from Chapter 13, Section 16(a)(i)) (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.

(from Chapter 13, Section 16(a)(ii)) (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.

(from Chapter 13, Section 16(a)(iii)) (iii) The plan shall ~~assure~~ ensure financial responsibility as required in Section ~~17~~ 19 of this chapter.

(from Chapter 13, Section 16(a)(iv)) (iv) The closure plan shall include the following information:

(from Chapter 13, Section 16(a)(iv)(A)) (A) The type and number of plugs to be used.

(from Chapter 13, Section 16(a)(iv)(B)) (B) The placement of each plug including the elevation of the top and bottom of each plug.

(from Chapter 13, Section 16(a)(iv)(C)) (C) The type, ~~and~~ grade, and quantity of material to be used in plugging.

(from Chapter 13, Section 16(a)(iv)(D)) (D) The method of placement of the plugs.

(from Chapter 13, Section 16(a)(iv)(E)) (E) Any proposed test or measure to be made.

(from Chapter 13, Section 16(a)(iv)(F)) (F) The amount, size, and location (by depth) of casing and any other materials to be left in the well;

(from Chapter 13, Section 16(a)(iv)(G)) (G) The method and location where casing is to be parted, if applicable.

(from Chapter 13, Section 16(a)(iv)(H)) (H) The procedure to be used to meet the requirements of paragraph (d)(5) of this section;

(from Chapter 13, Section 16(a)(iv)(I)) (I) The estimated cost of closure.

(from Chapter 13, Section 16(a)(iv)(J)) (J) Any proposed test or measure to be made.

(from Chapter 13, Section 16(a)(v)) (v) Post-closure plans shall include the following information:

(from Chapter 13, Section 16(a)(v)(A)) (A) The pressure in the injection zone before injection began.

(from Chapter 13, Section 16(a)(v)(B)) (B) The anticipated pressure in the injection zone at the time of closure.

(from Chapter 13, Section 16(a)(v)(A)) (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.

(from Chapter 13, Section 16(a)(v)(A)) (D) Predicted position of the waste front at closure.

(from Chapter 13, Section 16(a)(v)(A)) (E) The status of any required cleanups; and

(from Chapter 13, Section 16(a)(v)(A)) (F) The estimated cost of proposed post-closure care.

(from Chapter 13, Section 16(a)(vi)) (vi) The administrator may modify a closure plan in accordance with the procedures outlined in Section ~~8~~ 7 of this chapter governing modification of permits.

(from Chapter 13, Section 16(a)(vii)) (vii) An operator of a Class I hazardous waste injection well who ceases injection temporarily, may keep the well open provided:

(from Chapter 13, Section 16(a)(vii)(A)) (A) ~~He~~ The operator receives authorization from the administrator.

(from Chapter 13, Section 16(a)(vii)(A)) (B) ~~He~~ The operator has described actions or procedures, satisfactory to the administrator, that the operator will take to ensure that the well will not endanger Under- ground 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.

(from Chapter 13, Section 16(a)(viii)) (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.

(from Chapter 13, Section 16(b)) (b) The operator shall notify the administrator at least sixty (60) days prior to closure of a well. The administrator may allow a closure period of less than sixty (60) days.

(from Chapter 13, Section 16(c)) (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.

(from Chapter 13, Section 16(c)(i)) (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:

(from Chapter 13, Section 16(c)(i)(A)) (A) A statement that the well was closed in accordance with the closure plan previously submitted and approved by the administrator.

(from Chapter 13, Section 16(c)(i)(B)) (B) Where actual closure differed from the plan previously submitted, a written statement specifying the differences between the previous plan and the actual closure.

(from Chapter 13, Section 16(d)) (d) Standards for well closure.

(from Chapter 13, Section 16(d)(i)) (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.

(from Chapter 13, Section 16(d)(i)i) (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.

(from Chapter 13, Section 16(d)(iii)) (iii) Prior to well closure, the well shall be flushed with a buffer fluid.

(from Chapter 13, Section 16(d)(iv)) (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.

(from Chapter 13, Section 16(d)(v)) (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.

(from Chapter 13, Section 16(d)(vi)) (vi)Each plug used shall be appropriately tagged and tested for seal and stability before closure is completed.

(from Chapter 13, Section 16(d)(vii)) (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.

(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 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 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 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~~ 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 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:

(from Chapter 13, Section 16(f)(i)) (i) The fact that the land in question has been used to manage hazardous waste.

(from Chapter 13, Section 16(f)(ii)) (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~~ 8 to which it was submitted.

(from Chapter 13, Section 16(f)(iii)) (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 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 be demonstrated to the satisfaction of the administrator that:

((from Chapter 16, Section 12(a)(i)) (i) No hazardous waste has ever been discharged through the facility.

((from Chapter 16, Section 12(a)(ii)) (ii) No radioactive waste has ever been 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 are 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 accumulated in the septic tanks, holding tanks, lift stations, or other waste handling structures which shows 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 the immediate area of the facility shows that 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.

((from Chapter 16, Section 12(b)(iii)) (iii) Some other method is determined to be acceptable to the administrator which demonstrates compliance with Chapter 8 of these regulations and prevents the movement 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 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 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.

((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 waste has been disposed of into the facility. After they have fulfilled their useful purpose, they shall be abandoned by filling all breather 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 also have 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.

((from Chapter 16, Section 12(e)) (e) Prior to abandoning any class 5C4 automotive waste disposal facility, the operator shall provide ~~30~~ thirty (30) days notice to the administrator.

**Section 19. Financial responsibility.**

(from Chapter 13, Section 17(a)) (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.

from Chapter 13, Section 17(b)) (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.

from Chapter 13, Section 17(c)) (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.

from Chapter 13, Section 17(d)) (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.

from Chapter 13, Section 17(e)) (e) The owner or operator of a well injecting hazardous waste must comply with the financial responsibility requirements of 40 CRF 144 Subpart F.

**Section 20. Prohibitions.**

~~(from Chapter 13, Section 18(a)) (a) No person, except when authorized by a permit issued pursuant to the Wyoming Environmental Quality Act and this chapter, shall:~~

~~(from Chapter 13, Section 18(a)(i)) (i) Cause, threaten or allow the discharge of any pollution or wastes into any groundwaters of the State;~~

~~(from Chapter 13, Section 18(a)(ii)) (ii) Alter the physical, chemical, radiological, biological or bacteriological properties of the waters of the state; or~~

~~(from Chapter 13, Section 18(a)(iii) Construct, install, or operate any dis- charge system capable of causing or contributing to pollution of groundwaters of the State.~~

(from Chapter 16, Section 9 (a)) (a) In addition to the requirements in W.S. 35-11-301 (a), no person shall:

(from Chapter 13, Section 18(b)(i) and Chapter 16, Section 9 (a)(i)) (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.

(From Chapter 13, Section 18(b)(iii) and Chapter 16, Section 9 (a)(iii)) (ii) Construct, install, modify or improve an authorized injection facility except in compliance with the permit 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, Section 18, (b)(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:

(from Chapter 13, Section 18(b)(ii)) (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.

(from Chapter 13, Section 18(b)(ii)) (B) No uncased hole may be used as a conduit 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 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.

(from Chapter 13, Section 18(d)) (ii) 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.

(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 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.

(from Chapter 13, Section 18(f)) (iv) 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)~~ paragraphs (ii) and (iii) above.

(from Chapter 13, Section 18(d)) (v) 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:

(A) 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.

(B) 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.

(d) Requirements for Class V Wells:

(from Chapter 16, Section 9(a)(ii)) (i) No person shall ~~Discharge~~ discharge to any zone except the authorized discharge zone as described in the permit.

(from Chapter 16, Section 9(b)) (ii) The construction of any Class 5C4 facility after the effective date of these regulations is prohibited.

(from Chapter 16, Section 9(c)) (iii) No person shall inject any hazardous waste which has been banned from land disposal pursuant to ~~Chapter 13~~ Chapter 1, Wyoming Hazardous Waste Rules and Regulations unless the disposal conforms to that chapter.

(from Chapter 16, Section 9(d)) (iv) No drainage facility, subclass 5D1 through 5D5 shall be constructed so as to directly receive any waste other than natural precipitation or natural groundwater unless permitted under an individual permit.

(from Chapter 16, Section 9(e)) (v) 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.

(from Chapter 16, Section 9(f)) (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 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.

(from Chapter 16, Section 9(g)) (vii) No wastewater produced by electric power generation from geothermal fluids 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~~ regulations in this chapter.

(from Chapter 16, Section 9(h)) (viii) 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~~ regulations in this chapter.

(from Chapter 16, Section 9(i)) (ix) 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 thirty (30) days in advance.

(from Chapter 16, Section 9(j)) (x) 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.

(from Chapter 16, Section 9(k)) (xi) An operator of a facility which is authorized by rule is prohibited from injection into the facility:

(from Chapter 16, Section 9(k)(i)) (A) Upon failure to submit inventory information prior to construction for facilities constructed after April 14, 1999.

(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.

(from Chapter 16, Section 9(l)) (xii) Pumping domestic sewage out of any Class V facility for any use other than disposal to an approved facility is prohibited.

**Section 21. Public Participation, Public Notice and Public Hearing Requirements.**

~~(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.~~

(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.

(from Chapter 13, Section 19(b)) (b) The administrator shall give public notice for any of the following actions:

~~(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.~~

(from Chapter 13, Section 19(b)(i)) (i) The administrator has prepared a draft permit which is intended for issuance, denial or reissuance.

(from Chapter 13, Section 19(b)(ii)) (ii) The administrator intends to modify a permit.

(from Chapter 13, Section 19(b)(iii)) (iii) The administrator intends to revoke or terminate a permit.

(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.

(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.

~~(from Chapter 16, Section 13(d) Public notice of the preparation of a draft permit shall allow at least 30 days for public 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 draft permit and the two notices may be combined.~~

(from Chapter 13, Section 19(c)) (d) The administrator shall include a thirty (30) day public comment period for any action on items ~~(a)~~ (b)(i), (ii) or (iii) or thirty (30) days notice before any hearing date as part of the public notice. When two notices are required, they may be given at the same time.

~~(from Chapter 13, Section 19(d)) Public notice shall be given by the following methods:~~

(from Chapter 16, Section 13(e)) (e) Public notice shall be given by:

(from Chapter 13, Section 19(d)(i) and Chapter 16, Section 13(e)(i)) (i) ~~By~~ Mailing a copy of the notice to the following persons:

(from Chapter 13, Section 19(d)(i) and Chapter 16, Section 13(e)(i)(A)) (A) The applicant, by certified or registered mail. (from Chapter 16, Section 13(e)(i)(A)) For general permits this includes all persons registered as operators of facilities which the department believes will be covered by the general permit.

(from Chapter 13, Section 19(d)(i)(B) and Chapter 16, Section 13(e)(i)(B)) (B) The U.S. Environmental Protection Agency.

(from Chapter 13, Section 19(d)(i)(D) and Chapter 16, Section 13(e)(i)(C)) (C) Wyoming Game and Fish Department.

(from Chapter 13, Section 19(d)(i)(E) and Chapter 16, Section 13(e)(i)(D)) (D) Wyoming State Engineer.

(from Chapter 13, Section 19(d)(i)(G) and Chapter 16, Section 13(e)(i)(E)) (E) State Historical Preservation Officer.

(from Chapter 13, Section 19(d)(i)(C)) (F) Wyoming Oil and Gas Conservation.

(from Chapter 13, Section 19(d)(i)(F)) (G) Land Quality Division.

(from Chapter 13, Section 19(d)(i) and Chapter 16, Section 13(e)(i)(F)) (H) 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.

(from Chapter 13, Section 19(d)(i) and Chapter 16, Section 13(e)(i)(G)) (I) Any unit of local government having jurisdiction over the area where the facility is proposed to be located.

(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 facility or operation. ~~and~~

~~(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.

(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:

(from Chapter 13, Section 19(e)(i) and Chapter 16, Section 13(f)(i)) (i) Name~~,~~ and address of the department.

(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.

(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.

(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.

(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~~

(from Chapter 13, Section 19(d)(vi) and Chapter 16, Section 13(f)(vi))) (vi) Any additional information considered necessary and proper.

(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:

(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.

(from Chapter 13, Section 19(f) and Chapter 16, Section 13(g)(ii)) (ii) Date, time and place of hearing. ~~and~~

(from Chapter 13, Section 19(f) and Chapter 16, Section 13(g)(iii)) (iii) A brief description of the nature and purpose of the hearing, including applicable rules and procedures.

(from Chapter 13, Section 19(g) and Chapter 16, Section 13(H)) (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 including, but not limited to, permit issuance, denial, modification, revocation and reissuance, termination, or transfer and/or to request a public hearing.

(from Chapter 13, Section 19(h) and Chapter 16, Section 13(i)) (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. (from Chapter 13, Section 19(h)) The department shall provide facilities for inspection and copying of all non-confidential documents. Copying shall be at the expense of the person requesting copies.

(from Chapter 16, Section 13(j) (j) During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing. (from Chapter 13, Section 19(i) and Chapter 16, Section 13(j)) 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.

(from Chapter 13, Section 19(i)(i)) (i) Requests for public hearings based on contested issues may be filed at any stage of the permitting process; and

(from Chapter 13, Section 19(i)(ii)) (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.

~~(from Chapter 13, Section 19(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.~~

(from Chapter 13, Section 19(k) and Chapter 16, Section 13(k)) (k) The administrator shall hold a hearing whenever ~~from Chapter 13, Section 19(k) he~~ the administrator finds, on the basis of requests, a significant degree of public interest in a draft permit. ~~from Chapter 13, Section 19(k) The administrator may hold a hearing at his or her discretion~~ The administrator has the discretion to hold a hearing whenever such a hearing may clarify issues involved in a permit decision.

(from Chapter 13, Section 19(l)) (l) The Council shall hold hearings pursuant to the ~~department~~ Wyoming Department of Environmental Quality Rules of Practice and Procedure.

(from Chapter 13, Section 19(m)) (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 the ~~department~~ Wyoming Department of Environmental Quality Rules of Practice and Procedure.

(from Chapter 16, Section 13(l)) (n) The public comment period shall automatically extend to the close of any public hearing. The administrator may also extend the comment period by so stating at the public hearing.

~~(from Chapter 13, Section 19(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.~~

(from Chapter 16, Section 13(m)) (o) The director shall render a decision on the draft permit within thirty (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.

(from Chapter 13, Section 19(o) and Chapter 16, Section 13(n)) (p) 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:

(from Chapter 13, Section 19(o)(i) and and Chapter 16, Section 13(n)(i)) (i) Specify any changes that have been made to the permit. ~~and~~

(from Chapter 13, Section 19(o)(ii) and and Chapter 16, Section 13(n)(ii)) (ii) Briefly describe and respond to all comments voicing a legitimate regulatory concern that is within the authority of the department to regulate.

(from Chapter 13, Section 19(m) and Chapter 16, Section 13(o)) (q) The response to comments shall also be available to the public.

~~(from Chapter 13, Section 19(q)) All comments received on contested issues before the council will be responded to in accordance with department Rules of Practice and Procedures.~~

(from Chapter 16, Section 13(p)) (r) 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.

**Section 22. Class I Permits Issued Before the Effective Date of These Regulations.**

(from Chapter 13, Section 20) Any Class I well permitted before the effective date of these regulations shall be reviewed pursuant to Section ~~9 (b) and (c)~~ 6(h).

**(from Chapter 13, Appendix A) APPENDIX A**

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

## (from Chapter 13, Appendix B) APPENDIX B

| PARAMETER | MAXIMUM ALLOWABLE CONCENTRATION |
|---|---|
| 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 | 1 ~~PPB~~ ppb |
| TCDF-ALL TETRACHLORODIBENZOFURANS | 1 ~~PPB~~ ppb |
| 2,4,5 TRICHLOROPHENOL | 50 ~~PPB~~ ppb |
| 2,4,6 TRICHLOROPHENOL | 50 ~~PPB~~ ppb |
| 2,3,4,6 TETRACHLOROPHENOL | 100 ~~PPB~~ ppb |
| PENTACHLOROPHENOL | 10 ~~PPB~~ ppb |

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## (from Chapter 16, Appendix A) 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 USE 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 | 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. |
| 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 | 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. |

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**(from Chapter 16, Appendix B) 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 |

| TYPE | 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 |

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CHAPTER 27
Underground Injection Control Program
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# CHAPTER 27

# UNDERGROUND INJECTION CONTROL PROGRAM CLASS I AND V WELLS

## 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. These regulations fulfill Wyoming state obligations 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 as of 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 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. 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 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) “Cesspool” means a drywell that receives solely untreated domestic sewage, and which sometimes has an open bottom and/or perforated sides.

(h) "Class I well" means a well used to inject hazardous or non-hazardous industrial, commercial or municipal waste beneath the lowermost formation containing, within one- quarter (1/4) mile of the well bore, an underground source of drinking water.

(i) "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.

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

(j) "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 that 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.

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

(k) "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 this Chapter.

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.

(l) "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 this chapter. The Class V facility includes all systems of collection, treatment, and control which are associated with the subsurface disposal. Appendix C of this chapter contains a list of Class V facilities.

(m) "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 under- ground source of drinking water.

(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.

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

(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.

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

(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.

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

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

(z) “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.

(aa) “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.

(bb) “Injectate” means the wastewater being disposed of through any underground injection facility after it has received whatever pretreatment is done.

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

(dd) "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.

(ee) "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.

(ff) "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.

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

(hh) “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 rule must meet the requirements found in this chapter, but is not required to apply for and obtain a permit to construct and operate the facility.

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

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

(kk) “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.

(ll) “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.

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

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

(oo) "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.

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

(qq) "Septic system" means a facility that is used solely to emplace domestic sewage below the surface and is comprised of a septic tank and subsurface fluid distribution system.

(rr) "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 plan developed pursuant to Section 1453 of the Safe Drinking Water Act.

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

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

(uu) "Underground source of drinking water" means those aquifers or portions thereof which 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.

(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 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.

(ww) "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.

(xx) "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.

(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.

**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.

**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.

(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.

(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. Control of Class I well subsurface discharges; permit required; aquifer exemptions.**

(a) Class I wells shall be allowed only pursuant to the Wyoming Environmental Quality Act, Chapter 8, 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 8, 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 8. 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 6. Permits and Permit Applications.**

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

(c) 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.

(d) 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.

(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 by Wyoming Statutes, Title 33, Chapter 41.

(f) 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:

$$r = \left(\frac{2.25\,KHt}{S10^{x}}\right)^{\frac{1}{2}}$$

Where: $x = \left(\frac{W}{G} - B\right)\left(\frac{4PKH}{2.3Q}\right)$

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 quarter quarter 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 12 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 8 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 12, 14, 15, 16, 17 and 19 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 decision making 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."

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

(g) For Class V facilities the following are applicable:

(i) A permit is required.

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

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

(iv) 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 regulations describe the permitting method for and subclasses of facilities. The owner or operator of a

facility that 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 do not meet the requirements for a general permit or permit by rule must obtain an individual permit prior to installation or construction of the Class V facility.

(v) 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.

(vi) 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 this chapter.

(h) Permit conditions and contents.

(i) All Class I permits issued under this chapter shall contain the following conditions:

(A) 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.

(B) 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.

(I) Part one of the mechanical integrity test shall demonstrate the absence of leaks through the packer, tubing, casing, and well head.

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

(III) 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:

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

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

(3.) Any technical data supporting the use of this test.

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

(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.

(ii) Special conditions for Class I hazardous waste wells.

(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.

(B) 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:

(1.) Cease all injections of waste fluids immediately.

(2.) Take all necessary steps to determine the presence or absence of a leak.

(3.) Notify the administrator within twenty-four (24) hours after the alarm or shutdown, using procedures and criteria listed in paragraph (h)(iii)(Q) of this section.

(4.) 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:

(1.) Immediately cease all injection activities.

(2.) Notify the administrator pursuant to the procedures outlined in paragraph (h)(iii)(Q) of this section. In addition to the information required by paragraph (h)(iii)(Q) of this section, 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.

(3.) Comply with the requirements of any remedial action plan approved by the administrator.

(4.) Where the unauthorized release is into a Class I aquifer, as classified under Chapter 8, 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.

(5.) 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:

(1.) Identification numbers.

(2.) Recordkeeping and reporting for manifested wastes.

(3.) Manifest discrepancies.

(4.) Operating record requirements.

(5.) Annual reporting requirements and unmanifested waste reports.

(6.) 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 17 of this chapter.

(iii) All individual and general permits issued under this chapter shall contain the 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 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 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.

(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 rights of 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 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.

(I) 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.

(J) A requirement that the permittee furnish any information necessary to establish a monitoring program pursuant to Section 15 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 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 15 of this chapter.

(L) A requirement that all applications, reports, and other information submitted to the administrator contain certifications as required in Section 6 (f) (xv) of this chapter, and be signed by a person who meets the requirements to sign permit applications found in Section 6 (f) (xiv), 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 compliance with the existing permit unless the proposed permittee agrees to bring the facility into compliance.

(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 thirty (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 (h) (iii) (P) through (R) of this section, at the time monitoring reports are submitted.The reports shall contain the information listed in paragraph (h) (iii) (R) of this section.

(T) 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.

(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 upon completion 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 in the original permit application, or describing any deviations from the original plan, be submitted as soon as practicable after abandonment, and is complete.

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

(Y) 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 7. Permit Processing Procedures.**

(a) For Class I wells the following are applicable:

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

(ii) 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.

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

(A) 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.

(B) If an application is denied because of incompleteness necessitating a request for additional information, the applicant shall have a maximum of six (6) 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.

(C) Resubmittal of information by an applicant on an incomplete application will begin the process described in subsection (a)(ii) of this section.

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

(A) Prepare a draft permit for issuance or denial, prepare a fact sheet on the proposed operation, and provide public notice pursuant to Section 21; or

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

(v) 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 22 unless a hearing is requested by the applicant. Resubmittal of information for a deficient application will start the sixty (60) day review period again.

(vi) Denials of permit applications will be pursuant to procedures outlined in paragraph (d) of this section.

(vii) All draft permits for Class I wells require public notice pursuant to Section 21 of this chapter.

(b) For Class V wells that require an Individual Permit, the following are applicable:

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

(A) 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.

(ii) Resubmittal of information by an applicant on an incomplete application will begin the process described in paragraph (b)(i)(A) of this section.

(iii) 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 21.

(iv) 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.

(c) For Class V wells that require a General Permit, the following are applicable:

(i) In order to be covered by a general permit, an operator must submit all information required in Section 9 (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 (f) (xiv) and shall be certified in accordance with Section 6 (f) (xv). 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.

(ii) 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.

(iii) 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 7 (d) (vii). Any such modification must cover all persons covered by the permit.

(d) Permit modification, denial, revocation, termination and transfer.

(i) 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.

(ii) 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.

(iii) If the administrator tentatively decides to modify or revoke and reissue a permit, a draft permit 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 require the submission of a new application.

(iv) In a permit modification under Section 7 (d) (vii) 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 reissuance proceeding, the permittee shall comply with all conditions of the existing permit until a new final permit is issued.

(v) Proposed 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 21.

(vi) For Class I wells the administrator **shall** modify a permit or license when:

(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; or

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

(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.

(vii) For Class V wells the administrator **may** modify a permit when:

(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;

(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;

(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.

(viii) Minor modifications of permits may occur with the consent of the permittee without following the public notice requirements. 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:

(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 permit and 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 that 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 permit and would not change its classification;

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

(G) Amend an abandonment plan.

(ix) For a Class I well the administrator **may** deny a permit for any of the following reasons:

(A) The application is incomplete; or

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

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

(x) For Class I wells the administrator **shall** deny a permit for any of the following reasons:

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

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

(C) The application does not provide documentation to comply with financial responsibility requirements of Section 19.

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

(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 21.

(xi) For Class V wells the director **may** deny an individual permit for any of the following reasons:

(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 protection plan, or state approved water quality management plan; or

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

(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 21 of this chapter.

(xii) 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.

(xiii) The administrator may modify a permit or license to resolve issues that could lead to the revocation or consider any of the reasons in the preceding paragraph 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.

(xiv) Permits for Class I wells will be automatically terminated after closure and release of the financial responsibility requirements of Section 19 by the department.

(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 previous permittee will 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.

(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) When a permit transfer occurs, the administrator may modify a permit pursuant to this section. The administrator shall provide public notice pursuant to Section 21 for any modification other than a minor modification defined by this section.

(D) The potential transferee shall file a statement of qualifications to hold a permit with the administrator.

**Section 8. Records and Reports.**

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

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

(c) 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.

(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) Routine periodic 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, if applicable, the following information:

(i) 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.

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

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

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

(v) The average, maximum and minimum injection pressures for each month.

(vi) Any well workover.

(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.

(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.

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

**Section 9. Individual Permits for Class V Facilities.**

(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 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, shall obtain an individual permit under 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 including:

(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 13 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 is under pressure into a confined aquifer.

(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.

(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 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 15 of this chapter.

(xi) All applications for permits, reports, or information to be submitted to the administrator shall be signed by a responsible officer as described in Section 6(f)(xiv) and the application shall contain the certification contained in Section 6(f)(xv) of this chapter.

(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.**

(a) The department may develop and issue general 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 and 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:

(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.

(iv) Abandon the facility in accordance with Section 18.

(b) General permits shall also include:

(i) The permit conditions required in Section 6(h)(iii).

(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:

(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 well screening 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 13 for the specific subclass of facility.

(v) A requirement that the operator submit the disposal capacity of the facility in gallons per day as calculated using 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.

(c) 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 this section indicates that the general permit would not be protective of groundwater in that specific case. Any operator covered by a general permit may at any time apply for and obtain an individual permit for the same facility. Once issued, an individual permit will replace coverage by the general permit for that facility.

(d) 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 22 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.

(e) Operators of new injection facilities who believe that their facility may be covered by a general permit in class 5C6 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 5C3.

(f) 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.

(g) 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.

(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.

(i) 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 bed 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.

**Section 11. Permit by Rule for Class V Facilities.**

The types of Class V facilities listed in this section represent 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 13 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 9 (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 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.

(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 13 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.

(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 contains polluted 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 an Underground Source of Drinking Water, 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 wastewater system permit issued by the Department of Environmental Quality or a local 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.

(d) A permit by rule where the operator has provided the necessary information shall be 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 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:

(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.

(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 paragraph (e) of this section indicates that the permit by rule would not be protective of groundwater in that specific case.

**Section 12. 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 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.

(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.

(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 intervals.

(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 one- hundred 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.

(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.

(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 16 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.

(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 6(h)(i) 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 13. Construction and Operation Standards for Class V Wells.**

(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 loop systems 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 open loop 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.

(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.

(d) All mining, sand and backfill facilities (5B1) shall include:

(i) Provision for insuring mechanical integrity of any well designed to remain in service for more than 60 days.

(ii) Provision for controlling the type of material injected and to insure that no hazardous 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.

(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) shall include:

(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.

(iii) Target restoration values for the groundwater in the affected area being remediated 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 water standard 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 no violations 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.

(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 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.

(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 C) 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.

(iii) Maps showing the area where runoff will be transported to the drainage facility.

(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:

(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.

(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.

(C) 200 gallons per day per animal over 500 pounds.

(iv) The subsurface fluid distribution system shall be designed in accordance with 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 Tables 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 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 waste were delivered to a single point of discharge.

(k) All aquaculture 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.

(l) 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 facilities whenever the point of injection is not the point of compliance.

(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 coke breeze. 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 times when 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 to installation.

(vi) If it becomes necessary to wet any anode installed under this section, 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 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:

(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.

(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 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 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.

(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.

(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 sources 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 15. 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.

(ii) The extent and design of a monitoring system shall be sufficient to deal with the pollution potential of the proposed discharge.

(iii) Before construction or installation of a Class I or 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 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) The operator shall develop and follow 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. 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. At a minimum, any plan shall include:

(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.

(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, 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.

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

(B) The operator shall ensure that the plan remains accurate and the analyses remain representative.

(f) Requirements for Class I Wells:

(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.

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

(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.

(B) 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.

(C) Periodic monitoring of the groundwater quality in the first aquifer overlying the receiver.

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

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

(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.

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

(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 discharge zones such that they would no longer meet the requirements specified when the area of review was calculated.

(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 12 of this chapter.

(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.

(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 12 of this chapter.

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

(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 whenever there has been a well workover.

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

(C) 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.

(D) 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 factors which limit the test's reliability.

(E) Any other test approved by the administrator may also be used. Procedures for approval of unauthorized mechanical integrity tests are outlined in Section 6(h)(i)(B) of this chapter.

(F) 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.

(g) Requirements for Class V Wells:

(i) 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.

(A) 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.

(B) For facilities where the point of compliance is at one or more down gradient 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 surface water. Where necessary to protect existing or future uses, permit limitations may be established at the point of compliance which are more stringent than the class of use standard.

(C) Facilities where subsurface treatment is anticipated may be required to monitor the injected fluid at the point of injection. Permit limits may be established at the point of injection which exceeds 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.

(h) 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.

(i) 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 RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September, 1986, unless alternate methods and procedures are approved by the administrator.

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

**Section 16. Quality Assurance and Quality Control for Sample Collection and Analysis.**

(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 RCRA Groundwater Monitoring Technical Enforcement Guidance Document, September,1986, unless alternate methods and procedures are approved by the administrator.

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

**Section 17. 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 ensure financial responsibility as required in Section 19 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, 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.

(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 7 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) The operator receives authorization from the administrator.

(B) The operator 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 administrator 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.

(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 or she 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 8, the Wyoming 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 8 to which it was submitted.

(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 18. 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.

(iv) All accumulated sludges are removed from any septic tanks, holding tanks, 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, lift stations, or other waste handling structures which shows that none of these materials contain characteristic hazardous waste or radioactive waste.

(ii) Monitoring of the groundwater in the immediate area of the facility shows that 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.

(iii) Some other method is determined to be acceptable to the administrator which demonstrates compliance with Chapter 8 of these regulations and prevents the movement 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 standard found 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.

(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 facility. After they have fulfilled their useful purpose, they shall be abandoned by filling all breather 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 also have 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 thirty (30) days notice to the administrator.

**Section 19. 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.

(e) The owner or operator of a well injecting hazardous waste must comply with the 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:

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

(b) All Class IV wells are prohibited.

(c) Requirements for Class I Wells:

(i) No person shall 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.

(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.

(ii) 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.

(iii) 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.

(iv) 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 paragraphs (ii) and (iii) above.

(v) 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:

(A) 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.

(B) 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.

(d) Requirements for Class V Wells:

(i) No person shall discharge to any zone except the authorized discharge zone as described in the permit.

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

(iii) No person shall inject any hazardous waste which has been banned from land disposal pursuant to Chapter 1, Wyoming Hazardous Waste Rules and Regulations unless the disposal conforms to that chapter.

(iv) No drainage facility, subclass 5D1 through 5D5 shall be constructed so as to directly receive any waste other than natural precipitation or natural groundwater unless permitted under an individual permit.

(v) 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.

(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 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.

(vii) No wastewater produced by electric power generation from geothermal fluids shall be disposed of in any Class V injection facility. Such wells are Class I injection wells and are covered by regulations in this chapter.

(viii) 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 regulations in this chapter.

(ix) 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 thirty (30) days in advance.

(x) 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.

(xi) An operator of a facility which is authorized by rule is prohibited from injection into the facility:

(A) Upon failure to submit inventory information prior to construction for facilities constructed after April 14, 1999.

(B) Upon failure to comply with a request for information under Section 11 (e) of this chapter.

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

**Section 21. Public Participation, Public Notice and Public Hearing Requirements.**

(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 7 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.

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

(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.

(d) The administrator shall include a thirty (30) day public comment period for any action on items (b)(i), (ii) or (iii) or thirty (30) days notice before any hearing date as part of the public notice. When two notices are required, they may be given at the same time.

(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 permits this 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.

(F) Wyoming Oil and Gas Conservation.

(G) Land Quality Division.

(H) 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.

(I) Any unit of local government having jurisdiction over the area where 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.

(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.

(vi) Any additional information considered necessary and proper.

(g) In addition to the information required in (f) 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.

(iii) A brief description of the nature and purpose of the hearing, including applicable 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 including, but not limited to, permit issuance, denial, modification, revocation and reissuance, termination, or transfer and/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. The department shall provide facilities for inspection and copying of all non-confidential documents. Copying shall be at the expense of the person requesting copies.

(j) During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing. 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.

(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.

(l) The Council shall hold hearings pursuant to the Wyoming Department of Environmental Quality 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 the Wyoming Department of Environmental Quality Rules of Practice and Procedure.

(n) The public comment period shall automatically extend to the close of any public hearing. The administrator may also extend the comment period by so stating at the public hearing.

(o) The director shall render a decision on the draft permit within thirty (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.

(p) 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.

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

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

(r) 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.

**Section 22. 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 6(h).

2645 **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 |

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2649 **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 USE 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 | 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. |
| 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 | 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. |

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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 |

| TYPE | 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 |

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