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) <u>For a corporation</u> - 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) <u>For a partnership or sole proprietorship</u> -- by a general partner or the proprietor, respectively;

(C) <u>For a municipality, state, federal or</u> <u>other public agency</u> -- 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~~ permittee of any Class I well shall demonstrate and maintain financial responsibility and resources to close, plug, abandon, reclaim, and maintain post-closure care for the underground injection operation in a manner prescribed by the

~~a~~Administrator. The permittee shall show evidence of such financial responsibility to the ~~a~~Administrator~~;~~. ~~by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the administrator.~~

(b) All Class I hazardous waste and non-hazardous waste underground injection facilities and Class V coalbed methane produced water underground injection facilities that are permitted, are issued a permit renewal, or are issued a permit transfer after July 1, 2018, shall provide financial assurance in accordance with W.S. 35-11-302(a)(viii).

(i) Permittees shall provide financial assurance within ninety (90) days of the effective date of the rule or as described below, whichever is later:

(A) Thirty (30) days prior to drilling of the permitted well(s) for new facilities; or

(B) Prior to authorization of a permit renewal for existing facilities; or

(C) Prior to authorization of a permit transfer; or

(D) The well has been converted in compliance with the requirements of 40 CFR 144.51(n), in effect as of July 1, 2018.

(c) At a minimum, the permittee shall prepare a written estimate, in current dollars, of the cost of plugging and abandonment of the well, surface reclamation, post-closure care, removal of infrastructure including but not limited to piping, above and below ground tanks, buildings, impoundments, access roads, fencing, electrical facilities, or any other physical materials used in the operation and maintenance of the injection well.

(i) The permittee shall adjust the cost estimate for inflation and increases in costs:

(A) For Class I hazardous waste underground injection facilities, within thirty (30) days after each anniversary of the date on which the first cost estimate was prepared.

(B) For Class I non-hazardous waste underground injection facilities and Class V coalbed methane produced water underground injection facilities, within sixty (60) days after each anniversary of the date on which the first cost estimate was prepared.

(ii) The permittee shall revise the cost estimate whenever a change in the plan increases the cost, and adjust the revised cost estimate for inflation.

(iii) For Class I hazardous waste wells, the cost estimate must equal the cost at the point in the facility's operating life when the extent and manner of its operation would be the most expensive.

(d) The permittee shall keep the following at the facility during the operating life of the facility:

(i) The latest cost estimate and;

(ii) The latest adjusted cost estimate when the cost estimate in paragraph (i) above has been adjusted.

~~(b)~~(e) The amount of the funds available shall be no less than the amount identified as the estimated cost.

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

(g) The permittee of each facility shall establish financial assurance for each new and existing Class I hazardous waste or non-hazardous waste underground injection facility or Class V coalbed methane produced water injection facility and shall choose from the qualifying instruments below:

(i) Corporate surety bonds,

(ii) Federally insured Automatically Renewable Certificates of Deposit (C.D.),

(iii) U.S. Treasury Bonds, Bills, or Notes,

(iv) Cash,

(v) Letters of Credit, or

(vi) A combination of the above instruments may be submitted.

~~(d)~~(h) Upon completion of any of the activities identified in the cost estimate, ~~After plugging operations are completed,~~ the amount of the financial surety required may be reduced by the ~~a~~Administrator ~~to the estimated cost of post-closure care~~.

~~(e)~~ (i) In addition to the other requirements of this section, ~~T~~the ~~owner or operator~~ permittee of a Class I well injecting hazardous waste ~~must~~ shall comply with the financial responsibility requirements of 40 ~~CRF~~ CFR 144 Subpart F, which are in effect as of July 1, 2018.

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).

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

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

SUBCLASS	DESCRIPTION
	5B5 facilities are covered under Article 16 of the Environmental Quality Act
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

SUBCLASS	DESCRIPTION
	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.

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

SUBCLASS	DESCRIPTION
	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.
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 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	Permit by	register by April

TYPE	DESCRIPTION	TYPE OF PERMIT	WHEN REQUIRED
	Distribution Systems - Permitted as a small wastewater facility	Rule	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
5F1	Cathodic Protection Facilities	Permit by Rule	registerby 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