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

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

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

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

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

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

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

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

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

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

(h) "Class II well" means a well regulated by the Wyoming Oil and Gas Conservation Commission, other than a Class II commercial disposal well, which injects fluids:

~~(i) Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production. Non-hazardous gas plant wastes may be disposed of in a class II well pending Environmental Protection Agency co-approval.~~

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

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

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

~~(i) Mining of sulfur by the Frasch process;~~

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

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

~~(iv) Underground coal gasification operations;~~

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

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

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

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

~~Except that a well is not class IV if it is used to inject contaminated groundwater that has been treated and reinjected into the same formation from which it is drawn for the purpose of aquifer remediation where the ultimate cleanup criteria is protective of groundwater standards of these regulations. These wells are regulated as a class V well, type 5X26 under these regulations.~~

~~(k) "Class V well" means any injection well not included in Classes I, II, III, or IV.~~

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

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

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

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

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

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

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

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

~~(t) "Groundwaters of the State" are all bodies of underground water which are wholly or partially within the boundaries of the State.~~

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

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

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

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

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

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

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

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

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

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

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

~~(ff) "Underground source of drinking water" means those aquifers or portions thereof that have been classified as either Class I, II, III, IV(a), or Special (A), pursuant to~~

~~Chapter VIII, Quality Standards for Wyoming Groundwaters, Water Quality Rules and Regulations.~~

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

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

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

~~Section 4. Control of Class I well subsurface discharges; permit required; aquifer exemptions.~~

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

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

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

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

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

~~(i) Water Quality Division shall submit one complete copy of the application, the Draft Permit, and the public notice to the U.S. Environmental Protection Agency, Region VIII. This submission shall be made so that EPA receives the complete application at least twenty (20) days prior to the scheduled start of the public comment period.~~

~~(ii) When the aquifer exemption request is for an aquifer containing 3,000 mg/l or more of total dissolved solids, the following procedure shall be used: Within forty five (45) days of EPA receipt of a complete aquifer exemption request, EPA shall provide the department a written interim determination of intention to issue or deny the aquifer exemption pending receipt and review of the results of the public participation process conducted by the department. The interim response will become final if there are no comments relating to the aquifer exemption request during the comment or hearing process. If comments are received during the public comment or hearing process, the interim response will become final if not modified by EPA in writing within thirty (30) days of receipt of all comments.~~

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

~~Section 5. Permit application.~~

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

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

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

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

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

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

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

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

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

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

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

~~H = Thickness of the injection zone (feet)~~

~~t = Time of injection (days)~~

~~S = Storage coefficient (dimensionless)~~

~~Q = Injection rate (cubic feet/day)~~

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

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

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

~~P = 3.142 (dimensionless)~~

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

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

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

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

~~(v) Information about the proposed facility, including:~~

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

~~(B) Construction and engineering details in accordance with Section 11 of this chapter.~~

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

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

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

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

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

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

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

~~(E) General geology and hydrogeology in the area.~~

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

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

~~(A) For those wells that the administrator determines have not been adequately plugged, completed, or~~

~~abandoned, or for wells which lack supporting information, the applicant shall also submit a plan to prevent movement of fluids into Underground Source of Drinking Waters through these wells, and this plan, after approval or modification by the administrator, shall be incorporated as a permit condition.~~

~~(xi) Detailed plans for:~~

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

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

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

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

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

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

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

~~(1) A President, Secretary, Treasurer, or Vice President of the corporation in charge of a principal business function, or any other person who performs similar policy or decisionmaking functions for the corporation; or~~

~~(2) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.~~

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

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

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

~~"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."~~

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

~~Section 6. Application processing procedures.~~

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

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

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

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

~~(ii) If an application is denied because of incompleteness necessitating a request for additional information, the applicant shall have a maximum of six months to comply with the requests. If the applicant fails to provide the requested information within that period, the entire incomplete application shall be returned.~~

~~(iii) Resubmittal of information by an applicant on an incomplete application will begin the process described in subsection (b) of this section.~~

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

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

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

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

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

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

~~Section 7. Permit denial.~~

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

~~(i) The application is incomplete; or~~

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

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

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

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

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

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

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

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

~~Section 8. Permit modification, revocation, termination or transfer.~~

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

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

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

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

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

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

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

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

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

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

~~(i) Correct typographical errors;~~

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

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

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

~~(v) Change quantities or types of fluids injected which are within the capacity of the facility as permitted or licensed and, in the judgment of the director, would not interfere with the operation of the facility or its~~

~~ability to meet conditions described in the permit or license and would not change its classification;~~

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

~~(vii) Amend a plugging and abandonment plan.~~

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

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

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

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

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

~~(g) If the administrator tentatively decides to modify or revoke and reissue a permit, he or she shall prepare a draft permit or license incorporating the proposed changes. The administrator may request additional information and, in the case of a modified permit, may require the submission of an updated application. In the case of revoked and reissued permits, the administrator shall require the submission of a new application.~~

~~(h) In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit or license is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit has expired and was being reissued. During any revocation and reissuance proceeding the permittee shall~~

~~comply with all conditions of the existing permit until a new final permit is issued.~~

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

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

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

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

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

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

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

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

~~Section 9. Permit conditions and contents.~~

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

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

~~(c) Permits that do not satisfy the review criteria are subject to modification, revocation and reissuance, or termination pursuant to Section 8 of this chapter.~~

~~(d) All permits issued under this chapter shall contain the following conditions:~~

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

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

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

~~(iv) A stipulation that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.~~

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

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

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

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

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

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

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

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

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

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

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

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

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

~~(xii) A requirement that the permittee shall allow the administrator, or an authorized representative of~~

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

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

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

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

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

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

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

~~(xix) A requirement that monitoring results shall be reported at the intervals specified elsewhere in this permit.~~

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

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

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

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

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

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

~~(xxiii) A requirement that, in the situation where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the administrator, the permittee shall promptly submit such facts or information.~~

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

~~(xxv) A requirement that the packer be set within five-hundred (500) feet of the top of the receiver, unless the administrator allows some other specific interval to be used to set the packer, but always within the zone covered by excellent cement bond as shown by the cement bond log.~~

~~(xxvi) A requirement that the permittee notify the administrator at such times as the permit requires before conversion or abandonment of the well.~~

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

~~(A) Immediately cease all injection activities;~~

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

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

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

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

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

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

(A) Identification numbers;

(B) Recordkeeping and reporting for manifested wastes;

(C) Manifest discrepancies;

(D) Operating record requirements;

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

(F) Personnel training requirements.

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

Section 11. Construction standards for Class I wells.

(a) All existing and new Class I wells shall be constructed to prevent the movement of fluids into any underground source of drinking water, permit the use of testing devices and workover tools, and permit continuous monitoring of injection tubing and long string casing, as required under Sections 9 and 10 of this chapter.

~~(b) All well materials shall be compatible with the wastes that may be contacted. The applicant shall submit data necessary to document compatibility.~~

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

~~(i) Depth to the injection zone;~~

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

~~(iii) Hole size;~~

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

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

~~(vi) Lithology of injection and confining intervals; and~~

~~(vii) Type or grade of cement.~~

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

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

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

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

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

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

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

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

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

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

~~(A) Depth of setting;~~

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

~~(C) Injection pressure;~~

~~(D) Annular pressure;~~

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

~~(F) Size of casing; and~~

~~(G) Tubing tensile, burst, and collapse strengths.~~

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

~~Section 12. Siting conditions for Class I wells.~~

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

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

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

~~(ii) An analysis of the local geology and hydrogeology of the well site, including, at a minimum, detailed~~

~~information regarding the stratigraphy, structure, and rock properties, aquifer hydrodynamics, and mineral resources; and~~

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

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

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

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

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

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

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

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

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

~~(i) Monitoring may be required for any circumstance where groundwaters of the State could be affected.~~

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

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

~~(i) Pre-discharge or pre-operational monitoring;~~

~~(ii) Operational monitoring;~~

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

~~(iv) Recordkeeping and reporting;~~

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

~~Section 15. Records and reports.~~

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

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

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

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

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

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

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

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

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

~~(vi) Any well workover.~~

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

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

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

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

~~Section 16. Closure of hazardous waste wells.~~

~~(a) The operator of a Class I hazardous waste well shall prepare, maintain, and comply with a plan for closure of the well and post-closure care of the well that meets the~~

~~standards for well closure required in paragraph (d) of this section and post-closure care required in paragraph (e) of this section and is acceptable to the administrator. The obligation to implement the closure and post-closure plan survives the termination of a permit or the cessation of injection activities. The requirement to maintain and implement an approved plan is directly enforceable regardless of whether the requirement is a condition of the permit.~~

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

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

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

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

~~(A) The type and number of plugs to be used;~~

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

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

~~(D) The method of placement of the plugs;~~

~~(E) Any proposed test or measure to be made;~~

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

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

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

~~(I) The estimated cost of closure; and~~

~~(J) Any proposed test or measure to be made.~~

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

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

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

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

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

~~(E) The status of any required cleanups; and~~

~~(F) The estimated cost of proposed post-closure care.~~

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

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

~~(A) He receives authorization from the administrator; and~~

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

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

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

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

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

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

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

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

~~(d) Standards for well closure.~~

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

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

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

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

~~(v) Placement of the cement plugs shall be accomplished by circulating cement to the bottom of the well using a working string. The working string shall be removed as the cement is pumped. The cement used shall be of a~~

~~variety such that the working string can be withdrawn while still allowing the well to be filled with cement.~~

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

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

~~(e) Post-closure care.~~

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

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

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

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

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

~~(i) The fact that the land in question has been used to manage hazardous waste;~~

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

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

~~Section 17. Financial responsibility.~~

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

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

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

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

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

~~Section 18. Prohibitions.~~

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

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

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

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

~~(b) No person shall:~~

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

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

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

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

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

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

~~(c) All Class IV wells are prohibited.~~

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

~~(e) No dioxin containing wastes which are listed hazardous waste number F020, F021, F022, F023, F026, F027 or F028 under 40 CFR 261.31 shall be injected underground in any well unless those wastes do not exceed, or are treated to not exceed the standards listed in Appendix B.~~

~~(f) Treatment to meet appendix A or B limitations shall be accomplished according to a state hazardous waste treatment permit issued by the department. Dilution is prohibited as a substitute for treatment of wastes listed in subsections (d) and (e) above.~~

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

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

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

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

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

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

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

~~(ii) The administrator intends to modify a permit;~~

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

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

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

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

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

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

~~(A) The applicant, by certified or registered mail;~~

~~(B) The U.S. Environmental Protection Agency;~~

~~(C) Wyoming Oil and Gas Conservation Commission;~~

~~(D) Wyoming Game and Fish Department;~~

~~(E) Wyoming State Engineer;~~

~~(F) Land Quality Division;~~

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

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

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

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

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

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

~~(i) Name, address of the department;~~

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

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

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

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

~~(vi) Any additional information considered necessary and proper.~~

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

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

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

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

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

~~(h) All information received on or with the permit application shall be made available to the public for inspection and copying except such information as has been determined to constitute trade secrets or confidential information pursuant to W.S. 35-11-1101. The department shall provide facilities for inspection and copying of all nonconfidential documents. Copying shall be at the expense of the person requesting copies.~~

~~(i) Requests for public hearings on permit applications or modifications must be made in writing to the administrator and shall state the reasons for the request. Requests for public hearings on permit issuance, denial, revocation, termination, or any other department action appealable to the Council, shall be made in writing to the chairman of the council and the department and state the grounds for the request.~~

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

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

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

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

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

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

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

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

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

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

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

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

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

APPENDIX A

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

~~APPENDIX B~~

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

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