

Attachment A
Proposed Rules without Statement of Reasons

A1 - Side-by-Side
A2 - As the Rules Would Appear If Adopted

CHAPTER 7

NONCOAL MINE

PERMIT OR LICENSE REVISIONS

Section 1. Submittal of Revisions.

(a) A mine permit or Research and Development Testing License may be revised in accordance with this Chapter and upon approval by the Administrator, if the operator submits a request to the Division.

~~(a)~~ (b) Significant revisions are those which constitute a change described in Section 2 of this Chapter, except significant revisions to an in situ mine permit or Research and Development Testing License are those which constitute a change described in Chapter 11, Section 19(b). Any permit other than an in situ mine permit or Research and Development Testing License may be revised by identifying alterations to the mining or reclamation plan in the annual report or addendum thereto, or by obtaining prior approval from the Department, at the noncoal operator's discretion.

~~(b)~~ (c) Non-significant revisions shall be submitted in a format approved by the Administrator. Non-significant revisions to an in situ mine permit or Research and Development Testing License are those which constitute a change described in Chapter 11, Section 19(c). If promptly filed, and unless notified by the Administrator to delay, the operator may initiate the proposed change, unless the change is to an in situ mine permit or Research and Development Testing License, in which case the operator may initiate the proposed change only upon approval by the Administrator. All non-significant revisions shall include:

- (i) A brief description of the change and why the change is being sought;
- (ii) An outline or index indicating what pages, maps, tables, or other parts of the approved permit or Research and Development Testing License are affected by the revision; and
- (iii) Additional information necessary to support or justify the change.

~~(c)~~ (d) Incidental changes which are not categorized under ~~(a)~~ (b) or ~~(b)~~ (c) of this ~~s~~Section shall be noted in the annual report.

~~(d)~~ (e) Each application shall contain:

- (i) The name and address of the operator;
- (ii) The permit number and date approved;
- (iii) The following information, if different from that submitted in the original permit or Research and Development Testing License application:

(A) The precise location of the permit or Research and Development Testing License area by legal subdivision, section, township, range, county, and municipal corporation, if any;

(B) The names and last known addresses of the owners of record of the surface and mineral rights of the land covered by the permit or Research and Development Testing License; and

(C) The names and last known addresses of the owners of record of the surface rights of the lands immediately adjacent to the permit or Research and Development Testing License area.

(iv) A detailed description of the proposed revised mining, reclamation, or Research and Development Testing operation which shall also include:

(A) A USGS topographic map or equivalent of the permit or Research and Development Testing License area showing distinctly outlining and identifying the land to be affected by the revised mining or reclamation operation; ~~in detail, distinctly outlined and identified;~~

(B) For any proposed newly affected lands, if not submitted and approved in the original application for the permit:

(I) The information required in W.S. § 35-11-406(a)(vii) and (ix) ~~or, for in situ mining operations, the information required in W.S. § 35-11-428;~~ and

(II) The extent to which the revised mining or reclamation operation will disturb, change, or deface the lands proposed to be affected, the proposed future use or uses of the land and the plan whereby the operator will reclaim the affected lands to the proposed future use or uses.

(C) Any significant changes in the estimate of the total cost of reclaiming the affected and proposed affected lands, computed in accordance with established engineering principles.

(v) Such other information as the Administrator deems necessary or as good faith compliance with the provisions of the Act require.

Section 2. Criteria for Public Notice Requirements.

(a) Within 90 days after submission of the application for a permit or Research and Development Testing License revision, the Administrator shall notify the operator of whether or not the application is complete and whether notice and opportunity for public hearing is required.

(b) Notice and opportunity for public hearing is required:

(i) For revision of an in situ mining permit or Research and Development Testing License in accordance with requirements of Sections 19(b) and (c) of Chapter 11;

(ii) Whenever the application for a permit or Research and Development Testing License revision proposes the following changes, so long as they constitute significant deviations from that which was

contemplated in the approved mining and reclamation plan. The following will normally be considered significant deviations unless otherwise determined by the Administrator:

(A) More than a ~~twenty~~ 20 percent increase in affected land from that which was approved in the original permit,

(B) A change in the approved future land use or uses which affects more than ~~twenty~~ 20 percent of the land within the permit or Research and Development Testing License area;

~~(iii)~~(C) A change in the approved method for insuring that all acid-forming or toxic materials, radioactive materials, or materials constituting a fire, health or safety hazard uncovered during or created by the mining or Research and Development Testing License process are promptly treated or disposed of during the mining, reclamation or Research and Development Testing License process in a manner designed to prevent pollution of surface or subsurface water or threats to human or animal health and safety;

~~(iv)~~(D) The construction or relocation of mills and tailings disposal facilities;

~~(v)~~(E) A change in the approved method of mining which results in surface disturbance (e.g. underground, surface or in situ mining);

~~(vi)~~(F) A change which would adversely affect the quality, quantity, or distribution of water in surface or groundwater systems; or

~~(vii)~~(G) Any changes which propose significant alterations in the approved mining or reclamation operation as determined by the Administrator.

Section 3. Notice and Opportunity for Public Hearing.

(a) When required under Section 2 of this Chapter, the operator shall cause notice of the application for permit, non-Class III Well portions of an in situ permit and non-Class III Well portions of a Research and Development Testing License revision to be published in a newspaper of general circulation in the locality of the mining or Research and Development Testing License site once a week for four consecutive weeks commencing within 15 days after notification that publication is required. The notice shall contain that information required by W.S. § 35-11-406(j), the permit number and date approved, and a general description of the proposed revision. The operator shall also mail a copy of the application mine plan map to the Wyoming Oil and Gas Commission in accordance with W.S. § 35-11-406(j).

(b) Objections may be filed in accordance with W.S. § 35-11-406(k), which objections shall list one or more reasons for denying a permit or Research and Development Testing License revision application as set out in W.S. § 35-11-406(m). If such written objections are filed, a public hearing shall be held in accordance with W.S. § 35-11-406(k). The Council shall issue findings of fact and make a decision on the application within 60 days after the final hearing.

Section 4. Decision.

(a) The Administrator shall, with the concurrence of the Director, render a decision on the application for permit or Research and Development Testing License revision and approve or disapprove the proposed revision in accordance with the applicable criteria set out in W.S. § 35-11-406 and any regulations adopted pursuant thereto. The decision shall be made:

(i) Within 30 days after notification of a complete application, if notice is not required;
or

(ii) If notice is required:

(A) Within 30 days after completion of the notice period, if the application for permit revision is not protested; or

(B) If the revision is protested and a hearing held, within 15 days from the receipt of any findings of fact and decision from the Environmental Quality Council.

(b) The applicant shall be promptly informed of the decision on the application.

Section 5. Review of ~~Outstanding~~ Permits or Research and Development Testing Licenses.

(a) The Administrator, with the concurrence of the Director, may require the operator to submit an application for a permit or Research and Development Testing License revision and comply with all requirements of this Chapter. Any such requirement shall be based on written findings that, upon review of the operator's annual report for an in situ mine permit or annual request for renewal of a Research and Development Testing License or upon inspection of the existing operation, there is or is intended to be conducted a revised mining, reclamation or Research and Development Testing operation. Such review or inspection shall be conducted at least each year upon receipt of the operator's annual report for an in situ mine permit or annual request for renewal of a Research and Development Testing License, or inspection of the existing operation, there is or is intended to be conducted a revised mining or reclamation operation. Such review or inspection shall be conducted at least each year upon receipt of the operator's annual report. Right of review shall be afforded as provided in the Wyoming Administrative Procedure Act. Nothing contained herein shall be construed to require compliance with any provision of the Act or regulation from which the existing operation has been specifically excepted.

CHAPTER 11
NONCOAL
IN SITU MINING

Section 1. Definitions.

- (a) "Background" means; for the purposes of in situ mining, the constituents or parameters and the concentrations or measurements which describe water quality and water quality variability prior to the injection of recovery fluid.
- (b) "Catastrophic collapse" means the sudden and utter failure of overlying strata caused by removal of underlying materials.
- (c) "Class III well" means a well used for in situ mining for the injection of recovery fluid for the purpose of extracting 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 only in situ production from ore bodies which have not been conventionally mined. Wells used for solution mining (such as stopes leaching) of conventional mines are classified as Class V wells;
 - (iii) In situ mining of salts, trona, or potash. With the exception that wells, used in reclamation activities, to inject into previously mined areas of underground trona mines will be classified as Class V wells rather than Class III wells (and therefore not regulated under this Chapter), regardless of whether such wells are used for secondary recovery of trona; or
 - (iv) Fossil fuel recovery, including oil shale and tar sands; or
 - (v) Experimental technologies, such as pilot scale in situ mining wells in previously unmined areas.
- (d) "Compliance schedule" means a schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the applicable statutes and regulations.
- (e) "Conventional mine" means an open pit or underground excavation for the production of minerals.
- (f) "Excursion" means as defined in W.S. § 35-11-103(f)(ii).
- (g) "Exempted aquifer" means an aquifer or its portion that meets the criteria in the definition of

"underground source of water" but which has been exempted according to the procedures of Section 10 of this Chapter.

(h) "Groundwater restoration" means as defined in W.S. § 35-11-103(f)(iii).

~~(b)~~(i) "Injection well" means, for the purposes of in situ mining, a well or conduit through which recovery fluid is introduced into the subsurface. If a well is used for both injection and recovery, it is considered an injection well for the purposes of this Chapter until the operator has adequately demonstrated to the Administrator that the well has been converted to use(s), other than injection, per the requirements of Section 8 of this Chapter.

(i) "In situ mining" means as defined in W.S. § 35-11-103(f)(iv).

~~(e)~~(k) "License area" means, with respect to an In Situ Research and Development Testing License, an area described in the license application within which all affected land and water is contained.

(l) "Mechanical integrity" means, for an injection well, there is no significant leak in the casing, tubing or packer, and there is no significant fluid movement into an underground source of water through vertical channels adjacent to the injection well bore. The determination that there are no significant leaks or fluid movement is based on the results of the mechanical integrity testing required in Section 7 of this Chapter.

(m) "Permit" means a Mining Permit, as defined in W.S. § 35-11-103(e)(xi).

(n) "Production zone" means as defined in W.S. § 35-11-103(f)(v).

~~(d)~~(o) "Receiving strata" means, for the purposes of in situ mining, the geologic units within which the production zones is are contained.

(p) "Recovery fluid" means as defined in W.S. § 35-11-103(f)(vii).

~~(e)~~(q) "Recovery well" means, for the purposes of in situ mining, a well or conduit through which a recovery fluid, mineral, or product is produced from the subsurface. If a well is used for both injection and recovery, it is considered an injection well for the purposes of this Chapter until the operator has adequately demonstrated to the Administrator that the well has been converted to use(s), other than injection, per the requirements of Section 8 of this Chapter.

(r) "Research and Development Testing License" means the permitting vehicle issued by the Administrator, per W.S. § 35-11-431 et seq., approving research and development testing as defined in W.S. § 35-11-103 (f)(viii).

(s) "State Decision Document" serves as a summary of, or reference to, all terms and conditions within an approved in situ mining permit application, an approved Research and Development Testing License application, or an approved application to revise a permit or Research and Development Testing License. This

document is compiled by the Administrator and provides a summary of, or reference to, all UIC related terms and conditions, compliance provisions, and monitoring requirements included in the permit or Research and Development Testing License.

(t) "Stratum (plural strata)" means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.

(u) "UIC" means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved State program."

(v) "Underground Source of Water" (USW) means those aquifers or portions thereof which have a total dissolved solids content of less than 10,000 milligrams per liter (mg/l), or those that have been classified as a "known source of supply" pursuant to Chapter 8, Section 4(c), Quality Standards for Wyoming Groundwaters, Water Quality Division Rules and Regulations (as amended March 12, 1993).

(w) "Upper Control Limit" (UCL) means a value greater than the maximum value of a chemical or physical parameter that can be attributed to natural fluctuations and analytical variability. UCL parameters and amounts are determined statistically from the baseline sampling and agreed upon by the Administrator and the operator prior to initiation of mining. UCLs are used to determine when there is movement of recovery fluid out of authorized areas or unapproved changes to a chemical or physical parameter. For certain parameters, such as pH, a UCL may be defined as an acceptable range of values.

(f) (x) "Uses for which the water was suitable" means, with respect to in-situ mining, those uses of the premining groundwater which are or could have reasonably been developed considering established water quality standards and the premining groundwater quality conditions. Such uses shall include, but are not limited to, municipal and domestic drinking water, industrial, agricultural and wildlife uses.

(g) (y) "Well field area" means, for the purposes of in-situ mining, the surface area containing overlying the injection and recovery wells zones. This area may be all or a portion of the entire area proposed for the injection and production of recovery fluid throughout the life of the mine.

Section 2. General Requirements.

(a) In addition to the requirements of this Chapter, Chapter 1, Chapter 2, Section 1, Section 2(a)(i)(A) and (J) and Section 2(b)(iii)(E), Chapter 3, Section 2 (excepting Subsections (b)(ii) and (iii), (c)(iv), (f) and with respect to (k)(i), reclamation shall be completed with two years following ground water restoration), and Chapter 7 shall apply to in situ mining or Research and Development Testing License operations.

(a-cont.)(b) Applicable sections of Chapter 8 and 9 of the Water Quality Division Rules and Regulations (as amended March 12, 1993) regarding groundwater use classification, quality standards, and testing procedures and applicable Maximum Contaminant Levels from the U.S. Environmental Protection Agency Rules (40 CFR 141 as amended July 1, 2001) shall also apply to in situ mining or Research and Development Testing License operations.

~~(b)(c)~~ No in situ mining operation shall commence or be conducted unless a valid mining permit or Research and Development Testing License has been issued to the operator from the Department. Applications for an ~~In-Situ Mining~~ permit or Research and Development Testing License shall be filed with the Administrator of the ~~Land Quality Division~~. The applicant shall file ~~six (6)~~ three copies of the application, and the Administrator of the ~~Land Quality Division~~ shall forward ~~three (3)~~ copies for filing with the Administrator of the ~~Water Quality Division~~; one copy of the application to the EPA when the application is determined complete. Applications shall be in a format required by the ~~Department~~ Administrator.

~~(c)(d)~~ The ~~Administrator Land Quality Division and Water Quality Division~~ shall review the in-situ mining permit or Research and Development Testing License application and determine its suitability for publication in accordance with W.S. § 35-11-406. A single permit or Research and Development Testing License shall be issued by the Director upon the recommendations of the Administrator, ~~s of the Land Quality Division and Water Quality Division~~. A single license shall be issued by the Administrator of the Land Quality Division upon concurrent approval of the Administrator of the Water Quality Division.

~~(d)(e)~~ Operators having an in situ mining permit or Research and Development Testing License issued before the effective date of these regulations, shall by no later than May 25, 1980 within one year of the effective date of newly promulgated changes to this Chapter, present evidence demonstrating compliance with the requirements of W.S. § 35-11-426 through W.S. § 35-11-436 these regulations. The Administrator shall review such evidence and shall advise the operator in writing of such additional information or procedures necessary to satisfy the provisions of this Chapter and W.S. § 35-11-426 through W.S. § 35-11-436. The evidence must be presented:

(i) By those operators, who are mining, restoring, or reclaiming, within one year of the effective date of newly promulgated changes to this Chapter; or

(ii) By those operators, who have received a permit but have not yet started mining, before mining begins, but no later than one year after the effective date of the newly promulgated changes to this Chapter.

~~2(f)~~ ~~All wells and drill holes resulting from in situ mining operations shall be abandoned in accordance with Chapter 14 of these regulations and W.S. § 35-11-404.~~

(f) The operator shall allow the Administrator, or an authorized representative of the Division, to enter and inspect any property as provided by W.S. §§ 35-11-109(a)(iv), (v) and (vi).

(g) All applications shall be signed by a responsible corporate officer. All reports required by permits (including Annual Reports, Quarterly Monitoring Reports, and reports related to excursion monitoring and control) or other information required by the Administrator which pertain to Class III injection wells shall be signed by a responsible corporate officer or duly authorized representative. Any responsible corporate officer or duly authorized representative signing a document under this Section shall make the following certification:

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

(i) "Responsible corporate officer" means:

(A) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs policy or decision-making functions for the corporation, or

(B) 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, or

(C) In the case of a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(D) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(I) The chief executive officer of the agency, or

(II) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

(ii) "Duly authorized representative" means a person who is authorized to sign a document to be submitted to the Land Quality Division as part of the official record regarding an in situ mining permit or Research and Development Testing License. A person shall qualify for this title only if:

(A) The authorization is made in writing by a responsible corporate officer;

(B) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(C) The written authorization is submitted to the Director.

(iii) If the responsible corporate officer or duly authorized representative is no longer correctly listed with the Administrator, a new name must be submitted, with required written authorization as required by Section 2(h)(i) and (ii) of this Chapter, to the Administrator prior to or with any reports, information, or applications to be signed by that individual.

Section 3. Permit Applications Application Content Requirements - Adjudication and Baseline Information.

All applications for an in situ mining permit shall contain:

2(a)3(a) All applications for a permit shall include, at a minimum, the information and materials required pursuant to W.S. § 35-11-406(a)(i) through (vi), (viii) through (xiii) and (xv) and W.S. § 35-11-406(b)(x) through (xii) related to adjudication and baseline information required in: W.S. § 35-11-428; Chapter 1 and Chapter 2, Sections 1 and 2(a)(i)(A) and (J) of these rules and regulations; and:

(i) A description of the activities conducted by the applicant for which permits are required under: the Resource Conservation and Recovery Act (RCRA), the Underground Injection Control program of the Safe Drinking Water Act; the National Pollution Discharge Elimination System (NPDES) program of the Clean Water Act; and the Prevention of Significant Deterioration program of the Clean Air Act.

(ii) A listing of all permits or construction approvals received or applied for in association with the in situ permit area under the following programs:

- (A) Hazardous Waste Management program under RCRA;
- (B) UIC program under the Safe Drinking Water Act (as it pertains to wells other than Class III wells);
- (C) NPDES program under the Clean Water Act (CWA);
- (D) Prevention of Significant Deterioration (PSD) program under the Clean Air Act (CAA);
- (E) Nonattainment program under the CAA;
- (F) National Emission Standards for Hazardous Pollutants preconstruction approval under the CAA;
- (G) Dredge and fill permits under Section 404 of the CWA;

(H) U.S. Nuclear Regulatory Commission Source Material License; or

(I) Other relevant environmental permits, including State permits.

~~(b) A description of the land, geology and groundwater hydrology consistent with the extent and nature of the proposed surface disturbance and applicable in situ technology including:~~

~~(f) The past, present, and proposed postreclamation use of the land, groundwater and surface water;~~

~~(b)(ii)(a)(iii) A soil survey which maps and describes the general distribution of the soils within the permit area. A detailed soil survey and associated laboratory analysis may be required for soils on the affected lands.~~

~~(b)(iii)(a)(iv) A description of the nature and depth of the topsoil that will be removed from proposed affected land prior to disturbance by mining activities.~~

~~(b)(iv)(a)(v) A survey of vegetative cover, productivity and species diversity on the proposed affected land determined by scientifically acceptable sampling procedures. Vegetation productivity sampling may be required, at the Administrator's discretion, depending on the nature of the communities to be disturbed. However, if existing data from other sources, such as National Resources Conservation Service publications or adjacent permit areas, can be provided and demonstrated to be applicable to the communities in question, the collection of production data may be waived.~~

~~(b)(v)(a)(vi) A list of the indigenous vertebrate species by common and scientific names observed within the proposed permit area. Habitats for endangered species and important habitats and migration routes shall be identified and described. Surface waters supporting fish that may be affected by the operation shall be sampled for benthic invertebrates and periphytons. As required in Chapter 2, Section 1(f), the applicant shall consult with the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service prior to submission of a permit application to determine permitting requirements.~~

~~(b)(vi)(a)(vii) A description of climatic conditions of the site in accordance with the requirements of Chapter 2, Section 2(a)(i)(C) and (D), Chapter 2 of these regulations.~~

~~(b)(a)(viii) A description of the geology, including:~~

~~(A) Discussion, supported by maps, cross-sections and supporting geologist's, driller's, and geophysical logs, which identifies; formations and aquifers; geologic features that could influence aquifer properties; and the areal and stratigraphic position of the production zone in relation to other geologic features within the proposed permit or Research and Development Testing License area; and~~

(B) A generalized map and cross-sections illustrating the regional geologic setting.

~~(b)(a)(ix)~~ A geochemical, lithological, and mineralogical description of the receiving strata and any aquifers that may be affected by the injection of recovery fluid.

~~(b)(vii)(a)(x)~~ For surface waters within the permit area and on adjacent lands:

(A) The names, descriptions, and a map of all such surface waters, and within the permit area and on adjacent lands.

(B) A list and mapping of all adjudicated and permitted surface water and groundwater rights within the permit area and adjacent to the permit area shall be provided.

~~(b)(x)(a)(xi)~~ For groundwaters within the permit area and on adjacent lands:

(A) ~~Locations and present owners~~ The names (or numbers), descriptions, and a map of all water wells installed for water supply or monitoring in use and all wells which penetrate the injection zone within the permit area and on adjacent lands, including a ~~The description shall include: of names of present owners,~~ well completion data, producing interval(s), and variations in water level to the extent such information is available in the public records and from a reasonable inspection of the property. ~~The Administrator shall require a mapping of all wells within and adjacent to the permit area.~~

~~(b)(vii)(B)~~ A list and mapping of all adjudicated and permitted surface water and groundwater rights within the permit area and adjacent to the permit area shall be provided.

~~(b)(xi)(a)(xii)~~ A tabulation list and map of all abandoned wells and drill holes, giving location, depth, producing interval(s), type of use, condition of casing, plugging procedures and date of completion for each well or drill hole within the permit area and on adjacent lands to the extent such information is available in public records and from a reasonable inspection of the property.

~~(b)(xii)(a)(xiii)~~ A groundwater potentiometric surface contour map for each aquifer that may be affected by the mining process, including overlying and underlying aquifers in which monitoring wells are installed.

~~(b)(xiii)(a)(xiv)~~ Aquifer characteristics for the water saturated portions of the receiving strata and aquifers which may be affected by the mining process, which may include, but is not limited to, aquifer thickness, velocity and direction of groundwater movement, storage coefficients or specific yields, transmissivity or hydraulic conductivity and the direction(s) of preferred flow under hydraulic stress in the saturated zones of the receiving strata. The extent of hydraulic connection between the receiving strata and overlying and underlying aquifers, and the hydraulic characteristics of any influencing boundaries in or near the proposed well field area(s) shall be determined and described. Information needed to meet the requirements of Section 6(d) of this Chapter shall also be provided.

~~(b)(xiv)(a)(xv)~~ Tabulated water quality analyses for samples collected from all groundwaters which may be affected by the proposed operation. Sampling to characterize the premining groundwater quality and its variability shall be conducted in accordance with established Department guidelines.

Section 3 4. Permit Applications Content Requirements - Mine (Operations) Plan

~~2(a) and 3(c) 4(a)~~ ~~A mining plan containing all information required by W.S. § 35-11-406(b)(viii), (xiii), (xiv), and (xvi) and consistent with the applicable in situ technology. In addition to the requirements of this Chapter~~ All applications for a permit shall include, at a minimum, the information and materials related to mine plans required in: W.S. § 35-11-428 and 429; Chapter 1, Chapter 2, Section 1, Section 2(a)(i)(A) and (J) and Section 2(b)(iii)(E); and Chapter 3, Section 2 (excepting Subsections (b)(ii) and (iii), (c)(iv), and (h) and with respect to subsection (k)(i), reclamation shall be completed within two years following groundwater restoration as modified in Section 5(a)(iv) of this Chapter); and

~~(3)(c)(ii)~~ 4(a)(i) Contour (topographic) map(s) which accurately locate and identify the permit area and show the location of any public highways, dwellings, utilities and easements within the permit area and adjacent lands in relation to all proposed affected lands and proposed activities associated with the operation including, but not limited to: plant site, chemical storage areas, wellfield areas, monitor wells, roads, temporary and permanent drainage diversions, impoundments, stockpiles for topsoil, ore product and waste, and all processing facilities. The map(s) shall also clearly illustrate the location of monitoring wells required by Section 14 of this Chapter.

4(a)(ii) Discussion and illustration of the proposed mining schedule, including:

(A) A list of the proposed wellfields;

~~3(c)(iii)~~ (B) A map(s) which shows the proposed sequence for mining and reclamation of the wellfields;

~~3(d)(iii)~~ (C) A proposed time schedule for mining each wellfield;

(D) The operational parameters that will be used to determine when mining will be considered complete in a wellfield, including parameters such as: pumping and injection rates; lixiviant and production fluid concentrations; and groundwater elevations, such that there is a well-defined point in time at which mining will be considered complete.

(E) The capacity of the water/waste water treatment systems and correlation of the capacity with the mining and restoration schedules.

~~3(c)(vii)~~ 4(a)(iii) The procedure(s) used to protect the topsoil and subsoil as required in Chapter 3, Section 2(c)(i) through (iii), from excessive compaction, degradation, and wind and water erosion where stockpiling of topsoil and subsoil is necessary. The Administrator may authorize topsoil to remain on areas where minor disturbance will occur associated with construction and installation activities including but

not limited to light-use roads, signs, wellfields, utility lines, fences, monitoring stations, and drilling provided that the minor disturbance will not destroy the protective vegetative cover, increase erosion, nor adversely affect the soil resource.

~~3(c)(x)~~ 4(a)(iv) A description of and design plan for all impoundments and, for impoundments containing wastes, a leakage monitoring detection plan. For impoundments holding toxic or acid-forming material, contingency plans to control unanticipated leakage shall be provided.

~~3(c)(xi)~~ 4(a)(v) A description of all temporary and permanent surface water diversions in accordance with the requirements of Chapter 3, Section 2(e) and (f), ~~of these regulations.~~

~~3(c)(xii)~~ 4(a)(vi) The composition of all known and anticipated wastes and procedures for their disposal.

~~3(c)(xiii)~~ 4(a)(vii) Procedures for ensuring that all acid-forming, or toxic, or other materials constituting a fire, or health and safety hazard encountered during or created by the mining process are promptly treated, confined, or disposed of in a manner designed to prevent pollution of surface water or groundwater, degradation of soils, or and vegetation, or threat to human or animal health and safety.

~~3(c)(xviii)~~ 4(a)(viii) A ~~D~~description of the mitigating measures ~~used during mining to minimize disruption of important habitats and migration routes of wildlife.~~ developed from the consultations with the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service as required per Chapter 2, Section 1(f).

4(a)(ix) A description of the location within the permit area where underground injection is authorized.

~~3(c)(i)~~ 4(a)(x) A description of the proposed method of operation, including injection pressures, injection rate and;

(A) Injection rate, with the average and maximum daily rate and the volume of fluid to be injected;

(B) Injection pressures, with average and maximum injection pressures, as required by Section 11 of this Chapter;

(C) Proposed stimulation program;

(D) Type of recovery fluid to be used;

(E) Proposed injection procedure; and

(F) Expected changes in pressure, native groundwater displacement and direction of movement of injection fluid.

4(a)(xi) The following information concerning the production zone shall be determined or calculated and submitted for new Class III wells or projects:

(A) Where the production zone is in a receiving strata which is naturally water-bearing:

(I) Fluid pressure;

(II) Fracture pressure; and

(III) Physical and chemical characteristics of the receiving strata fluids.

(B) Where the receiving strata is not a water-bearing formation, the fracture pressure in the production zone.

~~3(c)(v)~~ 4(a)(xii) The procedure(s) to ~~ensure~~ assure that the installation of recovery, injection, and monitor wells will not result in hydraulic communication between the production zone and overlying or underlying stratigraphic horizons.

~~3(c)(iv)~~ 4(a)(xiii) The procedures utilized to verify that the injection and recovery wells are in communication with monitor wells completed in the receiving strata and employed for the purpose of detecting excursions.

~~3(c)(ix)~~ 4(a)(xiv) Descriptions of:

(A) The completion details for all monitor wells; and

(B) A detailed description of the typical proposed well completion for injection and recovery wells, as required by Section 6 of this Chapter.

~~3(c)(xv)~~ 4(a)(xv) Details of a program to monitoring program and reporting schedule the quantity and quality of waters that may be affected by the operation from premining through release of bond, including a description of procedures and time schedules used to confirm excursions as required by Sections 14 and 15 of this Chapter, respectively.

~~3(c)(vi)~~ 4(a)(xvi) A schedule for and description of the procedures to check for to demonstrate and maintain mechanical integrity of all Class III injection wells prior to injection and at a minimum of every five (5) years of use as required by Section 7 of this Chapter.

4(a)(xvii) A corrective action plan, for such wells which are improperly sealed, completed, or abandoned, consisting of such steps or modifications as are necessary to prevent movement of fluid into unauthorized zones as required by Section 13 of this Chapter.

~~3(c)(xiv)~~4(a)(~~xviii~~) A description of chemical reactions that may occur during mining as a result of recovery fluid injection.

~~3(c)(viii)~~4(a)(~~xix~~) A subsidence analysis, using established geotechnical principles, which estimates, based upon the proposed mining operation, the effect of subsidence upon the land surface and overlying groundwater aquifers. Subsidence shall be planned and controlled to the extent that the values and uses of the surface land resources and the groundwater aquifers will not be degraded.

~~3(c)(xvi)~~4(a)(~~xx~~) A description of measures employed to prevent an excursion, and contingency and corrective action plans to be implemented in the event of an excursion, in accordance with Sections 12 and 13 of this Chapter.

~~3(c)(xvii)~~4(a)(~~xxi~~) An assessment of impacts that may reasonably be expected as a result of the mining operation to water resources and water rights inside the permit area and on adjacent lands, and the steps that will be taken to mitigate these impacts.

~~WQD Chapter 11, Section 70(a)(ii)-(iv)~~ 4(a)(~~xxii~~) A maintenance plan to ensure:

- (A) Wells are covered and the covers are watertight;
- (B) The wells are marked and can be clearly seen; and
- (C) The area surrounding each well is kept clear of brush or debris; and
- (D) Monitoring equipment is appropriately serviced and maintained so the monitoring requirements in Section 14(a)(i) of this Chapter can be met.

Section 35. Permit Applications Content Requirements - Reclamation Plan.

~~2(a) and 3(c)~~ 5(a) ~~A reclamation plan containing all information required by W.S. § 35-11-406(b)(ii), (iv), (xv), (xix) and consistent with the applicable in situ technology. All applications for a permit shall include, at a minimum, the information and materials related to reclamation required in: W.S. §§ 35-11-428 and 429; Chapter 1, Chapter 2, Section 1, and Chapter 3, Section 2 (excepting Subsections (b)(ii) and (iii), (c)(iv), and (h) and with respect to subsection (k)(i), reclamation shall be completed within two years following groundwater restoration as modified in Section 5(a)(iv) of this Chapter); and~~

~~3(c)(iii)~~ 5(a)(i) Discussion and illustration of the proposed groundwater restoration schedule, including:

- (A) A list of the proposed wellfields;
- ~~3(c)(iii)~~ (B) A map(s) which shows the proposed sequence for reclamation restoration of the wellfields;

(C) A proposed time schedule for each wellfield;

(D) The capacity of the water/waste water treatment systems and correlation of the capacity with the mining and restoration schedules.

~~3(d)(i)~~ 5(a)(ii) The information necessary to demonstrate that the operation will return all affected groundwater, including affected groundwater within the production zone, receiving strata, and any other areas, to a condition such that its quality of use is equal to or better than, and consistent with, the uses for which the water was suitable prior to the operation by employing the best practicable technology. Such a demonstration shall be made by showing that, through the employment of the best practicable technology, as defined in W.S. § 35-11-103(f)(i):

(A) ~~The condition and quality of a~~All affected groundwater will be returned to background or better, or: as close to premining quality and quantity as practicable. At a minimum, the groundwater will be returned to a quality of use, on a parameter by parameter basis, equal to and consistent with the uses for which the water was suitable prior to the commencement of the operation.

(B) ~~The requirements of Section 3(d)(i)(A) cannot be achieved. In this event the condition and quality of all affected groundwater will at a minimum be returned to a quality of use equal to and consistent with uses for which the water was suitable prior to the commencement of the operation. In making a determination of whether a demonstration has been made by the operator that the best practicable technology has been applied and the water quality and quantity has been returned as close to premining quality and quantity as practicable, on a parameter by parameter basis, the Administrator shall, at a minimum, take the following factors into consideration:~~

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

(II) The social and economic value of the source of pollution;

(III) The social and economic value of the impacted aquifer;

(IV) The priority of location in the area involved;

(V) The technical practicability and economic reasonableness of reducing or eliminating the source of pollution;

(VI) The effect upon the environment; and

(VIII) The potential impacts to other waters of the state.

5(a)(iii) A plan for well repair, plugging, and conversion as required by Section 8 of this Chapter.

~~3(d)(xi)~~ 5(a)(iv) A proposed time schedule for achieving reclamation, including commitments that reclamation ~~shall be completed within two years following groundwater restoration of mining-related surface disturbances in any mining area~~ shall be completed within two years following approval of groundwater restoration in that area and that reclamation of all mining-related surface disturbances shall be completed within two years following approval of final groundwater restoration within the permit area.

~~3(d)(iii)~~ 5(a)(v) A contour map showing the approximate postreclamation surface contours for affected lands and the immediate surrounding areas if the operation will substantially alter the premining contours.

~~3(d)(iv)~~ 5(a)(vi) Procedures for reestablishing any surface drainage that may be disrupted by the mining operation.

~~3(d)(v)~~ 5(a)(vii) Procedures for the reclamation of any temporary diversion ditches or impoundments.

~~3(d)(vi)~~ 5(a)(viii) Procedures for permanently disposing of any toxic or acid-forming materials.

~~3(d)(vii)~~ 5(a)(ix) Procedures for removing and disposing of structures used in conjunction with the mining operation.

~~3(d)(viii)~~ 5(a)(x) Procedures for mitigating or controlling the effects of subsidence.

~~3(d)(ix)~~ 5(a)(xi) Procedures for ground surface preparation, depth of topsoil replacement, erosion control and water conservation practices.

~~3(d)(x)~~ 5(a)(xii) Procedures for revegetation ~~so as~~ to return the affected lands to the proposed postmining land use and procedures for evaluation of revegetation success in accordance with Chapter 3, Section 2(d).

~~3(d)(xii)~~ 5(a)(xiii) The estimated costs ~~of~~ for reclamation as computed in accordance with established engineering principles, including, but not limited to:

- (A) Cost of removing and disposing of structures;
- (B) Cost of topsoiling and reseeded all affected lands;
- (C) Cost of facilities, materials, and chemicals used for groundwater restoration;
- (D) Cost of capping, plugging, and sealing of all wells; and
- (E) Costs for personnel working on reclamation-related activities.

Section 6. Well Location, Depth Intervals, and Completion Requirements.

(a) The methods for well construction shall be approved by the Administrator and included in the permit or Research and Development Testing License application (per Section 4(a)(xiv) of this Chapter) and shall constitute a condition of the permit. The location and construction requirements listed in Sections 6(a) through 6(f) of this Chapter are applicable to all wells installed for activities related to in situ mining. Additional requirements for Class III injection wells are included in Section 6(g). Additional requirements for monitoring wells are included in Section 6(h).

~~WQD Chapter 11, Sections 64, 66, and 69~~ LQD Chapter 11, Section 6(b) Well Location/Siting:
In selecting well locations, capping wells, and maintaining well caps, the following requirements apply:

~~64(a) (b)(i)~~ 64(b) (b)(i) The top of the casing shall terminate above grade. Where possible, the top of the casing shall terminate or above any known conditions of flooding from runoff or standing water, and the area around the well shall slope away from the well to direct surface drainage shall be directed away from the well. If a well must be completed in an ephemeral drainage, steps shall be taken to protect the well from damage due to runoff and to prevent surface water drainage into the well. Completion of wells in intermittent or perennial drainages is prohibited.

~~69(b) (b)(ii)~~ 69(b) (b)(ii) The well opening shall be closed with a cover to prevent the introduction of undesirable material into the well and to insure public assure the safety of humans and animals whenever the well is not in use or when maintenance is being performed on the well.

~~66(a) (b)(iii)~~ 66(a) (b)(iii) Openings into the top of the well which are designed to provide access to the well, e.g., for injection, production, sampling, and measuring water levels, chlorinating, adding gravel, etc., shall be protected against entrance of surface waters or foreign matter by installation of water tight caps or plugs. Access openings designed to permit the entrance or egress of air or gas shall terminate above the ground and above known flood levels and shall be protected against the entrance of foreign materials by installation of downturned and screened "U" bends. All other openings (holes, crevices, cracks, etc.) shall be sealed. A sounding tube, taphole with plug or similar access for the introduction of water level measuring devices or for access for wiring or tubing for permanent downhole measuring devices may be affixed to the casing of the well as long as the proper seal is maintained. Access ports for water level and pressure measuring devices are required by the State Engineer on all wells greater than four inches diameter.

~~64(b) (b)(iv)~~ 64(b) (b)(iv) Where a well is to be near a building or powerlines, the well shall be located at a distance from the building and powerlines to provide access for repairs, maintenance, sampling, and similar work. At a minimum, a well must clear any projection from a building by three feet and clear any powerline by ten feet.

~~WQD Chapter 11, Sections 65 and 68~~ LQD Chapter 11, Section (c) Sealing the Annular Space:
The annular space shall be sealed to protect it against contamination or pollution by entrance of surface and/or shallow subsurface waters. Annular seals shall be installed to: provide protection for the casing against corrosion; to assure structural integrity of the casing; to stabilize the upper formations; protect the annular space against contamination or pollution by entrance of surface and/or shallow subsurface waters; and prevent

migration of water from one aquifer or water-bearing strata to another in accordance with the following requirements:

(65)(b)&(d) (c)(i) The drill hole shall be of sufficient diameter for adequate sealing and, at a given depth, at least four inches greater in drilled diameter than the diameter of the outer casing and joints at that depth. The annular space between outer casing and inner casing, if inner casing is used, shall also be of sufficient diameter for adequate sealing, and the outer casing diameter at least four inches greater than the inner casing diameter. If unconsolidated material is encountered, temporary conductor casing may be needed to hold the drill hole open while the sealing material is placed. Thickness of seal: The thickness of the seal shall be at least two inches, as measured perpendicular from the drill hole wall to the outer casing wall or between the walls of outer and inner casing, and not less than three times the size of the largest coarse aggregate used in the sealing material.

68(a)&(b) (c)(ii) All of the annular space, except that portion in the aquifer or water-bearing strata in which the well is completed, shall be sealed to prevent migration of water from one aquifer or water-bearing strata to another.

65(e)&68(c) (c)(iii) Placement of seal: Before placing the seal, all loose cuttings, chips, or other obstructions shall be removed from the annular space by flushing with water or fluid drilling mud.

(c)(iv) The sealing material shall be placed from the bottom to the top of the interval to be sealed, and, when possible, placed in one continuous operation. The fluid used to force the final sealing material through the casing shall remain under pressure, to prevent back flow, until the sealing material is set. If settling occurs during setting of the sealing material, additional material must be placed to bring the level of the sealing material to the ground surface.

65(e)&68(c) (c)(v) Sealing material shall consist of neat cement grout, sand-cement grout, bentonite clay or concrete meeting the following requirements:-

65(e)(i) (c)(v)(A) Cement used for sealing mixtures shall meet the requirements of American Society of Testing Materials (ASTM) C150-00 "Standard Specifications for Portland Cement" (2000) or American Petroleum Institute (API) RP 10B "Recommended Practices for Testing Oil-Well Cements and Cement Additives" (22nd ed., 12/1997, with Addendums 1 (10/1999) and 2 (11/2000). Materials used as additives for Portland Cement mixtures in the field shall meet the requirements of ASTM C494/C494M-99ae1 "Standard Specifications for Chemical Admixtures for Concrete" (2001) or API RP 10B "Recommended Practices for Testing Oil-Well Cements and Cement Additives" (22nd ed., 12/1997, with Addendums 1 (10/1999) and 2 (11/2000).

65(e)(ii) (c)(v)(B) Neat cement shall be composed of one sack of Portland Cement (94 pounds) to 4½ to 6½ gallons of clean water.

65(e)(iii) (c)(v)(C) Sand-cement grout shall be composed of not more than two parts by weight of sand and one part of Portland cement to 4½ to 6½ gallons of clean water per sack of cement.

~~65(c)(iv)~~ (c)(v)(D) Concrete used shall be "Class A" or "Class B". Aggregates shall meet the requirements of ASTM C33-01 "Standard Specifications for Concrete Aggregates" (2001).

~~65(c)(v)~~ (c)(v)(E) Special quick-setting cement, retardants to setting, and other additives, including hydrated lime to make the mix more fluid or bentonite to make the mix more fluid and reduce shrinkage, may be used.

~~65(c)(vi)~~ (c)(v)(F) Bentonite clay mixtures shall be composed of bentonite clay and clean water thoroughly mixed before placement so that there are no balls, clods, etc or other features that could reduce the effectiveness of the seal.

~~65(c)(vii)~~ (c)(v)(G) Used drillers mud or cuttings or chips from drilling the borehole shall not be used as sealing material.

~~65(c)(viii)~~ (c)(v)(H) The minimum time that must be allowed for materials containing cement to "set" shall be in accordance with (ASTM) C150-00 "Standard Specifications for Portland Cement" (2000) or American Petroleum Institute (API) RP 10B "Recommended Practices for Testing Oil-Well Cements and Cement Additives" (22nd ed., 12/1997, with Addendums 1 (10/1999) and 2 (11/00). When necessary these times may be reduced by use of accelerators as determined by the well contractor.

~~WQD Chapter 11, Section 67(a)~~ LQD Chapter 11, Section (d) Casing: The casing shall: provide structural stability to prevent casing collapse during installation as well as drillhole wall integrity when installed; be of required size to convey liquid at a specified injection/recovery rate and pressure; and be of required size to allow for sampling. Casing materials may include steel or polyvinyl chloride, which meet the relevant ASTM standards, or other materials if approved by the Administrator.

~~WQD Chapter 11, Section 67(b)~~ LQD Chapter 11, Section (e) All casing shall be placed with sufficient care to avoid damage to casing sections and joints. All joints in the casing above the perforations or screens shall be watertight. The uppermost perforations shall be at least below the minimum depth of seal. Casing shall be equipped with centering guides at a minimum spacing of twenty feet to ensure even thickness of annular seal and/or gravel pack.

~~67(b)(i)~~ (e)(i) Metallic casing: Steel casing may be joined by either welding or by threading and coupling.

~~67(b)(ii)~~ (e)(ii) Plastic (non-metallic) casing. Depending on the type of material and its fabrication, plastic casing may be joined by solvent welding or may be mechanically joined. Depending on the type of material and its fabrication. Compatibility between potential contaminants and the sealing agent used shall be demonstrated.

~~WQD Chapter 11, Section 69~~ LQD Chapter 11, Section 6(f) Well development shall:

~~69(a)~~ (f)(i) Be done by methods which will not cause damage to the well or cause adverse subsurface conditions that may destroy barriers to the vertical movement of water between aquifers; and

69(c) (f)(ii) Include documented deviation checks.

(g) For Class III injection wells, the following construction requirements are in addition to the requirements listed in (a) through (f) of this Section:

(i) Appropriate logs and other tests shall be conducted during the drilling and construction of new Class III wells. A descriptive report prepared by a knowledgeable log analyst interpreting the results of such logs and tests shall be submitted to the Administrator. The logs and tests appropriate to each type of Class III well shall be determined based on the intended function, depth, construction and other characteristics of the well, availability of similar data in the area of the drilling site and the need for additional information that may arise from time to time as the construction of the well progresses. Deviation checks shall be conducted on all holes where pilot holes and reaming are used, unless the hole will be cased and cemented by circulating cement to the surface. Where deviation checks are necessary, they shall be conducted at sufficiently frequent intervals to assure that vertical avenues for fluid migration are not created during drilling.

(ii) All Class III wells shall be cased and sealed to prevent the migration of fluids into or between underground sources of water. The casing and sealing material used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and sealing requirements, the following factors shall be considered:

(A) Depth to the production zone;

(B) Injection pressure, external pressure, internal pressure, axial loading, or other factors as determined by the Administrator;

(C) Drill hole annular space;

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

(E) Corrosiveness of injected fluids and formation fluids;

(F) Lithology of receiving strata and confining zones; and

(G) Type and grade of sealing material.

(h) The following monitoring well construction requirements are in addition to the requirements listed in (a) through (f) of this Section:

(i) Where injection is into a receiving strata which contains water with less than 10,000 milligrams per liter (mg/l) Total Dissolved Solids (TDS), monitoring wells shall be completed into the production zone and any Underground Source of Water which could be adversely affected by the mining operation. These wells shall be located in such a fashion as to detect any excursion of injection fluids, process by-products, or formation fluids outside the mining area or zone. If the operation may be affected by

subsidence or catastrophic collapse, the monitoring wells shall be located so that they will not be physically affected.

(ii) Where injection is into a receiving strata which contains water with greater than 10,000 mg/l TDS, no monitoring wells are necessary in the production zone.

(iii) Where the injection wells penetrate an Underground Source of Water (USW) in an area subject to subsidence or catastrophic collapse, an adequate number of monitoring wells shall be completed into the USW to detect any movement of injected fluids, process by-products or formation fluids into the USW. The monitoring wells shall be located outside the physical influence of the subsidence or catastrophic collapse.

(iv) In determining the number, location, and construction of the monitoring wells and frequency of monitoring, the following criteria shall be considered:

(A) The uses for which the groundwater in the receiving strata is suitable under premining conditions, as determined from Chapter 8, Water Quality Division Rules and Regulations (as amended March 12, 1993), in any aquifer affected or potentially affected by the injection operation;

(B) The proximity of the injection operation to points of withdrawal;

(C) The local geology and hydrology;

(D) The operating pressures and whether a negative pressure gradient is being maintained;

(E) The nature and volume of the recovery fluid, the formation fluid, and the process by-products; and

(F) The injection well density.

Section 7. Mechanical Integrity Testing (MIT) of Class III Injection Wells.

(a) A schedule and methods for Mechanical Integrity Testing shall be approved by the Administrator and included in the permit or Research and Development Testing License application (per Section 4(a)(xvi) of this Chapter) and shall constitute conditions of the permit. The schedule and methods shall meet the following requirements:

(i) The operator of a Class III well shall establish mechanical integrity as defined in Section 1 of this Chapter for each well prior to commencing injection and shall maintain mechanical integrity for each well until it is plugged or converted in accordance with Section 8 of this Chapter.

(ii) For demonstrating mechanical integrity as defined in Section 1 of this Chapter:

(A) One of the following methods must be used to evaluate the absence of significant leaks in the casing, tubing or packer:

(I) Following an initial pressure test, monitoring of the tubing-casing annulus pressure with sufficient frequency to be representative, as determined by the Administrator, while maintaining an annulus pressure different from atmospheric pressure measured at the surface; or

(II) Pressure test with liquid or gas.

(B) One of the following methods must be used to determine the absence of significant fluid movement into an underground source of water through vertical channels adjacent to the injection bore:

(I) The results of a temperature or noise log; or

(II) Where the nature of the casing precludes the use of the logging techniques prescribed above, cementing records demonstrating the presence of adequate cement to prevent such migration shall be provided; or

(III) Where the Administrator elects to rely on cementing records to demonstrate the absence of significant fluid movement, the monitoring program prescribed by Section 14 of this Chapter shall be designed to verify the absence of significant fluid movement.

(C) The Administrator may allow the operator to use a test to demonstrate mechanical integrity other than those listed in subsection (A) above. To obtain approval, the Administrator with concurrence of the Director shall submit a written request to the EPA, which shall set forth the proposed test and all technical data supporting its use. The EPA shall approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. Any alternate method approved by the EPA shall be published in the Federal Register and may be used in all States unless its use is restricted at the time of approval by the EPA.

(iii) Maintenance of the mechanical integrity of each Class III well, which has not been plugged or converted as required by Section 8 of this Chapter, shall be demonstrated at least once every five years.

(iv) Before resuming injection into any Class III well that has been damaged by surface or subsurface activity or that has undergone an activity that may jeopardize the mechanical integrity of the well, such as the use of downhole cutting and underreaming tools, the operator must demonstrate the mechanical integrity of that well.

(v) If the Administrator determines that a Class III well lacks mechanical integrity, he or she shall give written notice of this determination to the operator of the well. Unless the Administrator requires immediate cessation, the operator shall cease injection into the well within 48 hours of receipt of the Administrator's determination. The Administrator may allow plugging of the well or require the operator to perform such additional construction, operation, monitoring, reporting, and corrective action as is necessary to prevent the movement of fluid into unauthorized zones or onto the surface caused by the lack of mechanical integrity. The operator may resume injection upon written notification from the Administrator that the operator has demonstrated mechanical integrity.

(vi) Results of MIT testing shall be reported in accordance with the requirements in Section 15 of this Chapter.

Section 8. Requirements for Plugging of Drill Holes and Repair, Plugging, and Conversion of Wells.

(a) A plan for drill hole and well repair, plugging, and conversion shall be approved by the Administrator and included in the permit or Research and Development License application, as required by Section 5(a)(iii) of this Chapter, and shall constitute a condition of the permit.

(b) All wells and drill holes resulting from in situ mining operations shall be plugged in accordance with Chapter ~~14~~ 8 of these regulations and W.S. § 35-11-404.

(c) If a well lacks mechanical integrity, plugging or repair of the well is required to prevent the movement of fluid into unauthorized zones or onto the surface caused by the lack of mechanical integrity. Plugging or repair of the well must be completed within 120 days of the testing which indicates the well lacks mechanical integrity. If the well is repaired rather than plugged, retesting of the well, in accordance with the requirements of Section 7(a)(ii) of this Chapter must be completed within 120 days after the repair is completed.

(d) The operator shall notify the Administrator, as required by the permit or Research and Development Testing License, before plugging a well or converting it to uses other than those defined in Section 1(c) of this Chapter.

(e) All abandoned wells shall be plugged or converted, in accordance with the Plugging/Conversion Plan in the permit or Research and Development Testing License, in order to assure that groundwater is protected and preserved for future use and to eliminate any potential physical hazard. A well is considered "abandoned" when it has not been used for a period of one year, unless the operator submits to the Administrator and receives approval for a non-significant revision (Section 19(c)(vi) of this Chapter) demonstrating their intention to use the well again and the actions and procedures they will take to ensure that mechanical integrity of the well are maintained (Section 7(a)(i) of this Chapter) and the well will not endanger Underground Sources of Water in accordance with the requirements of this Chapter.

(f) A well shall be plugged to meet the requirements below to assure that plugging of the well will not allow the movement of fluids into or between Underground Sources of Water:

(i) The well shall be plugged with:

(A) Neat cement grout, sand-cement grout, concrete, or bentonite grout with a permeability of 10^{-7} cm/sec or less. To assure that the well is filled and there has been no bridging of the sealing material, the operator should provide LOD with documentation that the volume of material placed in the well at least equals the volume of the empty hole; or

(B) Other plugging materials if such materials will prevent movement of fluids into or between underground sources of water and the Administrator approves the use of such materials.

(ii) The well shall be plugged using a method which will not allow the movement of fluids either into or between underground sources of water. The description of the method will identify:

- (A) The type and number of plugs to be used;
- (B) The placement of each plug including the elevation of the top and the bottom;
- (C) The method of placement of the plugs, in accordance with Section 8(e)(iii);
- (D) The procedure to be used to meet the requirements of Section 8(e)(iv).

and

(iii) Placement of the cement plugs shall be accomplished by one of the following:

- (A) The Balance method;
- (B) The Dump Bailer method;
- (C) The Two-Plug method; or
- (D) An alternative method approved by the Administrator, which:

(I) Includes placement of cementing materials in the interval or intervals to be sealed by methods that prevent free fall, dilution and/or separation of aggregates from sealing materials;
and

(II) Will reliably provide a comparable level of protection to underground sources of water.

(iv) The well to be plugged 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 prescribed by the Administrator, prior to the placement of the cement plug(s).

(v) When the underground pressure head producing flow (ie. gassy or artesian) is such that a counter-pressure must be applied to force a sealing material into the annular space, this counter-pressure should be maintained for the length of time required for the cementing/sealing mixture to set or fully hydrate.

(g) In the case of an in situ operation which underlies or is in an aquifer which has been exempted under Section 10 of this Chapter, the Plugging/Conversion Plan in the permit or Research and Development Testing License shall also demonstrate adequate protection of Underground Sources of Water (USWs). The Administrator shall prescribe aquifer cleanup and monitoring where he deems it necessary and feasible to assure adequate protection of USWs.

(h) The top of the cementing/sealing mixture of any plugged and abandoned well should show clearly, by permanent markings, whether inscribed in the cement or on a steel plate placed atop the sealing

mixture, the permit number, well identification number and date of plugging. All markings devices should be installed at a minimum depth of two feet below the land surface.

(i) Plugging and conversion activities shall be reported in accordance with the requirements in Section 15 of this Chapter.

Section 9. Permit and Research and Development Testing License Conditions

(a) The following conditions shall apply to permits and Research and Development Testing Licenses. Each condition shall be incorporated into the permit or Research and Development Testing License either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit or Research and Development Testing License.

(i) The operator has a duty to comply with all terms and conditions of the approved permit or Research and Development Testing License.

(A) Any permit or Research and Development Testing License noncompliance is grounds for enforcement action and any Research and Development Testing License noncompliance is grounds for denial of a Research and Development Testing License renewal application.

(B) The filing of a request by the operator for a permit or Research and Development Testing License revision per Chapter 7 or Section 19 of this Chapter does not waive any permit or Research and Development Testing License condition.

(ii) It shall not be a defense for an operator 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 or Research and Development Testing License.

(iii) The operator has a duty to take all reasonable steps to minimize, mitigate, or correct any adverse impact on the environment resulting from noncompliance with this permit or Research and Development Testing License.

(iv) The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the operator to achieve compliance with the terms and conditions of the permit or Research and Development Testing License. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of the permit or Research and Development Testing License.

(v) The permit or Research and Development Testing License does not convey any property rights of any sort or any exclusive privilege.

(vi) The operator has a duty to provide to the Administrator, within a time specified, any information which the Administrator may request to determine whether cause exists for revising or revoking the permit or Research and Development Testing License, or to determine compliance with this permit or Research and Development Testing License. The operator shall also furnish to the Administrator, upon request, copies of records to be kept as required by the permit or Research and Development Testing License.

(vii) In compliance with all the provisions of Chapter 7 and Section 19 of this Chapter:

(A) The operator shall give notice to the Administrator as soon as possible of any planned physical alterations or additions to the permitted or licensed facility and

(B) When the operator becomes aware of failure to submit any relevant facts in a permit or Research and Development Testing License application, or submitted incorrect information in a permit or Research and Development Testing License application or in any report to the Administrator, the operator shall promptly submit such facts or information to the Administrator.

(viii) Prior to requesting bond reduction for abandonment of a Class III well or for conversion of a Class III well to another use, the operator shall provide documentation and receive approval from the Administrator regarding the plugging or conversion of that well.

(ix) The following shall also constitute conditions of the permit:

(A) Plans for corrective action, including injection pressure limitation, as specified in Section 13(a) of this Chapter;

(B) Monitoring requirements as specified in Section 14 of this Chapter;

(C) Schedule and methods to establish and maintain Mechanical Integrity as specified in Section 7 of this Chapter; and

(D) A plan for well repairs, plugging, and conversion as specified in Section 8 of this Chapter.

Section 10. Aquifer Classification and Exemption.

(a) Injections from Class III wells shall be restricted to those production zones that:

(i) Have been classified by the Wyoming Department of Environmental Quality as Class V aquifers under Chapter 8 of the Water Quality Division Rules and Regulations (as amended March 12, 1993); and

(ii) Have concentrations of Total Dissolved Solids:

(A) Less than 10,000 milligrams per liter; meet the definition of an "Underground Source of Water" as defined in Section 1 of this Chapter; and have been approved as an exempted aquifer

by the U.S. Environmental Protection Agency pursuant to Section 10(b) of this Chapter, or

(B) Greater than 10,000 milligrams per liter; and

(iii) Are located in a geologic and hydrologic setting in which movement of fluid, containing any contaminant, into Underground Sources of Water can be prevented.

(b) An aquifer, or a portion thereof, which meets the criteria for an Underground Source of Water as defined in Section 1 of this Chapter may be designated as an "exempted aquifer":

(i) If it meets the following criteria:

(A) It does not currently serve as a source of water for Class I, II, III, Special (A) or Class IVA uses as described in Chapter 8 of the Water Quality Rules and Regulations (as amended March 12, 1993), and

(B) It cannot now and will not in the future serve as a source of water because:

(I) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit or Research and Development Testing License applicant to contain minerals or hydrocarbons that, considering their quantity and location, are expected to be commercially producible; or

(II) It is situated at a depth or location which makes recovery of water for Class I, II, III, Special (A) or Class IVA as described in Chapter 8 of the Water Quality Division Rules and Regulations (as amended March 12, 1993) economically or technologically impractical; or

(III) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or

(IV) It is located over a Class III well mining area subject to subsidence or catastrophic collapse; or

(V) The total dissolved solids content of the groundwater is less than 10,000 mg/l and it is not reasonably expected to supply a public water system as defined by W.S. § 35-11-103(c)(viii); and

(ii) As demonstrated by information in the permit or Research and Development Testing License application, including:

(A) A map and general description of the receiving strata identifying and describing in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and define the extent of the aquifer proposed for exemption;

(B) General information on the mineralogy and geochemistry of the receiving strata;
and

(C) Analysis of the amenability of the receiving strata to the proposed mining method; and a timetable of planned development of the receiving strata.

(c) A request for an aquifer exemption shall be presented by the Administrator to the EPA as a state program revision pursuant to Code of Federal Regulations, Title 40, Part 145, Section 32 (40 CFR 145.32 as amended July 1, 2001).

Section 611. Prohibitions.

(a) Permittees and licensees shall not inject recovery fluid into any zone or interval other than that described in the approved permit or license. No Class III well construction may commence until a permit or Research and Development Testing License has been issued which includes well construction information in accordance with the requirements of Section 6 of this Chapter. Construction of wells needed to obtain the information required in Section 3 of this Chapter may be allowed with approval of the Administrator, however, such wells may not be used for injection.

(b) The operator may not commence injection in a new injection well until construction is complete, and:

(i) The operator has submitted notice of completion of construction to the Administrator, and

(ii) With respect to inspection and review:

(A) The Administrator has inspected or otherwise reviewed the new injection well and finds the well is in compliance with the permit or Research and Development Testing License; or

(B) The operator has not received notice from the Administrator of the intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in paragraph (b)(i) of this subsection, in which case prior inspection or review is waived and the operator may commence injection. The Administrator shall include in the notice a reasonable time period in which he or she shall inspect the well.

(c) The approved permit or Research and Development Testing License shall include maximum injection volumes and/or pressures necessary to assure: fractures are not initiated in the confining zone; injected fluids do not migrate into any Underground Source of Water (USW); and formation fluids are not displaced into any USW. Operating requirements shall, at a minimum, specify that:

(i) Except during well stimulation, injection pressure at the wellhead shall be calculated to assure that the pressure in the production zone during injection does not initiate new fractures or propagate existing fractures. In no case, shall injection pressure initiate fractures in the confining zone, if confinement is present, or cause the migration of injection or formation fluids into an USW;

(ii) Injection between the outermost casing protecting underground sources of water and the well bore is prohibited.

(d) No operator shall construct, operate, maintain, convert, plug, abandon, or conduct any injection or other mining-related activity in a manner that allows the movement of fluid containing any contaminant into zones or intervals other than those zones authorized in the approved permit or Research and

Development Testing License. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.

Section 12. Noncompliance and Excursions.

2(e) (a) The operator shall:

(i) Verbally report any confirmed excursion to the Administrator any noncompliance, including excursions, which may endanger public health or the environment within 24 hours, and of the time the operator becomes aware of the occurrence, including:

(A) Any monitoring or other information which indicates that any contaminant may cause endangerment to an Underground Source of Water (USW); and

(B) Any noncompliance with a permit or Research and Development Testing License or malfunction of the injection system which may cause fluid migration into, or between USWs.

(ii) Provide a written report to the Administrator within five days of the operator becoming aware of the noncompliance occurrence. The Administrator of the Land Quality Division will forward one copy to the Administrator of the Water Quality Division. If the noncompliance is:

(A) Not a potential excursion, the written report shall describe:

(I) The noncompliance and its cause;

(II) The period of noncompliance, including exact dates and times;

(III) If the noncompliance has not been corrected, the anticipated time it is expected to continue; and

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

(B) A potential excursion, the written report shall describe:

(I) The location of the excursion, including the monitoring well(s) involved;

(II) The date(s) confirmation samples will be collected in accordance with Section 12(b); and

(III) Interim measures taken to mitigate the impacts of the potential excursion.

(b) "Confirmation" of an excursion means that an excursion detected in a regularly scheduled sampling event is subsequently detected in a second or third sampling event conducted in accordance with the following requirements:

(i) The second sampling event shall be conducted within 24 hours of the receipt of the results from the first sampling event in which the excursion was initially detected. If the results from the first and second sampling event both indicate an excursion has occurred, then the excursion will be considered confirmed for the purpose of meeting the reporting requirements of W.S. § 35-11-429(a).

(ii) If the results from the first and second sampling events provide conflicting information about whether or not an excursion has occurred, then a third sampling event must be conducted within 24 hours of the receipt of the results from the second sampling event. However, if the results of the confirmatory sampling are not complete within 30 days of the initial sampling event which indicated an excursion might be present, then the excursion will be considered confirmed for the purpose of meeting the reporting requirements of W.S. § 35-11-429(a).

~~2(c)(c)~~ The operator shall:

(i) Verbally report any confirmed excursion to the Administrator within 24 hours of confirmation of the excursion; and;

(ii) Submit within seven days thereafter a written report to the Administrators of the Land Quality Division and the Water Quality Division within five days of the confirmation of the excursion detailing the procedures for mitigating or controlling the excursion. The Administrator of the Land Quality Division will forward one copy to the Administrator of the Water Quality Division.

~~2(c-cont'd) (d) The Administrator of the Land Quality Division may after consultation with the Director and Administrator of the Water Quality Division, terminate or modify the mining operation if an excursion is not controlled within 60 days following the confirmation of the excursion. An excursion is controlled when the movement of recovery fluid out of the production zone and into unauthorized areas has ceased it can be demonstrated through water quality and groundwater gradient or if applicable, pressure measurements, that recovery fluid in unauthorized areas is declining.~~

(i) If an excursion is not controlled within 30 days following confirmation of the excursion, a sample must be collected from each of the affected monitoring wells and analyzed for the following parameters: Ammonia; Antimony; Arsenic; Barium; Beryllium; Bicarbonate; Boron; Cadmium; Calcium; Carbonate; Chloride; Chromium; Conductivity; Copper; Fluoride; Gross Alpha; Gross Beta; Iron; Lead; Magnesium; Manganese; Mercury; Molybdenum; Nitrate; Nitrate + Nitrite; pH; Potassium; Selenium; Sodium; Sulfate; Radium-226 and 228; Thallium; Total Dissolved Solids; Uranium; Vanadium; and Zinc.

(ii) If an excursion is not controlled within 60 days following the confirmation of the excursion, the Administrator of the Land Quality Division may, after consultation with the Director and Administrator of the Water Quality Division, terminate or modify the mining operation and revoke the permit or Research and Development Testing License or modify the mining operation and require modification of the permit or Research and Development Testing License. Modifying the operation may include: sampling of additional wells for the parameters listed in Section 12(d)(i); installation of additional monitor wells; termination of injection in the portion of the well field in which the excursion originated; or a combination of approaches to assure control within the necessary time frames.

(ii) If the excursion is controlled, but the fluid which moved out of the production zone during the excursion has not been recovered within 60 days following confirmation of the excursion (i.e., the monitor well is still "on excursion"), the operator will submit, within 90 days following confirmation of the excursion, a plan and compliance schedule, acceptable to the Department, for bringing the well (or wells) off excursion. The plan and compliance schedule can be submitted as part of the monthly excursion report required in Section 12(e) of this Chapter. The compliance schedule shall meet the requirements of Section 13(b) of this Chapter.

(e) In addition to the excursion notifications and control plan required above, a monthly report on the status of an excursion shall be submitted to the Administrator beginning the first month the excursion is confirmed and continuing until that excursion is over. The monthly report shall be a requirement of the compliance schedule and shall include, at a minimum:

(i) Concentrations of UCL parameters and groundwater elevations in all monitoring wells on excursion and, as necessary, surrounding wells;

(ii) Such information deemed necessary by the Administrator to show that the excursion is being controlled and that the bond amount for groundwater restoration remains sufficient;

(iii) Information on steps taken to control the excursion.

(f) The operator shall report all instances of noncompliance, not reported under this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Sections 12(a)(i) and (ii), as applicable.

Section 13. Corrective Action and Compliance Schedules.

(a) Corrective actions are:

(i) Needed when a well is improperly sealed, completed, or abandoned, in which case:

(A) Operators shall provide the well information, as required in Sections 3(a)(xi) and (xii) of this Chapter, and the corrective action plan as required in Section 4(a)(xvii) of this Chapter. Where the Administrator's review of the plan indicates that the operator's plan is inadequate (based on the factors presented below), the Director shall require the operator to revise the plan, prescribe a plan for corrective action as a term and condition of the permit, or deny the application.

(B) In determining the adequacy of corrective action proposed by the operator and in determining the additional steps needed to prevent fluid movement into Underground Sources of Water, the following criteria and factors shall be considered by the Administrator:

(I) Nature and volume of injected fluid;

(II) Nature and volume of native groundwater;

(III) Compatibility of injected fluid and native groundwater;

(IV) Potentially affected population;

(V) Geology;

(VI) Hydrology;

(VII) Proposed method of operation as required by Section 4(a)(x) of this Chapter or history of the injection operation if the corrective action is needed in response to amending new wells into an existing operation;

(VIII) Completion and plugging records;

(IX) Plugging procedures in effect at the time the well was abandoned; and

(X) Hydraulic connections with Underground Sources of Water.

(ii) Needed if any water quality monitoring of an Underground Source of Water indicates the movement of any contaminant into an Underground Source of Water, except as specifically authorized in the approved permit or Research and Development Testing License, in which case, the Administrator shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well and limitation of injection pressure) as are necessary to prevent such movement. These additional requirements shall be imposed by requiring the operator to revise the permit or Research and Development Testing License, the permit or Research and Development Testing License may be revoked, or appropriate enforcement action may be taken if the permit or Research and Development Testing License has been violated.

(iii) The status of corrective action on defective wells shall be reported in accordance with the requirements of Section 15 of this Chapter.

(b) When appropriate, a permit or license may include, or be revised to include, a compliance schedule leading to compliance with the applicable statutes and regulations. The schedule shall be applicable whether the operator is continuing or ceasing regulated activities.

(i) Any compliance schedule shall require compliance as soon as possible, and in no case later than 3 years after the date the schedule is put into effect. In addition:

(A) The schedule shall set forth interim requirements, the dates for their achievement, and a projected date of compliance with all the requirements;

(B) The time between interim dates shall not exceed 1 year; and

(C) The schedule shall specify dates for the submission of progress reports, no later than 30 days following each interim date and the final date of compliance.

Section 14. Monitoring Requirements.

~~3(c)(xv)(a)~~ ~~Details of a program to~~ A detailed monitoring program shall be approved by the Administrator and included in the permit or Research and Development Testing License application, as required by Section 4(a)(xvi) of this Chapter, and shall constitute a condition of the permit. The program shall describe the procedures for monitoring the quantity and quality of waters that may be affected by the operation from premining before mining through release of bond; reclamation including a description of procedures and time schedules used to confirm excursions and shall, at a minimum, specify:

(i) Requirements for:

(A) The proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);

(B) The intervals and frequency of monitoring, sufficient to yield data which are representative of the monitored activity, including continuous monitoring when appropriate;

(C) Tests and methods used to generate monitoring data.

(ii) Monitoring of:

(A) The nature of the injected fluids with sufficient frequency, and at least monthly, to yield representative data on the characteristics of the fluid. Whenever the injection fluid is modified to the extent that the previous analysis is incorrect or incomplete, a new analysis shall be provided to the Administrator;

(B) The injection pressure and either flow rate or volume at least weekly or metering and daily recording of injected and produced fluid volumes as appropriate; and

(C) Class III injection wells may be monitored for the parameters required by subsections (A) and (B) on a field or project basis rather than an individual well basis by manifold monitoring. Manifold monitoring may be used in cases of facilities consisting of more than one injection well operating with a common manifold. Separate monitoring systems for each well are not required provided the operator demonstrates that manifold monitoring of injection pressure is comparable to individual well monitoring.

(iii) Requirements for:

(A) Semi-monthly monitoring of the fluid level in the production zone, where appropriate;

(B) Semi-monthly monitoring of the water levels and parameters chosen to measure the water quality in the monitoring wells;

(C) Quarterly monitoring of the water levels and parameters chosen to detect any movement of injected fluids, process by-products, or formation fluids in the monitoring wells where the

injection wells penetrate an Underground Source of Water in an area subject to subsidence or catastrophic collapse (Section 6(g)(iii) of this Chapter); and

(D) Periodic monitoring of pressure changes or other physical parameters if such monitoring provides for more rapid detection of excursions.

~~3(c)(xv)(a)(iv) Details of a program to monitor the quantity and quality of waters that may be affected by the operation from premining through release of bond, including a description of procedures and time schedules used to:~~

(A) Detect and confirm excursions; and

(B) Monitor excursions and excursion control efforts.

(v) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

Section 715. Maintenance of Records and Chemical Analysis Reporting Requirements.

~~7(a) The operator shall maintain records at the mine site in accordance with W.S. § 35-11-430(b) and All chemical analyses submitted to the Administrator in accordance with a valid permit or Research and Development License shall include:~~

~~(i) A description of, or reference for, the procedures and methods used for sample collection, preservation, and quality control;~~

~~(ii) The name, address, and telephone number of the laboratory performing the analyses, and the laboratory job identification number and the date the analyses were performed; and~~

~~(iii) Signatures as required by Section 2(h) of this Chapter.~~

(b) Quarterly monitoring reports shall include, at a minimum:

(i) The results of monitoring required per Sections 14(a)(ii) and (iii) of this Chapter.

(ii) The results of all mechanical integrity testing conducted during that quarter, including the following information identified by Class III well:

(A) Date of mechanical integrity testing;

(B) Identification of the method by which mechanical integrity was established;

(C) Verification of whether the mechanical integrity was or was not established in a well, including:

(I) Identification of a well which failed to have mechanical integrity established and consequently required repair; and

(II) A description of the method of plugging or repair.

(iii) The status of corrective action on defective wells, required per Section 13 of this Chapter.

(iv) The results of well repair and plugging required per Section 8 of this Chapter, including a statement that:

(A) Wells were plugged in accordance with the approved permit or Research and Development Testing License; or

(B) Documentation that prior approval was obtained from the Administrator where plugging procedures differed from the procedures approved in the permit or Research and Development Testing License. This documentation shall be included in the report, and contain a description of the procedures used specifying the differences between the permit or Research and Development Testing License approved method and the alternate method.

~~4(c)~~ Annual Report. ~~In situ mining operators shall submit annual reports containing a~~ Annual monitoring reports shall include, at a minimum:

(i) ~~a~~ All information required by W.S. § 35-11-411; and:

~~4(a)(c)(ii)~~ A map(s) showing the location of all wells installed in conjunction with the mining activity and showing all areas where:

(A) Groundwater restoration has been achieved, is actively taking place and is expected to commence during the next year;

(B) Mining is expected to commence during the next year;

~~4(b)(c)(iii)~~ The total quantity of recovery fluid injected and the total quantity of recovery fluid extracted during the reporting period for each well-field area including a description of how these quantities were determined;

~~4(c)(c)(iv)~~ Monitoring program results pursuant to ~~Section 3(c)(xv)~~ Section 4(a)(xvii) and Section 14 of this Chapter, including a map and description of all excursions, their location and extent, that occurred during the reporting period. ~~Completion details shall be included for all monitor wells installed during the previous year which have not been previously reported; and:~~

~~4(d)(c)(v)~~ An updated potentiometric surface map(s) for all aquifer(s) that are or may be affected by the mining operation may be requested at the Administrator's discretion.

~~4(e)(c)(vi)~~ Supporting data sufficient to demonstrate groundwater restoration in accordance with Section ~~3(d)(ii)~~ 5(a)(xiii) of this Chapter.

(d) During excursions, results from excursion-related monitoring shall be reported in accordance with the requirements of Section 12 of this Chapter.

(e) Well abandonment reports shall be made to the Land Quality Division and the State Engineer's Office:

(i) Within sixty days after the abandonment of any well which has artesian or gassy flow at the surface. The report, set forth in affidavit form, should contain the location of the hole to the nearest two hundred feet, the depth of the well, estimated rate of flow, and the facts of the plugging technique.

(ii) Within twelve months after the abandonment of any well. The report should include the location of the well to the nearest 40-acre legal subdivision (quarter quarter section), the depth the well, and the facts of the plugging technique.

Section 16. Maintenance and Retention of Records.

7(a) The operator shall maintain records at the mine site in accordance with W.S. § 35-11-430(b), including, for any laboratory analyses that an operator is allowed to retain on site for inspection rather than submit to the Administrator; and all chemical analyses submitted to the Administrator in accordance with a valid permit or Research and Development License shall include:

(i) A description of, or reference for, the procedures and methods used for sample collection, preservation, and quality control;

(ii) The name, address, and telephone number of the laboratory performing the analyses, and the laboratory job identification number and the date the analyses were performed.

(b) The operator shall:

(i) Retain records of all monitoring information, including the following:

(A) Records of all data used to complete permit and license applications and any supplemental information submitted under Sections 3, 4 and 5 of this Chapter;

(B) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit or Research and Development Testing License, and records of all data used to complete the application for the permit or Research and Development Testing License;

(C) The nature and composition of all injected fluids; and

(D) Information requested by the Administrator for inclusion in the Annual Report as required by W.S. § 35-11-411.

(ii) Retain the records listed in subsections 16(b)(i)(A) through 16(b)(i)(D) at the mine site until termination of the permit or Research and Development Testing License, unless otherwise authorized by the Administrator. However, the record retention schedule cannot be less than three years after the date of the sample, measurement, report, or application. The Administrator may require the operator to deliver the records to the Administrator at the conclusion of the retention period.

Section 5 17. Research and Development Testing License Application.

5(a) In addition to the information required by this Section, an application for a Research and Development Testing License shall contain all information required by W.S. § 35-11-431 and Sections 6 through 16 of this Chapter and shall:

5(a)(a)(i) Demonstrate that the operation is designed to:

(i)(A) Evaluate mineability or workability of a mineral deposit using in situ mining techniques;

(ii)(B) Affect the land surface, surface waters and groundwater of the State to the minimum extent necessary; and

(iii)(C) Provide premining, operational and post-mining data, information and experience that will be used for developing reclamation techniques for in situ mining.

5(b)(a)(ii) Contain a general description of the land, geology and groundwater hydrology for the proposed Research and Development Testing License area including:

(i)(A) The land use, vegetation, and topsoil characteristics of the affected lands;

(ii)(B) Location and name of surface waters and adjudicated water rights inside and within one-half 1/2 mile of the Research and Development Testing License license areas;

(iii)(C) Locations and present owners of all wells inside and within one-half (1/2) mile of the Research and Development Testing License area to include information concerning plugging and well completion and producing interval(s) to the extent such information is available in the public record or by a reasonable inspection of the property; and

(iv)(D) Groundwater quality data and potentiometric surface elevations for aquifers that may be affected by the proposed operation.

Section 18. Duration of Permits and Research and Development Testing Licenses.

(a) Permits shall be issued:

(i) For a period coinciding with the estimated schedules for termination of all mining and reclamation activities in conformance with the approved mining plan (Section 4(a)(ii)) and reclamation plan (Section 5(a)(i)) as provided in W.S. § 35-11-405(a) and (b); and

(ii) With the option for revision of the mining and reclamation schedules, as provided in W.S. § 35-11-429.

(b) The Administrator shall review the permit at least once every five years to determine whether it should remain unchanged; be revised in accordance with the requirements of Section 19 of this Chapter; or revoked in accordance with the requirements of Section 20 of this Chapter.

(c) As specified in W.S. § 35-11-431(a), a Research and Development Testing License is issued for up to one year and may be renewed annually.

Section 19. Revisions to Class III Well Portions of an In Situ Mine Permit or Research and Development Testing License.

(a) A permit, license to mine, or Research and Development Testing License may be revised as a significant or non-significant revision as specified in Sections 19(b) and 19(c), respectively, to address one or more of the following considerations, subject to the limitations of Sections 19(d) and 19(e).

(i) A revision may be necessary to address:

(A) A permit condition per Section 9 of this Chapter;

(B) An excursion or other aspect of noncompliance per Section 12 of this Chapter and W.S. 35-11-429(a)(ii); or

(C) A corrective action or compliance schedule per Section 13 of this Chapter;

(D) A concern noted during the five-year review per Section 18 of this Chapter;

or

(E) An objection by the Administrator to a part of the Annual Report per W.S. § 35-11-411(b);

(F) A change that could jeopardize reclamation or protection of any waters of the state per W.S. 35-11-429(a)(iv);

(ii) Any interested person, including the operator, may request a revision provided the request is in writing and contains facts or reasons supporting the request. If the Administrator decides that a request for a permit or license revision is not justified, he or she shall send the requester a brief written response giving the reason(s) for the decision. Denials of requests for revisions are not subject to public notice and comment;

(iii) If the Administrator requires the operator to revise any Class III Well portions of a permit or Research and Development Testing License, he or she shall prepare a letter to the operator specifying the needed changes and additional information.

(b) The occurrence of any of the following with regards to a Class III Well portion of a permit or Research and Development Testing License shall result in the operator being required to revise the permit or Research and Development Testing License. These revisions shall be treated as significant revisions and require public notice as specified in Chapter 7 of these regulations and Section 21 of this Chapter. In addition, the State Decision Document will be updated for these revisions:

(i) Any material or substantial alterations or additions to the facility which occurred after issuance of the permit or license, which justify the application of permit or license conditions that are different or absent in the existing permit or license, including:

(A) Any increase in the amount of land related to installation or operation of additional Class III wells, from that which was approved in the original in situ mining permit or Research and Development Testing License. Such a revision shall include (if not already presented in the permit or Research and Development Testing License) the information required in W.S. § 35-11-428 and the requirements of Sections 4 through 19 this Chapter. However, if the increase in the amount of land is for purposes unrelated to installation or operation of Class III wells, then the provisions of Section 2(b)(ii) of Chapter 7 apply.

(ii) The Underground Injection Control standards or regulations on which the permit or license was based have been changed by promulgation of new or amended standards or regulations or by judicial decision after the permit or license was issued;

(iii) The Administrator determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy;

(iv) Cause exists for revocation, as described in Section 20 of this Chapter, but the Administrator determines that revision is appropriate;

(v) A determination is made that the activity endangers human health or the environment and can only be regulated to acceptable levels by a permit revision.

(c) A non-significant revision of any Class III Well portion of a permit or Research and Development Testing License shall meet the requirements of Chapter 7 of these regulations, except that a non-significant revision shall be for the following reasons only:

(i) To correct typographical errors;

(ii) To require more frequent monitoring or reporting by the operator;

(iii) To 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 schedule of compliance and does not

interfere with attainment of the final compliance date requirement:

(iv) To allow for a change in ownership or operational control of a facility where the Administrator determines that no other change in the permit or Research and Development Testing License is necessary provided that a written agreement is submitted in a format and on forms required by the Administrator containing a specific date for transfer of permit or Research and Development Testing License responsibility, coverage, and liability between the current operator and new operator;

(v) To change quantities or types of fluids injected which are within the capacity of the facility as permitted or licensed and would not interfere with the operation of the facility or its ability to meet conditions described in the permit or Research and Development Testing License and would not change its classification;

(vi) To change well construction requirements approved by the Administrator pursuant to Section 6 of this Chapter, provided that any such alteration shall comply with the requirements of Section 6;
or

(vii) To amend a well plugging/conversion plan which has been updated under Section 8 of this Chapter.

(d) Suitability of the Class III well location will not be considered at the time of permit revision unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.

(e) Only those conditions to be revised shall be reopened when a revision is necessary. All other aspects of the existing permit shall remain in effect for the duration of the unrevised permit.

(f) Reviews and decisions on a permit revision application shall be conducted according to the provisions in Chapter 7.

Section 20. Revocation.

(a) A permit, license to mine, or Research and Development Testing License may be revoked by the Administrator to address one or more of the following considerations.

(i) Revocation may be necessary to address:

(A) An excursion or other aspect of noncompliance per Section 12 of this Chapter;

or

(B) One of the items listed in Section 20(b).

(ii) Any interested person, including the operator, may request revocation provided the request is in writing and contains facts or reasons supporting the request. If the Administrator decides that a request for revocation is not justified, he or she shall send the requester a brief written response giving

the reason(s) for the decision. Denials of requests for revocations are not subject to public notice and comment;

(ii) If the Administrator revokes any Class III Well portions of a permit or Research and Development Testing License, he or she shall prepare a letter to the operator specifying the needed changes and additional information.

(b) The Director or Administrator may revoke a permit, Licence to Mine, or Research and Development Testing License:

(i) If an excursion cannot be controlled or mitigated per W.S. § 35-11-429(a);

(ii) For failure to comply with permit terms and conditions per W.S. §§ 35-11-412(b)&(c);

(iii) For the operator's failure in the application or during the issuance process to disclose fully all relevant facts or for misrepresenting any relevant facts at any time, as provided in W.S. §§ 35-11-409(a) and 412(a); and

(iv) Per the provisions of W.S. §§ 35-11-109(a)(xiii) and 110(b);

(c) A revocation requires public notice as specified in Section 3 of Chapter 7 of these regulations and Section 21 of this Chapter.

Section 21. Public Notice, Public Hearing, Comment, and Decision Requirements.

(a) In addition to the requirements of W.S. §§ 35-11-406(g), (j), and (k) and Chapter 7, public notice for actions related to in situ permits or Research and Development Testing Licenses, except permit or license revocation, shall be given by the following methods. Public notice for permit or license revocation shall be given by the methods in Section 21(d) of this Chapter.

(i) All public notices issued under this Section shall contain the following:

(A) Name and address of the office processing the permit action for which notice is being given;

(B) Name and address of the operator and, if different, of the facility or activity regulated by the permit;

(C) A brief description of the business conducted at the facility or activity;

(D) Name, address and telephone number of a person from whom interested persons may obtain further information including copies of the State Decision Document;

(E) A brief description of the comment procedures, including a statement of procedures to request a hearing or, if a hearing has already been scheduled, the time and place of that hearing.

and other procedures by which the public may participate in the final permit decision; and

(F) Any additional information considered necessary or proper.

(ii) The Administrator shall mail a copy of the notice to the following persons:

(A) Any other agency (including EPA when the draft permit is prepared by the State) which the Administrator knows has issued or is required to issue a permit for the same facility or activity under the following programs: Resource Conservation and Recovery Act (RCRA); Underground Injection Control (UIC); Prevention of Significant Deterioration (or other permit requirement under the Clean Air Act); National Pollution Discharge Elimination System (including sludge management permits); and Section 404 of the Clean Water Act.

(B) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected Indian Tribes, and the Wyoming Oil and Gas Commission.

(C) Persons on a mailing list developed by including:

(I) Those who request in writing to be on the list;

(II) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and

(III) Persons notified of the opportunity to be put on the mailing list through periodic publication in the public press. The Administrator may update the mailing list from time to time by requesting written indication of continued interest from those listed. The Administrator may delete from the list the name of any person who fails to respond to such a request.

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

(E) Each State agency having any authority under State law with respect to the construction or operation of such facility.

(F) Any person otherwise entitled to receive notice under this paragraph may waive his or her rights to receive notice for any classes and categories of permits.

(iii) In addition to mailing a copy of the public notice, the Administrator shall mail or electronically transfer a copy of the State Decision Document to the following persons:

(A) Any other agency (including EPA when the draft permit is prepared by the State) which the Administrator knows has issued or is required to issue a permit for the same facility or activity under the following programs: Resource Conservation and Recovery Act (RCRA); Underground Injection

Control (UIC); Prevention of Significant Deterioration (or other permit requirement under the Clean Air Act); National Pollution Discharge Elimination System (including sludge management permits); and Section 404 of the Clean Water Act.

(B) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected Indian Tribes.

(iv) To supplement the required methods of public notice listed above, public notice can also be given by any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

(b) Objections may be filed in accordance with W.S. § 35-11-406(k), which objections shall list one or more reasons for denying a permit or Research and Development Testing License revision application as set out in W.S. § 35-11-406(m). If such written objections are filed, a public hearing shall be held in accordance with W.S. § 35-11-406(k) and the requirements of this Chapter. In addition to the hearing notice requirements described in W.S. § 35-11-406(k), the public notice of a hearing shall contain the following information:

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

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

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

(c) A decision on the application will be made by the Director:

(i) Within 30 days after completion of the notice period if no hearing is requested; or

(ii) If a hearing is requested:

(A) The Environmental Quality Council shall issue findings of fact and make a decision on the application within 60 days after the final hearing; and

(B) The Director will make a decision on the application within fifteen days from receipt of any findings of fact and decision of the Council.

(iii) In addition to the requirements of W.S. § 35-11-406(p), at the time that any permit or Research and Development Testing License is issued, the Director shall issue a response to objections. This response shall:

(A) Specify which provisions, if any, of the proposed permit have been changed in the final approved permit, and the reasons for the change;

(B) Briefly describe and respond to all significant objections on the permit application raised during the public comment period, or during any hearing; and

(C) Be sent to the applicant and objectors, along with a copy of the Director's decision, and be available to the public.

(iv) The Administrator will publish a summary of the decision in a newspaper of general circulation in the general area of the proposed operation.

(d) For permit or license revocation, all the provisions of this Chapter shall apply, except that the Director shall cause notice of the revocation to be published.

Section 8 22. Confidential Records.

(a) Information submitted to satisfy the requirements of this Chapter may be held confidential pursuant to W.S. § 35-11-1101.

CHAPTER 7

NONCOAL MINE

PERMIT OR LICENSE REVISIONS

Section 1. Submittal of Revisions.

(a) A mine permit or Research and Development Testing License may be revised in accordance with this Chapter and upon approval by the Administrator, if the operator submits a request to the Division.

(b) Significant revisions are those which constitute a change described in Section 2 of this Chapter, except significant revisions to an in situ mine permit or Research and Development Testing License are those which constitute a change described in Chapter 11, Section 19(b). Any permit other than an in situ mine permit or Research and Development Testing License may be revised by identifying alterations to the mining or reclamation plan in the annual report or addendum thereto, or by obtaining prior approval from the Department, at the noncoal operator's discretion.

(c) Non-significant revisions shall be submitted in a format approved by the Administrator. Non-significant revisions to an in situ mine permit or Research and Development Testing License are those which constitute a change described in Chapter 11, Section 19(c). If promptly filed, and unless notified by the Administrator to delay, the operator may initiate the proposed change, unless the change is to an in situ mine permit or Research and Development Testing License, in which case the operator may initiate the proposed change only upon approval by the Administrator. All non-significant revisions shall include:

(i) A brief description of the change and why the change is being sought;

(ii) An outline or index indicating what pages, maps, tables, or other parts of the approved permit or Research and Development Testing License are affected by the revision; and

(iii) Additional information necessary to support or justify the change.

(d) Incidental changes which are not categorized under (b) or (c) of this Section shall be noted in the annual report.

(e) Each application shall contain:

(i) The name and address of the operator;

(ii) The permit number and date approved;

(iii) The following information, if different from that submitted in the original permit or Research and Development Testing License application:

(A) The precise location of the permit or Research and Development Testing License area by legal subdivision, section, township, range, county, and municipal corporation, if any;

(B) The names and last known addresses of the owners of record of the surface and mineral rights of the land covered by the permit or Research and Development Testing License; and

(C) The names and last known addresses of the owners of record of the surface rights of the lands immediately adjacent to the permit or Research and Development Testing License area.

(iv) A detailed description of the proposed revised mining, reclamation, or Research and Development Testing operation which shall also include:

(A) A USGS topographic map or equivalent of the permit or Research and Development Testing License area distinctly outlining and identifying the land to be affected by the revised mining or reclamation operation;

(B) For any proposed newly affected lands, if not submitted and approved in the original application for the permit:

(I) The information required in W.S. § 35-11-406(a)(vii) and (ix); and

(II) The extent to which the revised mining or reclamation operation will disturb, change, or deface the lands proposed to be affected, the proposed future use or uses of the land and the plan whereby the operator will reclaim the affected lands to the proposed future use or uses.

(C) Any significant changes in the estimate of the total cost of reclaiming the affected and proposed affected lands, computed in accordance with established engineering principles.

(v) Such other information as the Administrator deems necessary or as good faith compliance with the provisions of the Act require.

Section 2. Criteria for Public Notice Requirements.

(a) Within 90 days after submission of the application for permit or Research and Development Testing License revision the Administrator shall notify the operator of whether or not the application is complete and whether notice and opportunity for public hearing is required.

(b) Notice and opportunity for public hearing is required:

(i) For revision of an in situ mining permit or Research and Development Testing License in accordance with requirements of Sections 19(b) and (c) of Chapter 11:

(ii) Whenever the application for a permit or Research and Development Testing License revision proposes the following changes, so long as they constitute significant deviations from that which was contemplated in the approved mining and reclamation plan. The following will normally be considered significant deviations unless otherwise determined by the Administrator:

(A) More than a 20 percent increase in affected land from that which was approved in the original permit,

(B) A change in the approved future land use or uses which affects more than 20 percent of the land within the permit or Research and Development Testing License area;

(C) A change in the approved method for insuring that all acid-forming or toxic materials, radioactive materials, or materials constituting a fire, health or safety hazard uncovered during or created by the mining or Research and Development Testing License process are promptly treated or disposed of during the mining, reclamation or Research and Development Testing License process in a manner designed to prevent pollution of surface or subsurface water or threats to human or animal health and safety;

(D) The construction or relocation of mills and tailings disposal facilities;

(E) A change in the approved method of mining which results in surface disturbance (e.g. underground, surface or in situ mining);

(F) A change which would adversely affect the quality, quantity, or distribution of water in surface or groundwater systems; or

(G) Any changes which propose significant alterations in the approved mining or reclamation operation as determined by the Administrator.

Section 3. Notice and Opportunity for Public Hearing.

(a) When required under Section 2 of this Chapter, the operator shall cause notice of the application for permit, non-Class III Well portions of an in situ permit and non-Class III Well portions of a Research and Development Testing License revision to be published in a newspaper of general circulation in the locality of the mining or Research and Development Testing License site once a week for four consecutive weeks commencing within 15 days after notification that publication is required. The notice shall contain that information required by W.S. § 35-11-406(j), the permit number and date approved, and a general description of the proposed revision. The operator shall also mail a copy of the application mine plan map to the Wyoming Oil and Gas Commission in accordance with W.S. § 35-11-406(j).

(b) Objections may be filed in accordance with W.S. § 35-11-406(k), which objections shall list one or more reasons for denying a permit or Research and Development Testing License revision application as set out in W.S. § 35-11-406(m). If such written objections are filed, a public hearing shall be held in accordance with W.S. § 35-11-406(k). The Council shall issue findings of fact and make a decision on the application within 60 days after the final hearing.

Section 4. Decision.

(a) The Administrator shall, with the concurrence of the Director, render a decision on the application for permit or Research and Development Testing License revision and approve or disapprove the proposed revision in accordance with the applicable criteria set out in W.S. § 35-11-406 and any regulations adopted pursuant thereto. The decision shall be made:

(i) Within 30 days after notification of a complete application, if notice is not required;
or

(ii) If notice is required:

(A) Within 30 days after completion of the notice period, if the application for permit revision is not protested; or

(B) If the revision is protested and a hearing held, within 15 days from the receipt of any findings of fact and decision from the Environmental Quality Council.

(b) The applicant shall be promptly informed of the decision on the application.

Section 5. Review of Permits or Research and Development Testing Licenses.

(a) The Administrator, with the concurrence of the Director, may require the operator to submit an application for a permit or Research and Development Testing License revision and comply with all requirements of this Chapter. Any such requirement shall be based on written findings that, upon review of the operator's annual report for an in situ mine permit or annual request for renewal of a Research and Development Testing License or upon inspection of the existing operation, there is or is intended to be conducted a revised mining, reclamation or Research and Development Testing operation. Such review or inspection shall be conducted at least each year upon receipt of the operator's annual report for an in situ mine permit or annual request for renewal of a Research and Development Testing License, or inspection of the existing operation, there is or is intended to be conducted a revised mining or reclamation operation. Such review or inspection shall be conducted at least each year upon receipt of the operator's annual report for an in situ mine permit or annual request for renewal of a Research and Development Testing License. Right of review shall be afforded as provided in the Wyoming Administrative Procedure Act. Nothing contained herein shall be construed to require compliance with any provision of the Act or regulation from which the existing operation has been specifically excepted.

CHAPTER 11
NONCOAL
IN SITU MINING

Section 1. Definitions.

- (a) "Background" means the constituents or parameters and the concentrations or measurements which describe water quality and water quality variability prior to the injection of recovery fluid.
- (b) "Catastrophic collapse" means the sudden and utter failure of overlying strata caused by removal of underlying materials.
- (c) "Class III well" means a well used for in situ mining for the injection of recovery fluid for the purpose of extracting 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 only in situ production from ore bodies which have not been conventionally mined. Wells used for solution mining (such as stopes leaching) of conventional mines are classified as Class V wells;
 - (iii) In situ mining of salts, trona, or potash. With the exception that wells, used in reclamation activities, to inject into previously mined areas of underground trona mines will be classified as Class V wells rather than Class III wells (and therefore not regulated under this Chapter), regardless of whether such wells are used for secondary recovery of trona; or
 - (iv) Fossil fuel recovery, including oil shale and tar sands.
 - (v) Experimental technologies, such as pilot scale in situ mining wells in previously unmined areas.
- (d) "Compliance schedule" means a schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the applicable statutes and regulations.
- (e) "Conventional mine" means an open pit or underground excavation for the production of minerals.
- (f) "Excursion" means as defined in W.S. § 35-11-103(f)(ii).

(g) "Exempted aquifer" means an aquifer or its portion that meets the criteria in the definition of "underground source of water" but which has been exempted according to the procedures of Section 10 of this Chapter.

(h) "Groundwater restoration" means as defined in W.S. § 35-11-103(f)(iii).

(i) "Injection well" means a well or conduit through which recovery fluid is introduced into the subsurface. If a well is used for both injection and recovery, it is considered an injection well for the purposes of this Chapter until the operator has adequately demonstrated to the Administrator that the well has been converted to use(s), other than injection, per the requirements of Section 8 of this Chapter.

(j) "In situ mining" means as defined in W.S. § 35-11-103(f)(iv).

(k) "License area" means, with respect to an In Situ Research and Development Testing License, an area described in the license application within which all affected land and water is contained.

(l) "Mechanical integrity" means, for an injection well, there is no significant leak in the casing, tubing or packer, and there is no significant fluid movement into an underground source of water through vertical channels adjacent to the injection well bore. The determination that there are no significant leaks or fluid movement is based on the results of the mechanical integrity testing required in Section 7 of this Chapter.

(m) "Permit" means a Mining Permit, as defined in W.S. § 35-11-103(e)(xi).

(n) "Production zone" means as defined in W.S. § 35-11-103(f)(v).

(o) "Receiving strata" means the geologic units within which the production zones are contained.

(p) "Recovery fluid" means as defined in W.S. § 35-11-103(f)(vii).

(q) "Recovery well" means a well or conduit through which a recovery fluid, mineral, or product is produced from the subsurface. If a well is used for both injection and recovery, it is considered an injection well for the purposes of this Chapter until the operator has adequately demonstrated to the Administrator that the well has been converted to use(s), other than injection, per the requirements of Section 8 of this Chapter.

(r) "Research and Development Testing License" means the permitting vehicle issued by the Administrator, per W.S. § 35-11-431 *et seq.* (as amended), approving research and development testing as defined in W.S. § 35-11-103 (f)(viii) (as amended).

(s) "State Decision Document" serves as a summary of, or reference to, all terms and conditions within an approved in situ mining permit application, an approved Research and Development Testing License application, or an approved application to revise a permit or Research and Development Testing License. This

document is compiled by the Administrator and provides a summary of, or reference to, all UIC related terms and conditions, compliance provisions, and monitoring requirements included in the permit or Research and Development Testing License.

(t) "Stratum (plural strata)" means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.

(u) "UIC" means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved State program."

(v) "Underground source of water" (USW) means those aquifers or portions thereof which have a total dissolved solids content of less than 10,000 mg/l, or those that have been classified as a "known source of supply" pursuant to Chapter 8, Section 4(c), Quality Standards for Wyoming Groundwaters, Water Quality Division Rules and Regulations (as amended March 12, 1993).

(w) "Upper Control Limit" (UCL) means a value greater than the maximum value of a chemical or physical parameter that can be attributed to natural fluctuations and analytical variability. UCL parameters and amounts are determined statistically from the baseline sampling and agreed upon by the Administrator and the operator prior to initiation of mining. UCLs are used to determine when there is movement of recovery fluid out of authorized areas or unapproved changes to a chemical or physical parameter. For certain parameters, such as pH, a UCL may be defined as an acceptable range of values.

(x) "Uses for which the water was suitable" means those uses of the premining groundwater which are or could have reasonably been developed considering established water quality standards and the premining groundwater quality conditions. Such uses shall include, but are not limited to, municipal and domestic drinking water, industrial, agricultural and wildlife uses.

(y) "Well field area" means the surface area overlying the injection and recovery zones. This area may be all or a portion of the entire area proposed for the injection and production of recovery fluid throughout the life of the mine.

Section 2. General Requirements.

(a) In addition to the requirements of this Chapter, Chapter 7 shall apply to in situ mining or Research and Development Testing License operations.

(b) Applicable sections of Chapter 8 of the Water Quality Division Rules and Regulations (as amended March 12, 1993), regarding groundwater use classification, quality standards, and testing procedures and applicable Maximum Contaminant Levels from the U.S. Environmental Protection Agency Rules (40 CFR 141 as amended July 1, 2001) shall also apply to in situ mining or Research and Development Testing License operations.

(c) No in situ mining shall commence or be conducted unless a valid permit or Research and Development Testing License has been issued to the operator from the Department. Applications for a permit or Research and Development Testing License shall be filed with the Administrator. The applicant shall file three copies of the application, and the Administrator shall forward one copy of the application to the EPA when the application is determined complete. Applications shall be in a format required by the Administrator.

(d) The Administrator shall review the permit or Research and Development Testing License application and determine its suitability for publication in accordance with W.S. § 35-11-406. A permit or Research and Development Testing License shall be issued by the Director upon the recommendation of the Administrator.

(e) Operators having an in situ mining permit or Research and Development Testing License issued before the effective date of these regulations, shall within one year of the effective date of newly promulgated changes to this Chapter, present evidence demonstrating compliance with the requirements of these regulations. The Administrator shall review such evidence and shall advise the operator in writing of such additional information or procedures necessary to satisfy the provisions of this Chapter. The evidence must be presented:

(i) By those operators, who are mining, restoring, or reclaiming, within one year of the effective date of newly promulgated changes to this Chapter; or

(ii) By those operators, who have received a permit but have not yet started mining, before mining begins, but no later than one year after the effective date of the newly promulgated changes to this Chapter.

(f) The operator shall allow the Administrator, or an authorized representative of the Division, to enter and inspect any property as provided by W.S. §§ 35-11-109(a)(iv), (v) and (vi).

(g) All applications shall be signed by a responsible corporate officer. All reports required by permits (including Annual Reports, Quarterly Monitoring Reports, and reports related to excursion monitoring and control) or other information required by the Administrator which pertain to Class III injection wells shall be signed by a responsible corporate officer or duly authorized representative. Any responsible corporate officer or duly authorized representative signing a document under this Section shall make the following certification:

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

(i) "Responsible corporate officer" means:

(A) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs policy or decision-making functions for the corporation, or

(B) 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, or

(C) In the case of a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(D) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(I) The chief executive officer of the agency, or

(II) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

(ii) "Duly authorized representative" means a person who is authorized to sign a document to be submitted to the Land Quality Division as part of the official record regarding an in situ mining permit or Research and Development Testing License. A person shall qualify for this title only if:

(A) The authorization is made in writing by a responsible corporate officer;

(B) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(C) The written authorization is submitted to the Director.

(iii) If the responsible corporate officer or duly authorized representative is no longer correctly listed with the Administrator, a new name must be submitted, with required written authorization as required by Section 2(h)(i) and (ii) of this Chapter, to the Administrator prior to or with any reports, information, or applications to be signed by that individual.

Section 3. Application Content Requirements - Adjudication and Baseline Information.

(a) All applications for a permit shall include, at a minimum, the information and materials related to adjudication and baseline information required in: W.S. § 35-11-428; Chapter 1 and Chapter 2, Sections 1 and 2(a)(i)(A) and (J) of these rules and regulations; and:

(i) A description of the activities conducted by the applicant for which permits are required under: the Resource Conservation and Recovery Act (RCRA), the Underground Injection Control program of the Safe Drinking Water Act; the National Pollution Discharge Elimination System (NPDES) program of the Clean Water Act; and the Prevention of Significant Deterioration program of the Clean Air Act.

(ii) A listing of all permits or construction approvals received or applied for in association with the in situ permit area under the following programs:

- (A) Hazardous Waste Management program under RCRA;
- (B) UIC program under the Safe Drinking Water Act (as it pertains to wells other than Class III wells);
- (C) NPDES program under the Clean Water Act (CWA);
- (D) Prevention of Significant Deterioration (PSD) program under the Clean Air Act (CAA);
- (E) Nonattainment program under the CAA;
- (F) National Emission Standards for Hazardous Pollutants preconstruction approval under the CAA;
- (G) Dredge and fill permits under Section 404 of the CWA;
- (H) U.S. Nuclear Regulatory Commission Source Material License; or
- (I) Other relevant environmental permits, including State permits.

(iii) A soil survey which maps and describes the general distribution of the soils within the permit area. A detailed soil survey and associated laboratory analysis may be required for soils on the affected lands.

(iv) A description of the nature and depth of the topsoil that will be removed from proposed affected land prior to disturbance by mining activities.

(v) A survey of vegetative cover and species diversity on the proposed affected land determined by scientifically acceptable sampling procedures. Vegetation productivity sampling may be required, at the Administrator's discretion, depending on the nature of the communities to be disturbed. However, if existing data from other sources, such as National Resources Conservation Service publications or adjacent permit areas, can be provided and demonstrated to be applicable to the communities in question, the collection of production data may be waived.

(vi) A list of the indigenous vertebrate species by common and scientific names observed within the proposed permit area. Surface waters supporting fish that may be affected by the operation shall be sampled for benthic invertebrates and periphytons. As required in Chapter 2, Section 1(f), the applicant shall consult with the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service prior to submission of a permit application to determine permitting requirements.

(vii) A description of climatic conditions of the site in accordance with the requirements of Chapter 2, Section 2(a)(i)(C) and (D) of these regulations.

(viii) A description of the geology, including:

(A) Discussion, supported by maps, cross-sections and geologist's, driller's, and geophysical logs, which identifies: formations and aquifers; geologic features that could influence aquifer properties; and the areal and stratigraphic position of the production zone in relation to other geologic features within the proposed permit or Research and Development Testing License area; and

(B) A generalized map and cross-sections illustrating the regional geologic setting.

(ix) A geochemical, lithological, and mineralogical description of the receiving strata and any aquifers that may be affected by the injection of recovery fluid.

(x) For surface waters within the permit area and on adjacent lands:

(A) The names, descriptions, and a map of all such waters; and

(B) A list and map of all adjudicated and permitted surface water.

(xi) For groundwaters within the permit area and on adjacent lands:

(A) The names (or numbers), descriptions, and a map of all wells installed for water supply or monitoring and all wells which penetrate the injection zone within the permit area and on adjacent lands. The description shall include: names of present owners, well completion data, producing interval(s), and variations in water level to the extent such information is available in the public records and from a reasonable inspection of the property.

(B) A list and map of all adjudicated and permitted groundwater rights.

(xii) A list and map of all abandoned wells and drill holes, giving location, depth, producing interval(s), type of use, condition of casing, plugging procedures and date of completion for each well or drill hole within the permit area and on adjacent lands to the extent such information is available in public records and from a reasonable inspection of the property.

(xiii) A groundwater potentiometric surface contour map for each aquifer that may be affected by the mining process, including overlying and underlying aquifers in which monitoring wells are installed.

(xiv) Aquifer characteristics for the water saturated portions of the receiving strata and aquifers which may be affected by the mining process, which may include, but is not limited to, aquifer thickness, velocity and direction of groundwater movement, storage coefficients or specific yields, transmissivity or hydraulic conductivity and the direction(s) of preferred flow under hydraulic stress in the saturated zones of the receiving strata. The extent of hydraulic connection between the receiving strata and overlying and underlying aquifers, and the hydraulic characteristics of any influencing boundaries in or near the proposed well field area(s) shall be determined and described. Information needed to meet the requirements of Section 6(d) of this Chapter shall also be provided.

(xv) Tabulated water quality analyses for samples collected from all groundwaters which may be affected by the proposed operation. Sampling to characterize the premining groundwater quality and its variability shall be conducted in accordance with established Department guidelines.

Section 4. Application Content Requirements - Mine (Operations) Plan

(a) All applications for a permit shall include, at a minimum, the information and materials related to mine plans required in: W.S. § 35-11-428 and 429; Chapter 1, Chapter 2, Section 1, and Chapter 3, Section 2 (excepting Subsections (b)(ii) and (iii), (c)(iv), and (h) and with respect to subsection (k)(i), as modified in Section 5(a)(iv) of this Chapter) and:

(i) Contour (topographic) map(s) which accurately locate and identify the permit area and show the location of any public highways, dwellings, utilities and easements within the permit area and adjacent lands in relation to all proposed affected lands and proposed activities associated with the operation including, but not limited to: plant site, chemical storage areas, wellfield areas, roads, temporary and permanent drainage diversions, impoundments, stockpiles for topsoil, ore product and waste, and all processing facilities. The map(s) shall also clearly illustrate the location of monitoring wells required by Section 14 of this Chapter.

(ii) Discussion and illustration of the proposed mining schedule, including:

(A) A list of the proposed wellfields;

- (B) A map(s) which shows the proposed sequence for mining of the wellfields;
 - (C) A proposed time schedule for mining each wellfield;
 - (D) The operational parameters that will be used to determine when mining will be considered complete in a wellfield, including parameters such as: pumping and injection rates; lixiviant and production fluid concentrations; and groundwater elevations, such that there is a well-defined point in time at which mining will be considered complete.
 - (E) The capacity of the water/waste water treatment systems and correlation of the capacity with the mining and restoration schedules.
- (iii) The procedure(s) used to protect the topsoil and subsoil as required in Chapter 3, Section 2(c)(i) through (iii), from excessive compaction, degradation, and wind and water erosion where stockpiling of topsoil and subsoil is necessary. The Administrator may authorize topsoil to remain on areas where minor disturbance will occur associated with construction and installation activities including but not limited to light-use roads, signs, wellfields, utility lines, fences, monitoring stations, and drilling provided that the minor disturbance will not destroy the protective vegetative cover, increase erosion, nor adversely affect the soil resource.
 - (iv) A description of and design plan for all impoundments and, for impoundments containing wastes, a leak detection plan. For impoundments holding toxic or acid-forming material, contingency plans to control unanticipated leakage shall be provided.
 - (v) A description of all temporary and permanent surface water diversions in accordance with the requirements of Chapter 3, Section 2(e) and (f), of these regulations.
 - (vi) The composition of all known and anticipated wastes and procedures for their disposal.
 - (vii) Procedures for ensuring that all acid-forming, or toxic, or other materials constituting a fire or health and safety hazard encountered during or created by the mining process are promptly treated, confined, or disposed of in a manner designed to prevent pollution of surface water or groundwater, degradation of soils, or vegetation, or threat to human or animal health and safety.
 - (viii) A description of the mitigating measures developed from the consultations with the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service as required per Chapter 2, Section 1(f) of these regulations.
 - (ix) A proposed time schedule for mining.
 - (x) A description of the location within the permit area where underground injection is authorized.

- (xi) A description of the proposed method of operation, including:
 - (A) Injection rate, with the average and maximum daily rate and the volume of fluid to be injected;
 - (B) Injection pressures, with average and maximum injection pressures, as required by Section 11 of this Chapter;
 - (C) Proposed stimulation program;
 - (D) Type of recovery fluid to be used;
 - (E) Proposed injection procedure; and
 - (F) Expected changes in pressure, native groundwater displacement and direction of movement of injection fluid.

(xii) The following information concerning the production zone shall be determined or calculated and submitted for new Class III wells or projects:

(A) Where the production zone is in a receiving strata which is naturally water-bearing:

- (I) Fluid pressure;
- (II) Fracture pressure; and
- (III) Physical and chemical characteristics of the receiving strata fluids.

(B) Where the receiving strata is not a water-bearing formation, the fracture pressure in the production zone.

(xiii) The procedure(s) to assure that the installation of recovery, injection, and monitor wells will not result in hydraulic communication between the production zone and overlying or underlying stratigraphic horizons.

(xiv) The procedures utilized to verify that the injection and recovery wells are in communication with monitor wells completed in the receiving strata and employed for the purpose of detecting excursions.

(xv) Descriptions of:

- (A) The completion details for all monitor wells; and

(B) A detailed description of the typical proposed well completion for injection and recovery wells, as required by Section 6 of this Chapter.

(xvi) Details of a monitoring program and reporting schedule as required by Sections 14 and 15 of this Chapter, respectively.

(xvii) A schedule for and description of the procedures to demonstrate and maintain mechanical integrity of all Class III injection wells as required by Section 7 of this Chapter.

(xviii) A corrective action plan, for such wells which are improperly sealed, completed, or abandoned, consisting of such steps or modifications as are necessary to prevent movement of fluid into unauthorized zones as required by Section 13 of this Chapter.

(xix) A description of chemical reactions that may occur during mining as a result of recovery fluid injection.

(xx) A subsidence analysis, using established geotechnical principles, which estimates, based upon the proposed mining operation, the effect of subsidence upon the land surface and overlying groundwater aquifers. Subsidence shall be planned and controlled to the extent that the values and uses of the surface land resources and the groundwater aquifers will not be degraded.

(xxi) A description of measures employed to prevent an excursion, and contingency and corrective action plans to be implemented in the event of an excursion, in accordance with Sections 12 and 13 of this Chapter.

(xxii) An assessment of impacts that may reasonably be expected as a result of the mining operation to water resources and water rights inside the permit area and on adjacent lands, and the steps that will be taken to mitigate these impacts.

(xxiii) A maintenance plan to ensure:

(A) Wells are covered and the covers are watertight;

(B) The wells are marked and can be clearly seen; and

(C) The area surrounding each well is kept clear of brush or debris; and

(D) Monitoring equipment is appropriately serviced and maintained so the monitoring requirements in Section 14(a)(i) of this Chapter can be met.

Section 5. Application Content Requirements - Reclamation Plan.

(a) All applications for a permit shall include, at a minimum, the information and materials related to reclamation plans required in: W.S. § 35-11-428 and 429; Chapter 1, Chapter 2, Section 1, and Chapter 3, Section 2 (excepting Subsections (b)(ii) and (iii), (c)(iv), and (h) and with respect to subsection (k)(i), as modified in Section 5(a)(iv) of this Chapter); and

(i) Discussion and illustration of the proposed groundwater restoration schedule, including

(A) A list of the proposed wellfields;

(B) A map(s) which shows the proposed sequence for restoration of the wellfields;

(C) A proposed time schedule for each wellfield;

(D) The capacity of the water/waste water treatment systems and correlation of the capacity with the mining and restoration schedules.

(ii) The information necessary to demonstrate that the operation will return all affected groundwater, including affected groundwater within the production zone, receiving strata, and any other areas, to a condition such that its quality of use is equal to or better than, and consistent with, the uses for which the water was suitable prior to the operation by employing the best practicable technology. Such a demonstration shall be made by showing that, through the employment of the best practicable technology, as defined in W.S. § 35-11-103(f)(i):

(A) All affected groundwater will be returned to as close to premining quality and quantity as practicable. At a minimum, the groundwater will be returned to a quality of use, on a parameter by parameter basis, equal to and consistent with the uses for which the water was suitable prior to the commencement of the operation.

(B) In making a determination of whether a demonstration has been made by the operator that the best practicable technology has been applied and the water quality and quantity has been returned as close to premining quality and quantity as practicable, on a parameter by parameter basis, the Administrator shall, at a minimum, take the following factors into consideration:

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

(II) The social and economic value of the source of pollution;

(III) The social and economic value of the impacted aquifer;

- (IV) The priority of location in the area involved;
- (V) The technical practicability and economic reasonableness of reducing or eliminating the source of pollution;
- (VI) The effect upon the environment; and
- (VIII) The potential impacts to other waters of the state.

(iii) A plan for well repair, plugging and conversion as required by Section 8 of this Chapter.

(iv) A proposed time schedule for achieving reclamation, including commitments that reclamation of mining-related surface disturbances in any mining area shall be completed within two years following approval of groundwater restoration in that area and that reclamation of all mining-related surface disturbances shall be completed within two years following approval of final groundwater restoration within the permit area.

(v) A contour map showing the approximate postreclamation surface contours for affected lands and the immediate surrounding areas if the operation will substantially alter the premining contours.

(vi) Procedures for reestablishing any surface drainage that may be disrupted by the mining operation.

(vii) Procedures for the reclamation of any temporary diversion ditches or impoundments.

(viii) Procedures for permanently disposing of any toxic or acid-forming materials.

(ix) Procedures for removing and disposing of structures used in conjunction with the mining operation.

(x) Procedures for mitigating or controlling the effects of subsidence.

(xi) Procedures for ground surface preparation, depth of topsoil replacement, erosion control and water conservation practices.

(xii) Procedures for revegetation to return the affected lands to the proposed postmining land use and procedures for evaluation of revegetation success in accordance with Chapter 3, Section 2(d).

(xiii) The estimated costs for reclamation as computed in accordance with established engineering principles, including, but not limited to:

- (A) Cost of removing and disposing of structures;
- (B) Cost of topsoiling and reseeded all affected lands;
- (C) Cost of facilities, materials, and chemicals used for groundwater restoration;
- (D) Cost of capping, plugging, and sealing of all wells; and
- (E) Costs for personnel working on reclamation-related activities.

Section 6. Well Location, Depth Intervals, and Completion Requirements.

(a) The methods for well construction shall be approved by the Administrator and included in the permit or Research and Development Testing License application (per Section 4(a)(xiv) of this Chapter) and shall constitute a condition of the permit. The location and construction requirements listed in Sections 6(a) through 6(f) of this Chapter are applicable to all wells installed for activities related to in situ mining. Additional requirements for Class III injection wells are included in Section 6(g). Additional requirements for monitoring wells are included in Section 6(h).

(b) In selecting well locations, capping wells, and maintaining well caps, the following requirements apply:

(i) The top of the casing shall terminate above grade. Where possible, the top of the casing shall terminate above any known conditions of flooding from runoff or standing water, and the area around the well shall slope away from the well to direct surface drainage away from the well. If a well must be completed in an ephemeral drainage, steps shall be taken to protect the well from damage due to runoff and to prevent surface water drainage into the well. Completion of wells in intermittent or perennial drainages is prohibited.

(ii) The well opening shall be closed with a cover to prevent the introduction of undesirable material into the well and to assure the safety of humans and animals whenever the well is not in use or when maintenance is being performed on the well.

(iii) Openings into the top of the well which are designed to provide access to the well, e.g., for injection, production, sampling, and measuring water levels, shall be protected against entrance of surface waters or foreign matter by installation of water tight caps or plugs. All other openings shall be sealed. A sounding tube, taphole with plug or similar access for the introduction of water level measuring devices or for access for wiring or tubing for permanent downhole measuring devices may be affixed to the casing of the well as long as the proper seal is maintained.

(iv) Where a well is to be near a building or powerlines, the well shall be located at a distance from the building and powerlines to provide access for repairs, maintenance, sampling, and similar work. At a minimum, a well must clear any projection from a building by three feet and clear any powerline by ten feet.

(c) Annular seals shall be installed to: provide protection for the casing against corrosion; assure structural integrity of the casing; stabilize the upper formations; protect the annular space against contamination or pollution by entrance of surface and/or subsurface waters; and prevent migration of water from one aquifer or water-bearing strata to another in accordance with the following requirements:

(i) The drill hole shall be of sufficient diameter for adequate sealing and, at a given depth, at least four inches greater in drilled diameter than the diameter of the outer casing and joints at that depth. The annular space between outer casing and inner casing, if inner casing is used, shall also be of sufficient diameter for adequate sealing, and the outer casing diameter at least four inches greater than the inner casing diameter. If unconsolidated material is encountered, temporary conductor casing may be needed to hold the drill hole open while the sealing material is placed. The thickness of the seal shall be at least two inches, as measured perpendicular from the drill hole wall to the outer casing wall or between the walls of outer and inner casing, and not less than three times the size of the largest coarse aggregate used in the sealing material.

(ii) All of the annular space, except that portion in the aquifer or water-bearing strata in which the well is completed, shall be sealed to prevent migration of water from one aquifer or water-bearing strata to another.

(iii) Before placing the seal, all loose cuttings, chips, or other obstructions shall be removed from the annular space by flushing with water or fluid drilling mud.

(iv) The sealing material shall be placed from the bottom to the top of the interval to be sealed, and, when possible, placed in one continuous operation. The fluid used to force the final sealing material through the casing shall remain under pressure, to prevent back flow, until the sealing material is set. If settling occurs during setting of the sealing material, additional material must be placed to bring the level of the sealing material to the ground surface.

(v) Sealing material shall consist of neat cement grout, sand-cement grout, bentonite clay or concrete meeting the following requirements:

(A) Cement used for sealing mixtures shall meet the requirements of American Society of Testing Materials (ASTM) C150-00 "Standard Specifications for Portland Cement" (2000) or American Petroleum Institute (API) RP 10B "Recommended Practices for Testing Oil-Well Cements and Cement Additives" (22nd ed., 12/1997, with Addendums 1 (10/1999) and 2 (11/2000)). Materials used as additives for Portland Cement mixtures in the field shall meet the requirements of ASTM C494/C494M-99a e1 "Standard Specifications for Chemical Admixtures for Concrete" (2001) or API RP 10B "Recommended Practices for Testing Oil-Well Cements and Cement Additives" (22nd ed., 12/1997, with Addendums 1 (10/1999) and 2 (11/2000)).

(B) Neat cement shall be composed of one sack of Portland Cement (94 pounds) to 4½ to 6½ gallons of clean water.

(C) Sand-cement grout shall be composed of not more than two parts by weight of sand and one part of Portland cement to 4½ to 6½ gallons of clean water per sack of cement.

(D) Concrete used shall be "Class A" or "Class B". Aggregates shall meet the requirements of ASTM C33-01 "Standard Specifications for Concrete Aggregates" (2001).

(E) Special quick-setting cement, retardants to setting, and other additives, including hydrated lime to make the mix more fluid or bentonite to make the mix more fluid and reduce shrinkage, may be used.

(F) Bentonite clay mixtures shall be composed of bentonite clay and clean water thoroughly mixed before placement so there are no balls, clods, or other features that could reduce the effectiveness of the seal.

(G) Used drillers mud or cuttings from drilling the borehole shall not be used as sealing material.

(H) The minimum time that must be allowed for materials containing cement to "set" shall be in accordance with (ASTM) C150-00 "Standard Specifications for Portland Cement" (2000) or American Petroleum Institute (API) RP 10B "Recommended Practices for Testing Oil-Well Cements and Cement Additives" (22nd ed., 12/1997, with Addendums 1 (10/1999) and 2 (11/00). When necessary these times may be reduced by use of accelerators as determined by the well contractor.

(d) The casing shall: provide structural stability to prevent casing collapse during installation as well as drillhole wall integrity when installed; be of required size to convey liquid at a specified injection/recovery rate and pressure; and be of required size to allow for sampling. Casing materials may include steel or polyvinyl chloride, which meet the relevant ASTM standards, or other materials if approved by the Administrator.

(e) All casing shall be placed with sufficient care to avoid damage to casing sections and joints. All joints in the casing above the perforations or screens shall be watertight. The uppermost perforations shall be at least below the minimum depth of seal. Casing shall be equipped with centering guides at a minimum spacing of twenty feet to ensure even thickness of annular seal and/or gravel pack.

(i) Steel casing may be joined by either welding or by threading and coupling.

(ii) Plastic casing may be joined by solvent welding or may be mechanically joined, depending on the type of material and its fabrication. Compatibility between potential contaminants and the sealing agent used shall be demonstrated.

(f) Well development shall:

(i) Be done by methods which will not cause damage to the well or cause adverse subsurface conditions that may destroy barriers to the vertical movement of water between aquifers; and

(ii) Include documented deviation checks.

(g) For Class III injection wells, the following construction requirements are in addition to the requirements listed in (a) through (f) of this Section:

(i) Appropriate logs and other tests shall be conducted during the drilling and construction of new Class III wells. A descriptive report prepared by a knowledgeable log analyst interpreting the results of such logs and tests shall be submitted to the Administrator. The logs and tests appropriate to each type of Class III well shall be determined based on the intended function, depth, construction and other characteristics of the well, availability of similar data in the area of the drilling site and the need for additional information that may arise from time to time as the construction of the well progresses. Deviation checks shall be conducted on all holes where pilot holes and reaming are used, unless the hole will be cased and cemented by circulating cement to the surface. Where deviation checks are necessary, they shall be conducted at sufficiently frequent intervals to assure that vertical avenues for fluid migration are not created during drilling.

(ii) All Class III wells shall be cased and sealed to prevent the migration of fluids into or between underground sources of water. The casing and sealing material used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and sealing requirements, the following factors shall be considered:

(A) Depth to the production zone;

(B) Injection pressure, external pressure, internal pressure, axial loading, or other factors as determined by the Administrator;

(C) Drill hole annular space;

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

(E) Corrosiveness of injected fluids and formation fluids;

(F) Lithology of receiving strata and confining zones; and

(G) Type and grade of sealing material.

(h) The following monitoring well construction requirements are in addition to the requirements listed in (a) through (f) of this Section:

(i) Where injection is into a receiving strata which contains water with less than 10,000 milligrams per liter (mg/l) Total Dissolved Solids (TDS), monitoring wells shall be completed into the production zone and any Underground Source of Water which could be adversely affected by the mining operation. These wells shall be located in such a fashion as to detect any excursion of injection fluids, process by-products, or formation fluids outside the mining area or zone. If the operation may be affected by subsidence or catastrophic collapse, the monitoring wells shall be located so that they will not be physically affected.

(ii) Where injection is into a receiving strata which contains water with greater than 10,000 mg/l TDS, no monitoring wells are necessary in the production zone.

(iii) Where the injection wells penetrate an Underground Source of Water (USW) in an area subject to subsidence or catastrophic collapse, an adequate number of monitoring wells shall be completed into the USW to detect any movement of injected fluids, process by-products or formation fluids into the USW. The monitoring wells shall be located outside the physical influence of the subsidence or catastrophic collapse.

(iv) In determining the number, location, and construction of the monitoring wells and frequency of monitoring, the following criteria shall be considered:

(A) The uses for which the groundwater in the receiving strata is suitable under premining conditions, as determined from Chapter 8, Water Quality Division Rules and Regulations (as amended March 12, 1993), in any aquifer affected or potentially affected by the injection operation;

(B) The proximity of the injection operation to points of withdrawal;

(C) The local geology and hydrology;

(D) The operating pressures and whether a negative pressure gradient is being maintained;

(E) The nature and volume of the recovery fluid, the formation fluid, and the process by-products; and

(F) The injection well density.

Section 7. Mechanical Integrity Testing (MIT) of Class III Injection Wells.

(a) A schedule and methods for Mechanical Integrity Testing shall be approved by the Administrator and included in the permit or Research and Development Testing License application (per

Section 4(a)(xvii) of this Chapter) and shall constitute conditions of the permit. The schedule and methods shall meet the following requirements:

(i) The operator of a Class III well shall establish mechanical integrity as defined in Section 1 of this Chapter for each well prior to commencing injection and shall maintain mechanical integrity for each well until it is plugged or converted in accordance with Section 8 of this Chapter.

(ii) For demonstrating mechanical integrity as defined in Section 1 of this Chapter:

(A) One of the following methods must be used to evaluate the absence of significant leaks in the casing, tubing or packer:

(I) Following an initial pressure test, monitoring of the tubing-casing annulus pressure with sufficient frequency to be representative, as determined by the Administrator, while maintaining an annulus pressure different from atmospheric pressure measured at the surface; or

(II) Pressure test with liquid or gas.

(B) One of the following methods must be used to determine the absence of significant fluid movement into an underground source of water through vertical channels adjacent to the injection bore:

(I) The results of a temperature or noise log; or

(II) Where the nature of the casing precludes the use of the logging techniques prescribed above, cementing records demonstrating the presence of adequate cement to prevent such migration shall be provided; or

(III) Where the Administrator elects to rely on cementing records to demonstrate the absence of significant fluid movement, the monitoring program prescribed by Section 16 of this Chapter shall be designed to verify the absence of significant fluid movement.

(C) The Administrator may allow the operator to use a test to demonstrate mechanical integrity other than those listed in subsection (A) above. To obtain approval, the Administrator with concurrence of the Director shall submit a written request to the EPA, which shall set forth the proposed test and all technical data supporting its use. The EPA shall approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. Any alternate method approved by the EPA shall be published in the Federal Register and may be used in all States unless its use is restricted at the time of approval by the EPA.

(iii) Maintenance of the mechanical integrity of each Class III well, which has not been plugged or converted, as required by Section 8 of this Chapter, shall be demonstrated at least once every five years.

(iv) Before resuming injection into any Class III well that has been damaged by surface or subsurface activity or that has undergone an activity that may jeopardize the mechanical integrity of the well, such as the use of downhole cutting and underreaming tools, the operator must demonstrate the mechanical integrity of that well.

(v) If the Administrator determines that a Class III well lacks mechanical integrity, he or she shall give written notice of this determination to the operator of the well. Unless the Administrator requires immediate cessation, the operator shall cease injection into the well within 48 hours of receipt of the Administrator's determination. The Administrator may allow plugging of the well or require the operator to perform such additional construction, operation, monitoring, reporting, and corrective action as is necessary to prevent the movement of fluid into unauthorized zones or onto the surface caused by the lack of mechanical integrity. The operator may resume injection upon written notification from the Administrator that the operator has demonstrated mechanical integrity.

(vi) Results of MIT testing shall be reported in accordance with the requirements in Section 15 of this Chapter.

Section 8. Requirements for Plugging of Drill Holes and Repair, Plugging, and Conversion of Wells.

(a) A plan for drill hole and well repair, plugging, and conversion shall be approved by the Administrator and included in the permit or Research and Development License application, as required by Section 5(a)(xii) of this Chapter, and shall constitute a condition of the permit.

(b) All drill holes shall be plugged in accordance with Chapter 8 of these regulations and W.S. § 35-11-404.

(c) If a well lacks mechanical integrity, plugging or repair of the well is required to prevent the movement of fluid into unauthorized zones or onto the surface caused by the lack of mechanical integrity. Plugging or repair of the well must be completed within 120 days of the testing which indicates the well lacks mechanical integrity. If the well is repaired rather than plugged, retesting of the well, in accordance with the requirements of Section 7(a)(ii) of this Chapter must be completed within 120 days after the repair is completed.

(d) The operator shall notify the Administrator, as required by the permit or Research and Development Testing License, before plugging a well or converting it to uses other than those defined in Section 1(c) of this Chapter.

(e) All abandoned wells shall be plugged or converted, in accordance with the Plugging/Conversion Plan in the permit or Research and Development Testing License, in order to assure that groundwater is protected and preserved for future use and to eliminate any potential physical hazard. A well is considered "abandoned" when it has not been used for a period of one year, unless the operator submits to the Administrator and receives approval for a non-significant revision (Section 19(c)(vi) of this Chapter)

demonstrating their intention to use the well again and the actions and procedures they will take to ensure that the well will not endanger Underground Sources of Water (USDW) in accordance with the requirements of this Chapter.

(f) A well shall be plugged to meet the requirements below to assure that plugging of the well will not allow the movement of fluids into or between Underground Sources of Water:

(i) The well shall be plugged with:

(A) Neat cement grout, sand-cement grout, concrete, or bentonite grout with a permeability of 10^{-7} cm/sec or less. To assure that the well is filled and there has been no bridging of the sealing material, the operator should provide LQD with documentation that the volume of material placed in the well at least equals the volume of the empty hole; or

(B) Other plugging materials if such materials will prevent movement of fluids into or between underground sources of water and the Administrator approves the use of such materials.

(ii) The well shall be plugged using a method which will not allow the movement of fluids either into or between underground sources of water. The description of the method will identify:

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

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

(C) The method of placement of the plugs, in accordance with Section 8(e)(iii);

and

(D) The procedure to be used to meet the requirements of Section 8(e)(iv).

(iii) Placement of the cement plugs shall be accomplished by one of the following:

(A) The Balance method;

(B) The Dump Bailer method;

(C) The Two-Plug method; or

(D) An alternative method approved by the Administrator, which:

(I) Includes placement of cementing materials in the interval or intervals to be sealed by methods that prevent free fall, dilution and/or separation of aggregates from sealing materials; and

(II) Will reliably provide a comparable level of protection to underground sources of water.

(iv) The well to be plugged 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 prescribed by the Administrator, prior to the placement of the cement plug(s).

(v) When the underground pressure head producing flow (ie. gassy or artesian) is such that a counter-pressure must be applied to force a sealing material into the annular space, this counter-pressure should be maintained for the length of time required for the cementing/sealing mixture to set or fully hydrate.

(g) In the case of an in situ operation which underlies or is in an aquifer which has been exempted under Section 10 of this Chapter, the Plugging/Conversion Plan in the permit or Research and Development Testing License shall also demonstrate adequate protection of Underground Sources of Water (USWs). The Administrator shall prescribe aquifer cleanup and monitoring where he deems it necessary and feasible to assure adequate protection of USWs.

(h) The top of the cementing/sealing mixture of any plugged and abandoned well should show clearly, by permanent markings, whether inscribed in the cement or on a steel plate placed atop the sealing mixture, the permit number, well identification number and date of plugging. All markings devices should be installed at a minimum depth of two feet below the land surface.

(i) Plugging and conversion activities shall be reported in accordance with the requirements in Section 20 of this Chapter.

Section 9. Permit and Research and Development Testing License Conditions

(a) The following conditions shall apply to permits and Research and Development Testing Licenses. Each condition shall be incorporated into the permit or Research and Development Testing License either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit or Research and Development Testing License.

(i) The operator has a duty to comply with all terms and conditions of the approved permit or Research and Development Testing License.

(A) Any permit or Research and Development Testing License noncompliance is grounds for enforcement action and any Research and Development Testing License noncompliance is grounds for denial of a Research and Development Testing License renewal application.

(B) The filing of a request by the operator for a permit or Research and Development Testing License revision per Chapter 7 or Section 19 of this Chapter does not waive any permit or Research and Development Testing License condition.

(ii) It shall not be a defense for an operator 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 or Research and Development Testing License.

(iii) The operator has a duty to take all reasonable steps to minimize, mitigate, or correct any adverse impact on the environment resulting from noncompliance with this permit or Research and Development Testing License.

(iv) The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the operator to achieve compliance with the terms and conditions of the permit or Research and Development Testing License. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of the permit or Research and Development Testing License.

(v) The permit or Research and Development Testing License does not convey any property rights of any sort or any exclusive privilege.

(vi) The operator has a duty to provide to the Administrator, within a time specified, any information which the Administrator may request to determine whether cause exists for revising or revoking the permit or Research and Development Testing License, or to determine compliance with this permit or Research and Development Testing License. The operator shall also furnish to the Administrator, upon request, copies of records to be kept as required by the permit or Research and Development Testing License.

(vii) In compliance with all the provisions of Chapter 7 and Section 19 of this Chapter:

(A) The operator shall give notice to the Administrator as soon as possible of any planned physical alterations or additions to the permitted or licensed facility and

(B) When the operator becomes aware of failure to submit any relevant facts in a permit or Research and Development Testing License application, or submitted incorrect information in a permit or Research and Development Testing License application or in any report to the Administrator, the operator shall promptly submit such facts or information to the Administrator.

(viii) Prior to requesting bond reduction for abandonment of a Class III well or for conversion of a Class III well to another use, the operator shall provide documentation and receive approval from the Administrator regarding the plugging or conversion of that well.

(ix) The following shall also constitute conditions of the permit:

(A) Plans for corrective action, including injection pressure limitation, as specified in Section 13(a) of this Chapter;

(B) Monitoring requirements as specified in Section 14 of this Chapter;

(C) Schedule and methods to establish and maintain Mechanical Integrity as specified in Section 7 of this Chapter: and

(D) A plan for well repairs, plugging, and conversion as specified in Section 8 of this Chapter.

Section 10. Aquifer Classification and Exemption.

(a) Injections from Class III wells shall be restricted to those production zones that:

(i) Have been classified by the Wyoming Department of Environmental Quality as Class V aquifers under Chapter 8 of the Water Quality Division Rules and Regulations (as amended March 12, 1993); and

(ii) Have concentrations of Total Dissolved Solids:

(A) Less than 10,000 milligrams per liter; meet the definition of an "Underground Source of Water" as defined in Section 1 of this Chapter; and have been approved as an exempted aquifer by the U.S. Environmental Protection Agency pursuant to Section 10(b) of this Chapter; or

(B) Greater than 10,000 milligrams per liter; and

(iii) Are located in a geologic and hydrologic setting in which movement of fluid, containing any contaminant, into Underground Sources of Water can be prevented.

(b) An aquifer, or a portion thereof, which meets the criteria for an Underground Source of Water as defined in Section 1 of this Chapter may be designated as an "exempted aquifer":

(i) If it meets the following criteria:

(A) It does not currently serve as a source of water for Class I, II, III, Special (A) or Class IVA uses as described in Chapter 8 of the Water Quality Rules and Regulations (as amended March 12, 1993); and

(B) It cannot now and will not in the future serve as a source of water because:

(I) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit or Research and Development Testing License applicant to contain minerals or hydrocarbons that, considering their quantity and location, are expected to be commercially producible; or

(II) It is situated at a depth or location which makes recovery of water for Class I, II, III, Special (A) or Class IVA as described in Chapter 8 of the Water Quality Division Rules and Regulations (as amended March 12, 1993), economically or technologically impractical; or

(III) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or

(IV) It is located over a Class III well mining area subject to subsidence or catastrophic collapse; or

(V) The total dissolved solids content of the groundwater is less than 10,000 mg/l and it is not reasonably expected to supply a public water system as defined by W.S. § 35-11-103(c)(viii); and

(ii) As demonstrated by information in the permit or Research and Development Testing License application, including:

(A) A map and general description of the receiving strata identifying and describing in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and define the extent of the aquifer proposed for exemption;

(B) General information on the mineralogy and geochemistry of the receiving strata; and

(C) Analysis of the amenability of the receiving strata to the proposed mining method; and a timetable of planned development of the receiving strata.

(c) A request for an aquifer exemption shall be presented by the Administrator to the EPA as a state program revision pursuant to Code of Federal Regulations, Title 40, Part 145, Section 32 (40 CFR 145.32 as amended July 1, 2001).

Section 11. Prohibitions.

(a) No Class III well construction may commence until a permit or Research and Development Testing License has been issued which includes well construction information in accordance with the requirements of Section 6 of this Chapter. Construction of wells needed to obtain the information required in Section 3 of this Chapter may be allowed with approval of the Administrator; however, such wells may not be used for injection.

(b) The operator may not commence injection in a new injection well until construction is complete, and:

(i) The operator has submitted notice of completion of construction to the Administrator;
and

(ii) With respect to inspection and review:

(A) The Administrator has inspected or otherwise reviewed the new injection well and finds the well is in compliance with the permit or Research and Development Testing License; or

(B) The operator has not received notice from the Administrator of the intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in paragraph (b)(i) of this subsection, in which case prior inspection or review is waived and the operator may commence injection. The Administrator shall include in the notice a reasonable time period in which he or she shall inspect the well.

(c) The approved permit or Research and Development Testing License shall include maximum injection volumes and/or pressures necessary to assure: fractures are not initiated in the confining zone; injected fluids do not migrate into any Underground Source of Water (USW); and formation fluids are not displaced into any Underground Source of Water. Operating requirements shall, at a minimum, specify that:

(i) Except during well stimulation, injection pressure at the wellhead shall be calculated so as to assure that the pressure in the production zone during injection does not initiate new fractures or propagate existing fractures. In no case, shall injection pressure initiate fractures in the confining zone, if confinement is present, or cause the migration of injection or formation fluids into an USW;

(ii) Injection between the outermost casing protecting underground sources of water and the well bore is prohibited.

(d) No operator shall construct, operate, maintain, convert, plug, abandon, or conduct any injection or other mining-related activity in a manner that allows the movement of fluid containing any contaminant into zones or intervals other than those zones authorized in the approved permit or Research and Development Testing License. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.

Section 12. Noncompliance and Excursions.

(a) The operator shall:

(i) Verbally report to the Administrator any noncompliance, including excursions, which may endanger public health or the environment within 24 hours of the time the operator becomes aware of the occurrence, including:

(A) Any monitoring or other information which indicates that any contaminant may cause endangerment to an Underground Source of Water (USW); and

(B) Any noncompliance with a permit or Research and Development Testing License or malfunction of the injection system which may cause fluid migration into, or between USWs.

(ii) Provide a written report to the Administrator within five days of the operator becoming aware of the noncompliance occurrence. The Administrator of the Land Quality Division will forward one copy to the Administrator of the Water Quality Division. If the noncompliance is:

(A) Not a potential excursion, the written report shall describe:

- (I) The noncompliance and its cause;
- (II) The period of noncompliance, including exact dates and times;
- (III) If the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- (IV) Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

(B) A potential excursion, the written report shall describe:

- (I) The location of the excursion, including the monitoring well(s) involved;
- (II) The date(s) confirmationsamples will be collected in accordance with Section 12(b); and
- (III) Interim measures taken to mitigate the impacts of the potential excursion.

(b) "Confirmation" of an excursion means that an excursion detected in a regularly scheduled sampling event is subsequently detected in a second or third sampling event conducted in accordance with the following requirements:

(i) The second sampling event shall be conducted within 24 hours of the receipt of the results from the first sampling event in which the excursion was initially detected. If the results from the first and second sampling event both indicate an excursion has occurred, then the excursion will be considered confirmed for the purpose of meeting the reporting requirements of W.S. § 35-11-429(a).

(ii) If the results from the first and second sampling events provide conflicting information about whether or not an excursion has occurred, then a third sampling event must be conducted within 24 hours of the receipt of the results from the second sampling event. However, if the results of the confirmatory sampling are not complete within 30 days of the initial sampling event which indicated an excursion might be present, then the excursion will be considered confirmed for the purpose of meeting the reporting requirements of W.S. § 35-11-429(a).

(c) The operator shall:

(i) Verbally report any confirmed excursion to the Administrator within 24 hours of confirmation of the excursion and;

(ii) Submit a written report to the Administrator within five days of the confirmation of the excursion detailing the procedures for mitigating or controlling the excursion. The Administrator of the Land Quality Division will forward one copy to the Administrator of the Water Quality Division.

(d) An excursion is controlled when it can be demonstrated through water quality and groundwater gradient or if applicable, pressure measurements, that recovery fluid in unauthorized areas is declining.

(i) If an excursion is not controlled within 30 days following confirmation of the excursion, a sample must be collected from each of the affected monitoring wells and analyzed for the following parameters: Ammonia; Antimony; Arsenic; Barium; Beryllium; Bicarbonate; Boron; Cadmium; Calcium; Carbonate; Chloride; Chromium; Conductivity; Copper; Fluoride; Gross Alpha; Gross Beta; Iron; Lead; Magnesium; Manganese; Mercury; Molybdenum; Nitrate; Nitrate + Nitrite; pH; Potassium; Selenium; Sodium; Sulfate; Radium-226 and 228; Thallium; Total Dissolved Solids; Uranium; Vanadium; and Zinc.

(ii) If an excursion is not controlled within 60 days following confirmation of the excursion, the Administrator may, after consultation with the Director the mining operation and revoke the permit or Research and Development Testing License or modify the mining operation and require modification of the permit or Research and Development Testing License. Modifying the operation may include: sampling of additional wells for the parameters listed in Section 12(d)(i); installation of additional monitor wells; termination of injection in the portion of the well field in which the excursion originated; or a combination of approaches to assure control within the necessary time frames.

(iii) If the excursion is controlled, but the fluid which moved out of the production zone during the excursion has not been recovered within 60 days following confirmation of the excursion (i.e., the monitor well is still "on excursion"), the operator will submit, within 90 days following confirmation of the excursion, a plan and compliance schedule, acceptable to the Department, for bringing the well (or wells) off excursion. The plan and compliance schedule can be submitted as part of the monthly excursion report required in Section 12(e) of this Chapter. The compliance schedule shall meet the requirements of Section 13(b) of this Chapter.

(e) In addition to the excursion notifications and control plan required above, a monthly report on the status of an excursion shall be submitted to the Administrator beginning the first month the excursion is confirmed and continuing until that excursion is over. The monthly report shall be a requirement of the compliance schedule and shall include, at a minimum:

(i) Concentrations of UCL parameters and groundwater elevations in all monitoring wells on excursion and, as necessary, surrounding wells;

(ii) Such information deemed necessary by the Administrator to show that the excursion is being controlled and that the bond amount for groundwater restoration remains sufficient;

(iii) Information on steps taken to control the excursion.

(f) The operator shall report all instances of noncompliance, not reported under this section, at the time monitoring reports are submitted. The reports shall contain the information listed in Sections 12(a)(i) and (ii), as applicable.

Section 13. Corrective Action.

(a) Corrective actions are:

(i) Needed when a well is improperly sealed, completed, or abandoned, in which case:

(A) Operators shall provide the well information, as required in Sections 3(a)(xi) and (xii) of this Chapter, and the corrective action plan as required in Section 4(a)(xviii) of this Chapter. Where the Administrator's review of the plan indicates that the operator's plan is inadequate (based on the factors presented below), the Director shall require the operator to revise the plan, prescribe a plan for corrective action as a term and condition of the permit, or deny the application.

(B) In determining the adequacy of corrective action proposed by the operator and in determining the additional steps needed to prevent fluid movement into Underground Sources of Water, the following criteria and factors shall be considered by the Administrator:

(I) Nature and volume of injected fluid;

(II) Nature and volume of native groundwater;

(III) Compatibility of injected fluid and native groundwater;

(IV) Potentially affected population;

(V) Geology;

(VI) Hydrology;

(VII) Proposed method of operation as required by Section 4(a)(x) of this Chapter or history of the injection operation if the corrective action is needed in response to amending new wells into an existing operation;

(VIII) Completion and plugging records;

(IX) Plugging procedures in effect at the time the well was abandoned; and

(X) Hydraulic connections with Underground Sources of Water.

(ii) Needed if any water quality monitoring of an Underground Source of Water indicates the movement of any contaminant into an Underground Source of Water, except as specifically authorized in the approved permit or Research and Development Testing License, in which case, the Administrator shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well and limitation of injection pressure) as are necessary to prevent such movement. These additional requirements shall be imposed by requiring the operator to revise the permit or Research and Development Testing License, the permit or Research and Development Testing License may be revoked, or appropriate enforcement action may be taken if the permit or Research and Development Testing License has been violated.

(iii) The status of corrective action on defective wells shall be reported in accordance with the requirements of Section 15 of this Chapter.

(b) When appropriate, a permit or license may include, or be revised to include, a compliance schedule leading to compliance with the applicable statutes and regulations. The schedule shall be applicable whether the operator is continuing or ceasing regulated activities.

(i) Any compliance schedule shall require compliance as soon as possible, and in no case later than 3 years after the date the schedule is put into effect. In addition:

(A) The schedule shall set forth interim requirements, the dates for their achievement, and a projected date of compliance with all the requirements;

(B) The time between interim dates shall not exceed 1 year; and

(C) The schedule shall specify dates for the submission of progress reports, no later than 30 days following each interim date and the final date of compliance.

Section 14. Monitoring Requirements.

(a) A detailed monitoring program shall be approved by the Administrator and included in the permit or Research and Development Testing License application, as required by Section 4(a)(xvi) of this Chapter, and shall constitute a condition of the permit. The program shall describe the procedures for monitoring the quantity and quality of waters that may be affected by the operation before mining through reclamation and shall, at a minimum, specify:

(i) Requirements for:

(A) The proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);

(B) The intervals and frequency of monitoring, sufficient to yield data which are representative of the monitored activity, including continuous monitoring when appropriate;

(C) Tests and methods used to generate monitoring data.

(ii) Monitoring of:

(A) The nature of injected fluids with sufficient frequency to yield representative data on the characteristics of the fluid. Whenever the injection fluid is modified to the extent that the previous analysis is incorrect or incomplete, a new analysis shall be provided to the Administrator;

(B) The injection pressure and either flow rate or volume at least weekly or metering and daily recording of injected and produced fluid volumes as appropriate; and

(C) Class III injection wells may be monitored for the parameters required by subsections (A) and (B) on a field or project basis rather than an individual well basis by manifold monitoring. Manifold monitoring may be used in cases of facilities consisting of more than one injection well operating with a common manifold. Separate monitoring systems for each well are not required provided the operator demonstrates that manifold monitoring of injection pressure is comparable to individual well monitoring.

(iii) Requirements for:

(A) Semi-monthly monitoring of the fluid level in the production zone, where appropriate;

(B) Semi-monthly monitoring of the water levels and parameters chosen to measure the water quality in the monitoring wells;

(C) Quarterly monitoring of the water levels and parameters chosen to detect any movement of injected fluids, process by-products, or formation fluids in the monitoring wells where the

injection wells penetrate an Underground Source of Water in an area subject to subsidence or catastrophic collapse (Section 6(g)(iii) of this Chapter); and

(D) Periodic monitoring of pressure changes or other physical parameters if such monitoring provides for more rapid detection of excursions.

(iv) A description of procedures and schedules used to:

(A) Detect and confirm excursions; and

(B) Monitor excursions and excursion control efforts.

(v) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

Section 15. Reporting Requirements.

(a) All chemical analyses submitted to the Administrator in accordance with a valid permit or Research and Development License shall include:

(i) A description of, or reference for, the procedures and methods used for sample collection, preservation, and quality control;

(ii) The name, address, and telephone number of the laboratory performing the analyses, and the laboratory identification number; and

(iii) Signatures as required by Section 2(h) of this Chapter.

(b) Quarterly monitoring reports shall include, at a minimum:

(i) The results of monitoring required per Sections 14(a)(ii) and (iii) of this Chapter.

(ii) The results of all mechanical integrity testing conducted during that quarter, including the following information identified by Class III well:

(A) Date of mechanical integrity testing;

(B) Identification of the method by which mechanical integrity was established;

(C) Verification of whether the mechanical integrity was or was not established in a well, including:

(I) Identification of a well which failed to have mechanical integrity established and consequently required repair; and

(II) A description of the method of plugging or repair.

(iii) The status of corrective action on defective wells, required per Section 13 of this Chapter.

(iv) The results of well repair and plugging required per Section 8 of this Chapter, including a statement that:

(A) Wells were plugged in accordance with the approved permit or Research and Development Testing License; or

(B) Documentation that prior approval was obtained from the Administrator where plugging procedures differed from the procedures approved in the permit or Research and Development Testing License. This documentation shall be included in the report, and contain a description of the procedures used specifying the differences between the permit or Research and Development Testing License approved method and the alternate method.

(c) Annual monitoring reports shall include, at a minimum:

(i) All information required by W.S. § 35-11-411; and

(ii) A map(s) showing the location of all wells installed in conjunction with the mining activity and showing all areas where:

(A) Groundwater restoration has been achieved, is actively taking place and is expected to commence during the next year;

(B) Mining is expected to commence during the next year;

(iii) The total quantity of recovery fluid injected and the total quantity of recovery fluid extracted during the reporting period for each well-field area including a description of how these quantities were determined:

(iv) Monitoring program results pursuant to Section 4(a)(xvii) and Section 14 of this Chapter, which have not been previously reported; and

(v) An updated potentiometric surface map(s) for all aquifer(s) that are or may be affected by the mining operation may be requested at the Administrator's discretion.

(vi) Supporting data sufficient to demonstrate groundwater restoration in accordance with Section 5(a)(xiii) of this Chapter.

(d) During excursions, results from excursion-related monitoring shall be reported in accordance with the requirements of Section 12 of this Chapter.

(e) Well abandonment reports shall be made to the Land Quality Division and the State Engineer's Office:

(i) Within sixty days after the abandonment of any well which has artesian or gassy flow at the surface. The report, set forth in affidavit form, should contain the location of the hole to the nearest two hundred feet, the depth of the well, estimated rate of flow, and the facts of the plugging technique.

(ii) Within twelve months after the abandonment of any well. The report should include the location of the well to the nearest 40-acre legal subdivision (quarter quarter section), the depth the well, and the facts of the plugging technique.

Section 16. Maintenance of Records.

(a) The operator shall maintain records at the mine site in accordance with W.S. § 35-11-430(b), including, for any laboratory analyses that an operator is allowed to retain on site for inspection rather than submit to the Administrator:

(i) A description of, or reference for, the procedures and methods used for sample collection, preservation, and quality control;

(ii) The name, address, and telephone number of the laboratory performing the analyses, and the laboratory identification number.

(b) The operator shall:

(i) Retain records of all monitoring information, including the following:

(A) Records of all data used to complete permit and license applications and any supplemental information submitted under Sections 3, 4 and 5 of this Chapter;

(B) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit or Research and Development Testing License, and records of all data used to complete the application for the permit or Research and Development Testing License;

(C) The nature and composition of all injected fluids; and

(D) Information requested by the Administrator for inclusion in the Annual Report as required by W.S. § 35-11-411.

(ii) Retain the records listed in subsections 16(b)(i)(A) through 16(b)(i)(D) at the mine site until termination of the permit or Research and Development Testing License, unless otherwise authorized by the Administrator. However, the record retention schedule cannot be less than three years after the date of the sample, measurement, report, or application. The Administrator may require the operator to deliver the records to the Administrator at the conclusion of the retention period.

Section 17. Research and Development Testing License Application.

(a) In addition to the information required by this Section, an application for a Research and Development Testing License shall contain all information required by W.S. § 35-11-431 and Sections 6 through 16 of this Chapter and shall:

(i) Demonstrate that the operation is designed to:

(A) Evaluate mineability or workability of a mineral deposit using in situ mining techniques;

(B) Affect the land surface, surface waters and groundwater of the State to the minimum extent necessary; and

(C) Provide premining, operational and post-mining data, information and experience that will be used for developing reclamation techniques for in situ mining.

(ii) Contain a general description of the land, geology and groundwater hydrology for the proposed Research and Development Testing License area including:

(A) The land use, vegetation, and topsoil characteristics of the affected lands;

(B) Location and name of surface waters and adjudicated water rights inside and within one-half mile of the Research and Development Testing License area;

(C) Locations and present owners of all wells inside and within one-half mile of the Research and Development Testing License area to include information concerning plugging and well completion and producing interval(s) to the extent such information is available in the public record or by a reasonable inspection of the property; and

(D) Groundwater quality data and potentiometric surface elevations for aquifers that may be affected by the proposed operation.

Section 18. Duration of Permits and Research and Development Testing Licenses.

(a) Permits shall be issued:

(i) For a period coinciding with the estimated schedules for termination of all mining and reclamation activities in conformance with the approved mining plan (Section 4(a)(ii)) and reclamation plan (Section 5(a)(i)) as provided in W.S. § 35-11-405(a) and (b); and

(ii) With the option for revision of the mining and reclamation schedules, as provided in W.S. § 35-11-429.

(b) The Administrator shall review the permit at least once every five years to determine whether it should: remain unchanged; be revised in accordance with the requirements of Section 19 of this Chapter; or revoked in accordance with the requirements of Section 20 of this Chapter.

(c) As specified in W.S. § 35-11-431(a), a Research and Development Testing License is issued for up to one year and may be renewed annually.

Section 19. Revisions to Class III Well Portions of an In Situ Mine Permit or Research and Development Testing License.

(a) A permit, license to mine, or Research and Development Testing License may be revised as a significant or non-significant revision as specified in Sections 19(b) and 19(c), respectively, to address one or more of the following considerations, subject to the limitations of Sections 19(d) and 19(e).

(i) A revision may be necessary to address:

(A) A permit condition per Section 9 of this Chapter;

(B) An excursion or other aspect of noncompliance per Section 12 of this Chapter and W.S. 35-11-429(a)(ii); or

(C) A corrective action or compliance schedule per Section 13 of this Chapter;

(D) A concern noted during the five-year review per Section 18 of this Chapter;
or

(E) An objection by the Administrator to a part of the Annual Report per W.S. § 35-11-411(b);

(F) A change that could jeopardize reclamation or protection of any waters of the state per W.S. 35-11-429(a)(iv);

(ii) Any interested person, including the operator, may request a revision provided the request is in writing and contains facts or reasons supporting the request. If the Administrator decides that a request for a permit or license revision is not justified, he or she shall send the requester a brief written response giving the reason(s) for the decision. Denials of requests for revisions are not subject to public notice and comment;

(iii) If the Administrator requires the operator to revise any Class III Well portions of a permit or Research and Development Testing License, he or she shall prepare a letter to the operator specifying the needed changes and additional information.

(b) The occurrence of any of the following with regards to a Class III Well portion of a permit or Research and Development Testing License shall result in the operator being required to revise the permit or Research and Development Testing License. These revisions shall be treated as significant revisions and require public notice as specified in Chapter 7 of these regulations and Section 21 of this Chapter. In addition, the State Decision Document will be updated for these revisions:

(i) Any material or substantial alterations or additions to the facility which occurred after issuance of the permit or license, which justify the application of permit or license conditions that are different or absent in the existing permit or license, including:

(A) Any increase in the amount of land related to installation or operation of additional Class III wells, from that which was approved in the original in situ mining permit or Research and Development Testing License. Such a revision shall include (if not already presented in the permit or Research and Development Testing License) the information required in W.S. § 35-11-428 and the requirements of Sections 4 through 19 this Chapter. However, if the increase in the amount of land is for

purposes unrelated to installation or operation of Class III wells, then the provisions of Section 2(b)(ii) of Chapter 7 apply.

(ii) The Underground Injection Control standards or regulations on which the permit or license was based have been changed by promulgation of new or amended standards or regulations or by judicial decision after the permit or license was issued;

(iii) The Administrator determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy;

(iv) Cause exists for revocation, as described in Section 20 of this Chapter, but the Administrator determines that revision is appropriate;

(v) A determination is made that the activity endangers human health or the environment and can only be regulated to acceptable levels by a permit revision.

(c) A non-significant revision of any Class III Well portion of a permit or Research and Development Testing License shall meet the requirements of Chapter 7 of these regulations, except that a non-significant revision shall be for the following reasons only:

- (i) To correct typographical errors;
 - (ii) To require more frequent monitoring or reporting by the operator;
 - (iii) To 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 schedule of compliance and does not interfere with attainment of the final compliance date requirement;
 - (iv) To allow for a change in ownership or operational control of a facility where the Administrator determines that no other change in the permit or Research and Development Testing License is necessary provided that a written agreement is submitted in a format and on forms required by the Administrator containing a specific date for transfer of permit or Research and Development Testing License responsibility, coverage, and liability between the current operator and new operator;
 - (v) To change quantities or types of fluids injected which are within the capacity of the facility as permitted or licensed and would not interfere with the operation of the facility or its ability to meet conditions described in the permit or Research and Development Testing License and would not change its classification;
 - (vi) To change well construction requirements approved by the Administrator pursuant to Section 6 of this Chapter, provided that any such alteration shall comply with the requirements of Section 6; or
 - (vii) To amend a well plugging/conversion plan which has been updated under Section 8 of this Chapter.
- (d) Suitability of the Class III well location will not be considered at the time of permit revision unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.
- (e) Only those conditions to be revised shall be reopened when a revision is necessary. All other aspects of the existing permit shall remain in effect for the duration of the unrevised permit.
- (f) Reviews and decisions on a permit revision application shall be conducted according to the provisions in Chapter 7.

Section 20. Revocation.

(a) A permit, license to mine, or Research and Development Testing License may be revoked by the Administrator to address one or more of the following considerations.

(i) Revocation may be necessary to address:

(A) An excursion or other aspect of noncompliance per Section 12 of this Chapter;

or

(B) One of the items listed in Section 20(b).

(ii) Any interested person, including the operator, may request revocation provided the request is in writing and contains facts or reasons supporting the request. If the Administrator decides that a request for revocation is not justified, he or she shall send the requester a brief written response giving the reason(s) for the decision. Denials of requests for revocations are not subject to public notice and comment;

(iii) If the Administrator revokes any Class III Well portions of a permit or Research and Development Testing License, he or she shall prepare a letter to the operator specifying the needed changes and additional information.

(b) The Director or Administrator may revoke a permit, Licence to Mine, or Research and Development Testing License:

(i) If an excursion cannot be controlled or mitigated per W.S. § 35-11-429(a);

(ii) For failure to comply with permit terms and conditions per W.S. §§ 35-11-412(b)&(c);

(iii) For the operator's failure in the application or during the issuance process to disclose fully all relevant facts or for misrepresenting any relevant facts at any time, as provided in W.S. §§ 35-11-409(a) and 412(a); and

(iv) Per the provisions of W.S. §§ 35-11-109(a)(xiii) and 110(b);

(c) A revocation requires public notice as specified in Section 3 of Chapter 7 of these regulations and Section 21 of this Chapter.

Section 21. Public Notice, Public Hearing, Comment, and Decision Requirements.

(a) In addition to the requirements of W.S. §§ 35-11-406(g), (j), and (k) and Chapter 7, public notice for actions related to in situ permits or Research and Development Testing Licenses, except permit or license revocation, shall be given by the following methods. Public notice for permit or license revocation shall be given by the methods in Section 21(d) of this Chapter.

(i) All public notices issued under this Section shall contain the following:

(A) Name and address of the office processing the permit action for which notice is being given;

(B) Name and address of the operator and, if different, of the facility or activity regulated by the permit;

(C) A brief description of the business conducted at the facility or activity;

(D) Name, address and telephone number of a person from whom interested persons may obtain further information including copies of the State Decision Document;

(E) A brief description of the comment procedures, including a statement of procedures to request a hearing or, if a hearing has already been scheduled, the time and place of that hearing, and other procedures by which the public may participate in the final permit decision; and

(F) Any additional information considered necessary or proper.

(ii) The Administrator shall mail a copy of the notice to the following persons:

(A) Any other agency (including EPA when the draft permit is prepared by the State) which the Administrator knows has issued or is required to issue a permit for the same facility or activity under the following programs: Resource Conservation and Recovery Act (RCRA); Underground Injection Control (UIC); Prevention of Significant Deterioration (or other permit requirement under the Clean Air Act); National Pollution Discharge Elimination System (including sludge management permits); and Section 404 of the Clean Water Act.

(B) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected Indian Tribes, and the Wyoming Oil and Gas Commission.

(C) Persons on a mailing list developed by including:

(I) Those who request in writing to be on the list;

(II) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and

(III) Persons notified of the opportunity to be put on the mailing list through periodic publication in the public press. The Administrator may update the mailing list from time to time by requesting written indication of continued interest from those listed. The Administrator may delete from the list the name of any person who fails to respond to such a request.

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

(E) Each State agency having any authority under State law with respect to the construction or operation of such facility.

(F) Any person otherwise entitled to receive notice under this paragraph may waive his or her rights to receive notice for any classes and categories of permits.

(iii) In addition to mailing a copy of the public notice, the Administrator shall mail or electronically transfer a copy of the State Decision Document to the following persons:

(A) Any other agency (including EPA when the draft permit is prepared by the State) which the Administrator knows has issued or is required to issue a permit for the same facility or activity under the following programs: Resource Conservation and Recovery Act (RCRA); Underground Injection Control (UIC); Prevention of Significant Deterioration (or other permit requirement under the Clean Air Act); National Pollution Discharge Elimination System (including sludge management permits); and Section 404 of the Clean Water Act.

(B) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected Indian Tribes.

(iv) To supplement the required methods of public notice listed above, public notice can also be given by any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

(b) Objections may be filed in accordance with W.S. § 35-11-406(k), which objections shall list one or more reasons for denying a permit or Research and Development Testing License revision application as set out in W.S. § 35-11-406(m). If such written objections are filed, a public hearing shall be held in accordance with W.S. § 35-11-406(k) and the requirements of this Chapter. In addition to the hearing notice requirements described in W.S. § 35-11-406(k), the public notice of a hearing shall contain the following information:

- (i) Reference to the date of previous public notices relating to the permit;
- (ii) Date, time, and place of the hearing;
- (iii) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

(c) A decision on the application will be made by the Director:

- (i) Within 30 days after completion of the notice period if no hearing is requested; or
- (ii) If a hearing is requested:

(A) The Environmental Quality Council shall issue findings of fact and make a decision on the application within 60 days after the final hearing; and

(B) The Director will make a decision on the application within fifteen days from receipt of any findings of fact and decision of the Council.

(iii) In addition to the requirements of W.S. § 35-11-406(p), at the time that any permit or Research and Development Testing License is issued, the Director shall issue a response to objections. This response shall:

(A) Specify which provisions, if any, of the proposed permit have been changed in the final approved permit, and the reasons for the change;

(B) Briefly describe and respond to all significant objections on the permit application raised during the public comment period, or during any hearing; and

(C) Be sent to the applicant and objectors, along with a copy of the Director's decision, and be available to the public.

(iv) The Administrator will publish a summary of the decision in a newspaper of general circulation in the general area of the proposed operation.

(d) For permit or license revocation, all the provisions of this chapter shall apply, except that the director shall cause notice of the revocation to be published.

Section 22. Confidential Records.

(a) Information submitted to satisfy the requirements of this Chapter may be held confidential pursuant to W.S. § 35-11-1101.

Attachment B
Side-By-Side Comparison of
EPA Rules with Proposed Rules
(in order of EPA Rules)

B1 - 40 CFR 124

B2 - 40 CFR 144

B3 - 40 CFR 146

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
Subpart A - General Program Requirements	
<p>40 CFR 124.1 Purpose and scope.... (a) [Applicability]; (b) [Organization of Rules]; (c) [Types of Hearings]; (d) [Processing under two or more EPA Programs]; (e) Certain procedural requirements set forth in part 124 must be adopted by States in order to gain EPA approval to operate RCRA, UIC, NPDES, and 404 permit programs. These requirements are listed in §§123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA) and signaled by the following words at the end of the appropriate part 124 section or paragraph heading: <i>(applicable to State programs, see...145.11 (UIC)....)</i> (f) [Coordination of joint EPA/State processing].</p>	<p>The majority of 40 CFR 124.1 outlines EPA authority or is applicable only to EPA-issued Underground Injection Control (UIC) permits and joint review situations for programs other than the UIC program. Because the Land Quality Division (LQD) of the Wyoming Department of Environmental Quality is responsible for UIC permits in Wyoming and is not involved in other EPA programs,² counterpart LQD rules are not necessary for most of this section. For the applicable subsection (40 CFR 124.1(e)), States are required to have counterparts to specific portions of the various EPA programs, and the portions of the Underground Injection Control Program for which States must have counterparts are listed in 40 CFR 145.11 and highlighted by the phrase "applicable to State programs...."</p>
<p>40 CFR 124.2 Definitions....</p>	<p>These definitions are applicable only to EPA-issued permits and to items such as clarification of position descriptions (e.g., Regional Administrator), so no counterpart LQD rules are necessary. LQD is proposing adoption of some of the definitions in 40 CFR 144 and 146, as discussed in the side-by-side for those sections.</p>
<p>40 CFR 124.3 Application for a permit. (a) <i>Applicable to State programs, see...145.11 (UIC)....</i> (1) Any person who requires a permit under the...UIC....programs shall complete, sign, and submit to the Director an application for each permit required under...144.1 (UIC).... Applications are not required for RCRA permits by rule (§270.60), underground injections authorized by rules (§§144.21 through 144.26), NPDES general permits (§122.28) and 404 general permits (§233.37).</p>	<p>LQD has statutory requirements for applications for both permits (W.S. § 35-11-427, quoted below) and Research and Development Testing Licenses (W.S. § 35-11-431, quoted below) so no counterpart rule is necessary. (Note: LQD does not have (and is not required to have) provisions for underground injections authorized by rule; therefore, there are no existing or proposed counterparts for those portions of the EPA rules.) W.S. § 35-11-427 In situ mining permit; permit required; authority of land quality division exclusive. Application for an in situ mining permit shall be made to the director. The director shall</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>See 40 CFR 124.3(a)(2) above.</p> <p>40 CFR 124.3(a)(3) Permit applications (except for PSD permits) must comply with the signature and certification requirements of §§122.22 (NPDES), 144.32 (UIC), 233.6 (404), and 270.11 (RCRA).</p> <p>(b) [Reserved] (c) [EPA Completeness Review] (d) [Failure/Refusal to correct Deficiencies] (e) [Site Visit] (f) [Effective Date] (g) [Project Decision Schedule]</p>	<p>W.S. § 35-11-406 cont'd (h) The administrator shall review the application and unless the applicant requests a delay advise the applicant in writing within one hundred and fifty (150) days from the date of determining the application is complete, that [the application can go to public notice], that the application is deficient or that the application is denied. [The rest of W.S. § 406(h) lists review/response time limits.]</p> <p>W.S. § 35-11-431 Research and development license; renewal; application. (a)...An application for a research and development testing license shall include [the rest of the statute specifies material that must be submitted in the license application].</p> <p>The signature and certification requirements for the Underground Injection Control Program are listed in 40 CFR 144.32, and the proposed counterpart LQD rules can be found with that CFR section.</p> <p>These topics are only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary.</p>
<p>40 CFR 124.4 Consolidation of permit processing.</p>	<p>LQD does not have (and is not required to have) provisions for permit consolidation; therefore, no counterpart LQD rules are necessary.</p>
<p>40 CFR 124.5 Modification, revocation and reissuance, or termination of permits. <i>(Applicable to State programs, see...145.11 (UIC)...).</i></p>	<p>In the proposed LQD rules, permit revisions are addressed in the proposed Section 19 of Chapter 11 (quoted below) and permit revocations are addressed in the proposed Section 20 of that chapter (quoted below). Although the EPA rules refer to "revocation and reissuance" of permits, the Wyoming Environmental Quality Act does not differentiate</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>See 40 CFR 124.5 above.</p> <p>40 CFR 124.5(a) Permits (other than PSD permits) may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Director's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons specified in §122.62 or §122.64 (NPDES), 144.39 or 144.40 (UIC), 233.14 or 233.15 (404), and 270.41 or 270.43 (RCRA). All requests shall be in writing and shall contain facts or reasons supporting the request.</p> <p>40 CFR 124.5(b) If the Director decides the request is not justified, he or she shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings. Denials by the Regional Administrator may be informally appealed to the Environmental Appeals Board by a letter briefly setting forth the relevant facts. The Environmental Appeals Board may direct the Regional Administrator to begin modification, revocation and reissuance, or termination proceedings under paragraph (c) of this section. The appeal shall be considered denied if the Environmental Appeals Board takes no action on the letter within 60 days after receiving it. This informal appeal is, under 5 U.S.C. 704, a prerequisite to seeking judicial review of EPA action in denying a request for modification, revocation and reissuance, or termination.</p>	<p>between revocation and termination of permits - in either case, a permit would need to be re-issued before mining could resume. Therefore, the EPA rules relating solely to "revocation and reissuance" have not been incorporated into the proposed LQD rules.</p> <p><i>Revision</i></p> <p>Chapter 11, Section 19(a) <u>A permit, license to mine, or Research and Development Testing License may be revised as a significant or non-significant revision per Sections 19(b) and 19(c), respectively, to address one or more of the following considerations, subject to the limitations of Sections 19(d) and 19(e).</u> [See the side-by-sides for 40 CFR 144.39 and 144.40 for the revision/revocation reasons.]</p> <p>19(a)(i) [Contains cross-references to requirements in Wyoming statutes and other sections of Chapter 11.]</p> <p>19(a)(ii) <u>Any interested person, including the operator, may request a revision provided the request is in writing and contains facts or reasons supporting the request. If the Administrator decides that a request for a permit or license revision is not justified, he or she shall send the requester a brief written response giving the reason(s) for the decision. Denials of requests for revisions are not subject to public notice and comment;</u></p> <p>19(a)(iii) <u>If the Administrator requires the operator to revise any Class III Well portions of a permit or Research and Development Testing License, he or she shall prepare a letter to the operator specifying the needed changes and additional information.</u></p> <p><i>Revocation</i></p> <p>Chapter 11, Section 20(a) <u>A permit, license to mine, or Research and Development Testing License may be revoked by the Administrator to address one or more of the following considerations.</u></p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>See 40 CFR 124.5(b) above.</p> <p>40 CFR 124.5(c) (<i>Applicable to State programs, see 145.11 (UIC)...</i>).</p> <p>(1) If the Director tentatively decides to modify or revoke and reissue a permit under §§122.62 (NPDES), 144.39 (UIC), 233.14 (404), or 270.41 or 270.42(c) (RCRA), he or she shall prepare a draft permit under 124.6 incorporating the proposed changes. The Director may request additional information and, in the case of a modified permit, may require the submission of an updated application. In the case of revoked and reissued permits, the Director shall require the submission of a new application.</p> <p>40 CFR 124.5(c)(2) In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit.</p>	<p>Chapter 11, Section 20(a) cont'd</p> <p><u>(i) Revocation may be necessary to address:</u></p> <p style="padding-left: 40px;"><u>(A) An excursion or other aspect of noncompliance per Section 12 of this Chapter; or</u></p> <p style="padding-left: 40px;"><u>(B) One of the items listed in Section 20(b).</u></p> <p><u>(ii) Any interested person, including the operator may request revocation provided the request is in writing and contains facts or reasons supporting the request. If the Administrator decides that a request for revocation is not justified, he or she shall send the requester a brief written response giving the reason(s) for the decision. Denials of requests for revocations are not subject to public notice and comment;</u></p> <p><u>(iii) If the Administrator revokes any Class III Well portions of a permit or Research and Development Testing License, he or she shall prepare a letter to the operator specifying the needed changes and additional information.</u></p> <p>See the side-by-side below for 40 CFR 124.6 for discussion of draft permits.</p> <p>Chapter 11, Section 19(e) <u>Only those conditions to be revised shall be reopened when a revision is necessary. All other aspects of the existing permit shall remain in effect for the duration of the unrevised permit.</u></p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.5(c)(2) cont'd When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.</p> <p>40 CFR 124.5(c)(3) "Minor modifications" as defined in 122.63 (NPDES), 144.41 (UIC), and 233.16 (404), and "Classes 1 and 2 modifications" as defined in 270.42 (a) and (b) (RCRA) are not subject to the requirements of this section.</p> <p>40 CFR 124.5(d) (<i>Applicable to State programs, see ...145.11 (UIC)...</i>). If the Director tentatively decides to terminate a permit under 122.64 (NPDES), 144.40 (UIC), 233.15 (404), or 270.43 (RCRA), he or she shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under 124.6. In the case of EPA-issued permits, a notice of intent to terminate shall not be issued if the Regional Administrator and the permittee agree to termination in the course of transferring permit responsibility to an approved State under 123.24(b)(1)(NPDES), 145.24, 145.24(b)(1) (UIC), 271.8(b)(6) (RCRA), or 501.14(b)(1) (Sludge).</p> <p>40 CFR 124.5(e) [EPA Administrative Record] 40 CFR 124.5(f) [Only applicable to 404 permits.] 40 CFR 124.5(g) [Reserved for PSD Modification Provisions.]</p>	<p>See Chapter 11, Section 19(e) above.</p> <p>Minor modifications are described in 40 CFR 145.41, and the proposed counterpart LQD rules can be found with that CFR section.</p> <p>See the excerpts above from Chapter 11 of the proposed rules (Section 19 - <i>Revision</i> & Section 20 - <i>Revocation</i>).</p> <p>These provisions are only applicable to EPA-issued UIC permits or non-UIC programs which LQD does not regulate; therefore, no counterpart LQD rules are necessary.</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.6 Draft permits. (a) <i>(Applicable to State programs, see 145.11 (UIC)...)</i>. Once an application is complete, the Director shall tentatively decide whether to prepare a draft permit (except in the case of State section 404 permits for which no draft permit is required under §233.39) or to deny the application.</p>	<p>EPA and the State of Wyoming approach the permitting process differently, although the end result is essentially the same. Under EPA's approach, EPA prepares the permit document (the Draft Permit). Under the State approach, each prospective Class III operator prepares the permit document (the Permit Application), which is then reviewed by the State. The State follows this approach primarily because of the size of the Class III UIC operations (mostly in-situ uranium or trona mines) in the State of Wyoming and because all other mining operations are permitted in a similar manner (e.g., coal mines under the state program following federal Office of Surface Mining requirements).</p> <p>Under either the EPA or State approach, the permitting process includes aspects such as the opportunity for public comment on the Draft Permit (EPA) or Permit Application (State), prior to permit issuance (EPA) or permit application approval (State).</p> <p>Because of this difference in approach, the State does not prepare a Draft Permit. However, the State does require that a Permit Application include all of the same materials required for a Draft Permit. In addition, there are provisions for Public Notice and Comments and Hearings, and the State prepares a State Decision Document (SDD) that summarizes the permit setting, proposed mining and reclamation, and regulatory basis for the State approval of the permit (see proposed definition in Section 1 of Chapter 11, quoted below), thereby encompassing requirements for the Draft Permit and Fact Sheet. Revisions, except minor revisions as defined in the proposed rules, are handled in essentially the same manner as initial permit applications, including preparation of an SDD (proposed Section 19 of Chapter 11, quoted below). Additional details about the requirements for the Permit Application and SDD are included in reference to specific CFR sections.</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>See 40 CFR 124.6 above.</p> <p>40 CFR 124.6(b) If the Director tentatively decides to deny the permit application, he or she shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under this section. See §124.6(e). If the Director's final decision (§124.15) is that the tentative decision to deny the permit application was incorrect, he or she shall withdraw the notice of intent to deny and proceed to prepare a draft permit under paragraph (d) of this section.</p> <p>40 CFR 124.6(c) [Only applicable to NPDES and 404 permits.]</p> <p>40 CFR 124.6(d) (<i>Applicable to State programs, see 145.11 (UIC)...</i>). If the Director decides to prepare a draft permit, he or she shall prepare a draft permit that contains the following information:</p>	<p>Chapter 11, Section 1(r) <u>"State Decision Document" serves as a summary of, or reference to, all terms and conditions within an approved in situ mining permit application, an approved Research and Development Testing License application, or an approved application to revise a permit or Research and Development Testing License. This document is compiled by the Administrator and provides a summary of, or reference to, all UIC related terms and conditions, compliance provisions, and monitoring requirements included in the permit or Research and Development Testing License. [A sample Table of Contents for an SDD is included as Attachment I.]</u></p> <p>Chapter 11, Section 19(b)... <u>These revisions shall be treated as significant revisions and require public notice as specified in Chapter 7 of these regulations and Section 21 of this Chapter. In addition, the State Decision Document will be updated for these revisions....</u></p> <p>Chapter 11, Section 21(c)(iv) <u>The Administrator will publish a summary of the decision in a newspaper of general circulation in the general area of the proposed operation.</u></p> <p>The proposed counterpart LQD rules for each of the topics listed in this subsection can be found with the referenced CFR section.</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.6(d)(1) All conditions under...§§144.51 and 144.42 (UIC)...;</p> <p>(2) All compliance schedules under...§144.53 (UIC)...;</p> <p>(3) All monitoring requirements under...§144.54 (UIC)...; and</p> <p>(4) For:</p> <p>(i) [Only applicable to RCRA permits];</p> <p>(ii) UIC permits, permit conditions under §144.52;</p> <p>(iii) [Only applicable to PSD permits];</p> <p>(iv) [Only applicable to 404 permits];</p> <p>(v) [Only applicable to NPDES permits];</p> <p>40 CFR 124.6(e) (<i>Applicable to State programs, see 145.11 (UIC)...</i>). All draft permits prepared by EPA under this section shall be accompanied by a statement of basis (§124.7) or fact sheet (§124.8), and shall be based on the administrative record (§124.9), publicly noticed (§124.10) and made available for public comment (§124.11). The Regional Administrator shall give notice of opportunity for public hearing (§124.12), issue a final decision (§124.15) and respond to comments (§124.17). For RCRA, UIC or PSD permits, an appeal may be taken under §124.9 and, for NPDES permits, an appeal may be taken under §124.74. Draft permits prepared by a State shall be accompanied by a fact sheet if required under §124.8.</p>	<p>The proposed counterpart LQD rules for each of the topics listed in this subsection can be found with the referenced CFR section.</p>
<p>40 CFR 124.7 Statement of basis. [Explanation of EPA conditions/decisions if a Fact Sheet is not prepared under 40 CFR 124.8.]</p>	<p>Applicable only to EPA-issued permits, so no counterpart LQD rules are necessary.</p>
<p>40 CFR 124.8 Fact sheet. (<i>Applicable to State programs, see 145.11 (UIC)...</i>).</p> <p>(a) A fact sheet shall be prepared for every draft permit for a major HWM, UIC, 404, or NPDES facility or activity, for every Class I sludge</p>	<p>As noted in the side-by-side for 40 CFR 124.6(a), the State Decision Document (SDD) is intended to encompass requirements for both Draft Permits and Fact Sheets and is available to the public for review. This document, combined with the requirements for Public Notice, includes the information required by EPA.</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.8 cont'd management facility, for every 404 and NPDES general permit (237.37 and 122.28), for every NPDES draft permit that incorporates a variance or requires an explanation under 124.56(b), for every draft permit that includes a sewage sludge land application plan under 40 CFR 501.15(a)(2)(ix), and for every draft permit which the Director finds is the subject of wide-spread public interest or raises major issues. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Director shall send this fact sheet to the applicant and, on request, to any other person.</p> <p>40 CFR 124.8(b) The fact sheet shall include, when applicable:</p> <ul style="list-style-type: none"> (1) A brief description of the type of facility or activity which is the subject of the draft permit; (2) The type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged. (3) [Only applicable to PSD permits]; (4) A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by §124.9 (for EPA-issued permits). <p>40 CFR 124.8(b)(5) Reasons why any requested variances or alternatives to required standards do or do not appear justified.</p> <p>40 CFR 124.8(b)(6) A description of the procedures for reaching a final decision on the draft permit including:</p>	<p>As noted in the side-by-side for 40 CFR 124.6(a), the State Decision Document (SDD) is intended to encompass requirements for both Draft Permits and Fact Sheets and is available to the public for review. This document, combined with the requirements for Public Notice, includes the information required by EPA.</p> <p>Per W.S. § 35-11-601, variances can only be granted upon notice and hearing; therefore, no counterpart LQD rules are necessary.</p> <p>See the Public Notice requirements in Section 21 of the proposed Chapter 11 in the Statement of Reasons.</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.8(b)(6) cont'd (i) The beginning and ending dates of the comment period under §124.10 and the address where comments will be received; (ii) Procedures for requesting a hearing and the nature of that hearing; and (iii) Any other procedures by which the public may participate in the final decision. 40 CFR 124.8(b)(7) Name and telephone number of a person to contact for additional information. 40 CFR 124.8(b)(8) [Only applicable to NPDES permits.]</p>	<p>See the Public Notice requirements in Section 21 of the proposed Chapter 11 in the Statement of Reasons.</p>
<p>40 CFR 124.9 Administrative record for draft permits when EPA is the permitting authority.</p>	<p>Only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary. (See W.S. §16-3-101 <i>et seq.</i> for the provisions of the Wyoming Administrative Procedures Act and the WDEQ Rules of Practice & Procedure, which discuss record requirements.)</p>
<p>40 CFR 124.10 Public notice of permit actions and public comment period. (a) Scope. (1) The Director shall give public notice that the following actions have occurred:</p> <p>40 CFR 124.10(a)(1)(i) A permit application has been tentatively denied under §124.6(b);</p> <p>40 CFR 124.10(a)(1)(ii) (<i>Applicable to State programs, see 145.11 (UIC)...</i>). A draft permit has been prepared under §124.6(d);</p>	<p>As noted in the side-by-side for 40 CFR 124.3(a)(2), LQD has a two-step process for initial permit review (and revisions start with the second step). There are statutory requirements for public notice for each of these steps (W.S. §§ 35-11-406(g)&(j), quoted below in the side-by-side for 40 CFR 124.10(a)(1)(ii) and for public comment, hearings, and related actions after the second step, i.e., after the technical adequacy determination (W.S. § 35-11-406(k), quoted below in the side-by-side for 40 CFR 124.10(a)(1)(iii)).</p> <p>With respect to denial of a permit application, see the side-by-side for 40 CFR 124.6(b). With respect to denial of a request for revision or revocation, see the side-by-side for 40 CFR 124.5(a).</p> <p>W.S. § 35-11-406(g) After the application is determined complete, the applicant shall publish a notice of the filing of the application once each week</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>See 40 CFR 124.10(a)(1)(iii) above.</p> <p>40 CFR 124.10(a)(1)(iv) An appeal has been granted under §124.19(c);</p> <p>40 CFR 124.10(a)(1)(v) [Only applicable to 404 permits];</p> <p>40 CFR 124.10(a)(1)(vi) [Only applicable to NPDES permits];</p> <p>40 CFR 124.10(a)(2) No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under §124.5(b). Written notice of that denial shall be given to the requester and to the permittee.</p> <p>40 CFR 124.10(a)(3) Public notices may describe more than one permit or permit actions.</p> <p>40 CFR 124.10(b) <i>Timing (applicable to State programs, see §...145.11 (UIC)...).</i></p>	<p>W.S. § 35-11-406(k) cont'd preferable to a contested case proceeding. An informal conference or a public hearing shall be held within twenty (20) days after the final date for filing objections unless a different period is stipulated to by the parties. The council or director shall publish notice of the time, date and location of the hearing or conference in a newspaper of general circulation in the locality of the proposed operation once a week for two (2) consecutive weeks immediately prior to the hearing or conference. The hearing shall be conducted as a contested case in accordance with the Wyoming Administrative Procedure Act, and right of judicial review shall be afforded as provided in that act.</p> <p>Only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary. (See W.S. §16-3-101 <i>et seq.</i> for the provisions of the Wyoming Administrative Procedures Act and the WDEQ Rules of Practice & Procedure, which discuss record requirements.)</p> <p>See the side-by-side for 40 CFR 124.5(a) for the complete quotes of the following proposed rules related to public notice for revision and revocation. <u>Chapter 11, Section 19(a)(ii)...Denials of requests for revisions are not subject to public notice and comment; Chapter 11, Section 20(a)(ii)... Denials of requests for revocations are not subject to public notice and comment;</u></p> <p>Only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary.</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.10(b)(1) Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under paragraph (a) of this section shall allow at least 30 days for public comment. [Remainder of rule applies to RCRA permits and EPA-issued permits.]</p>	<p>While the Wyoming Statutes provide for public notice (see the side-by-side for 40 CFR 124.11 below), the time frame is not the same as in the EPA rules. This difference, along with another difference, is discussed in more detail in the side-by-side for 40 CFR 124.12 below.</p>
<p>40 CFR 124.10(b)(2) Public notice of a public hearing shall be given at least 30 days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)</p>	<p>See the 40 CFR 124.12 side-by-side below.</p>
<p>40 CFR 124.10(c) <i>Methods (applicable to State programs, see §...145.11 (UIC)...)</i>. Public notice of activities described in paragraph (a)(1) of this section shall be given by the following methods:</p>	<p>The proposed provisions for public notice methods are included in Section 21 of Chapter 11, quoted below. The provisions here have been rearranged (for clarity in the State rules); cross-references to Wyoming statutory requirements have been added. W.S. § 35-11-406(j) requires the applicant to file the public notice.</p>
<p>40 CFR 124.10(c)(1) By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this paragraph may waive his or her rights to receive notice for any classes and categories of permits);</p>	<p>Chapter 11, Section 21(a)(ii)(F) <u>Any person otherwise entitled to receive notice under this paragraph may waive his or her rights to receive notice for any classes and categories of permits).</u></p>
<p>40 CFR 124.10(c)(1)(i) The applicant [except for general NPDES and 404 permits];</p>	<p>W.S. § 35-11-406(j) requires the applicant to file the public notice; therefore, under Wyoming's program, a copy does not need to be mailed to the applicant (see 40 CFR 124.10(a)(1)(ii) side-by-side for complete quote of W.S. §35-11-406(j)).</p>
<p>40 CFR 124.10(c)(1)(ii) Any other agency which the Director knows has issued or is required to issue a RCRA, UIC, PSD (or other permit under the Clean Air Act), NPDES, 404, sludge management permit, or</p>	<p>Chapter 11, Section 21(a)(ii) <u>The Administrator shall mail a copy of the notice to the following persons:</u> Chapter 11, Section 21(a)(ii)(A) <u>Any other agency (including EPA when the draft permit is prepared by the State) which the Administrator knows has issued or is required to issue a permit for</u></p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.10(c)(1)(ii) cont'd ocean dumping permit under the Marine Research Protection and Sanctuaries Act for the same facility or activity (including EPA when the draft permit is prepared by the State);</p> <p>40 CFR 124.10(c)(1)(iii) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected States (Indian Tribes). (For purposes of this paragraph, and in the context of the Underground Injection Control Program only, the term State includes Indian Tribes treated as States.)</p> <p>40 CFR 124.10(c)(1)(iv) through (viii) [For NPDES, 404, PSD, & Class I UIC permits.]</p> <p>40 CFR 124.10(c)(1)(ix) Persons on a mailing list developed by:</p> <p style="padding-left: 20px;">(A) Including those who request in writing to be on the list;</p> <p style="padding-left: 20px;">(B) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and</p> <p style="padding-left: 20px;">(C) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as Regional and State funded newsletters, environmental bulletins, or State law journals. (The Director may update the mailing list from time to time by requesting written indication of continued interest from those listed. The</p>	<p>Chapter 11, Section 21(a)(ii)(A) cont'd <u>the same facility or activity under the following programs: Resource Conservation and Recovery Act (RCRA); Underground Injection Control (UIC); Prevention of Significant Deterioration (or other permit requirement under the Clean Air Act); National Pollution Discharge Elimination System (including sludge management permits); and Section 404 of the Clean Water Act.</u></p> <p>Chapter 11, Section 21(a)(ii)(B) <u>Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected Indian Tribes, and the Wyoming Oil and Gas Commission.</u></p> <p>Provisions related to coast and ocean concerns have been removed (due to the conditions in Wyoming).</p> <p>Chapter 11, Section 21(a)(ii)(C) <u>Persons on a mailing list developed by including:</u></p> <p style="padding-left: 20px;"><u>(C)(I) Those who request in writing to be on the list;</u></p> <p style="padding-left: 20px;"><u>(C)(II) Soliciting persons for "area lists" from participants in past permit proceedings in that area; and</u></p> <p style="padding-left: 20px;"><u>(C)(III) Persons notified of the opportunity to be put on the mailing list through periodic publication in the public press and in such publications as Regional and State funded newsletters, environmental bulletins, or State law journals. (The Administrator may update the mailing list from time to time by requesting written indication of continued interest from those listed. The</u></p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.10(c)(1)(ix) cont'd Director may delete from the list the name of any person who fails to respond to such a request.)</p> <p>40 CFR 124.10(c)(1)(x)(A) To any unit of local government having jurisdiction over the area where the facility is proposed to be located; and</p> <p>40 CFR 124.10(c)(1)(x)(B) To each State agency having any authority under State law with respect to the construction or operation of such facility.</p> <p>40 CFR 124.10(c)(2) [For EPA-issued, NPDES, RCRA, and 404 permits.]</p> <p>40 CFR 124.10(c)(3) When the program is being administered by an approved State, in a manner constituting legal notice to the public under State law; and</p>	<p><u>Chapter 11, Section 21(a)(ii)(C)(III) cont'd Administrator may delete from the list the name of any person who fails to respond to such a request.</u> The LQD currently has a list of interested persons, operators, and environmental groups to whom it sends notices. To augment this list, the LQD will use the public notice for this rule making as a way to contact potentially interested parties (Section 22(a)(ii)(C)(III)). For "area lists" (Section 22(a)(ii)(C)(II)), the LQD has contacted those owners previously contacted for permit actions per W.S. § 35-11-406. With respect to the "notification list" (Section 21(a)(ii)(C)(III)), the LQD has found the press publication effective, and because of the small state population, few of the other publications listed as examples are widely available in Wyoming.</p> <p><u>Chapter 11, Section 21(a)(ii)(D) Any unit of local government having jurisdiction over the area where the facility is proposed to be located.</u></p> <p><u>Chapter 11, Section 21(a)(ii)(E) Each State agency having any authority under State law with respect to the construction or operation of such facility.</u></p> <p><u>Chapter 11, Section 21(a) In addition to the requirements of W.S. §§ 35-11-406(g) and 406(j) and Chapter 7 of these regulations, public notice for actions related to in situ permits or Research and Development Testing Licenses, except permit or license revocation, shall be given by the following methods. Public notice for permit or license revocation shall be given by the methods in Section 21(d) of this Chapter.</u></p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.10(c)(4) Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.</p> <p>40 CFR 124.10(d) <i>Contents (applicable to State programs, see...§§145.11 (UIC))....</i></p> <p>40 CFR 124.10(d)(1) <i>All public notices.</i> All public notices issued under this part shall contain the following minimum information:</p> <p>40 CFR 124.10(d)(1)(i) Name and address of the office processing the permit action for which notice is being given;</p> <p>40 CFR 124.10(d)(1)(ii) Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit, except in the case of NPDES and 404 draft general permits under §§ 122.28 and 233.37;</p> <p>40 CFR 124.10(d)(1)(iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit, for NPDES or 404 general permits when there is no application;</p> <p>40 CFR 124.10(d)(1)(iv) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit or draft general permit, as the case may be, statement of basis or fact sheet, and the application; and</p> <p>40 CFR 124.10(d)(1)(v) A brief description of the comment procedures required by §§ 124.11 and 124.12 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision.</p>	<p>Chapter 11, Section 21(a)(iv) <u>To supplement the required methods of public notice listed above, public notice can also be given by any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.</u></p> <p>Chapter 11, Section 21(a)(i) <u>All public notices issued under this Section shall contain the following:</u></p> <p>Chapter 11, Section 21(a)(i)(A) <u>Name and address of the office processing the permit action for which notice is being given;</u></p> <p>Chapter 11, Section 21(a)(i)(B) <u>Name and address of the operator and, if different, of the facility or activity regulated by the permit;</u></p> <p>Chapter 11, Section 21(a)(i)(C) <u>A brief description of the business conducted at the facility or activity;</u></p> <p>Chapter 11, Section 21(a)(i)(D) <u>Name, address and telephone number of a person from whom interested persons may obtain further information including copies of the State Decision Document;</u></p> <p>Chapter 11, Section 21(a)(i)(E) <u>A brief description of the comment procedures, including a statement of procedures to request a hearing or, if a hearing has already been scheduled, the time and place of that hearing, and other procedures by which the public may participate in the final permit decision; and</u></p>

**Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making**

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.10(d)(1)(vi) through (viii) [<i>For EPA-issued, NPDES, and 404 permits</i>]</p> <p>40 CFR 124.10(d)(1)(ix) Any additional information considered necessary or proper.</p> <p>40 CFR 124.10(d)(2) <i>Public notices for hearings.</i> In addition to the general public notice described in paragraph (d)(1) of this section, the public notice of a hearing under §124.12, subpart E, or subpart F shall contain the following information:</p> <p>40 CFR 124.10(d)(2)(i) Reference to the date of previous public notices relating to the permit;</p> <p>40 CFR 124.10(d)(2)(ii) Date, time, and place of the hearing;</p> <p>40 CFR 124.10(d)(2)(iii) A brief description of the nature and purpose of the hearing; including the applicable rules and procedures; and</p> <p>40 CFR 124.10(d)(2)(iv) [<i>For 404 permits</i>].</p> <p>40 CFR 124.10(e) (<i>Applicable to State programs, see...§145.11 (UIC)</i>...). In addition to the general public notice described in paragraph (d)(1) of this section, all persons identified in paragraphs (c)(1)(i), (ii), (iii), and (iv) of this section shall be mailed a copy of the fact sheet or statement of basis (for EPA-issued permits), the permit application (if any) and the draft permit (if any).</p>	<p>Chapter 11, Section 21(a)(i)(F) <u>Any additional information considered necessary or proper.</u></p> <p>Chapter 11, Section 21(b)(1)<u>In addition to the hearing notice requirements described in W.S. § 35-11-406(k), the public notice of a hearing shall contain the following information:</u></p> <p><u>(i) Reference to the date of previous public notices relating to the permit;</u></p> <p><u>(ii) Date, time, and place of the hearing;</u></p> <p><u>(iii) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.</u></p> <p>Chapter 11, Section 21(a)(iii) <u>In addition to mailing a copy of the public notice, the Administrator shall mail or electronically transfer a copy of the State Decision Document to the following persons:</u></p> <p><u>(i) Any other agency (including EPA when the draft permit is prepared by the State) which the Administrator knows has issued or is required to issue a permit for the same facility or activity under the following programs: Resource Conservation and Recovery Act (RCRA); Underground Injection Control (UIC); Prevention of Significant Deterioration (or other permit requirement under the Clean Air Act); National Pollution Discharge Elimination System (including sludge management permits); and Section 404 of the Clean Water Act.</u></p> <p><u>(ii) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources, the Advisory Council on Historic Preservation, State Historic Preservation Officers, including any affected Indian Tribes.</u></p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.11 Public comments and requests for public hearings. <i>(Applicable to State programs...145.11(UIC)....)</i> During the public comment period provided under 124.10, any interested person may submit written comments on the draft permit or the permit application for 404 permits when no draft permit is required (see 233.39) and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in 124.17.</p>	<p>W.S. § 35-11-406(k) Any interested person has the right to file written objections to the application with the administrator within thirty (30) days after the last publication of the above notice..... a public hearing shall be held within twenty (20) days after the final date for filing objections unless a different period is stipulated to by the parties. The council or director shall publish notice of the time, date and location of the hearing or conference in a newspaper of general circulation in the locality of the proposed operation once a week for two (2) consecutive weeks immediately prior to the hearing or conference. The hearing shall be conducted as a contested case in accordance with the Wyoming Administrative Procedure Act, and right of judicial review shall be afforded as provided in that act.</p> <p>Chapter 11, Section 21(b) <u>Objections may be filed in accordance with W.S. § 35-11-406(k), which objections shall list one or more reasons for denying a permit or Research and Development Testing License revision application as set out in W.S. § 35-11-406(m). If such written objections are filed, a public hearing shall be held in accordance with W.S. § 35-11-406(k) and the requirements of this Chapter.</u></p> <p><u>In addition to the hearing notice requirements described in W.S. § 35-11-406(k), the public notice of a hearing shall contain the following information:...</u></p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.12 Public hearings. (a)(Applicable to State programs...145.11(UIC)....) (1) The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit(s). (2) The Director may also hold a public hearing at his or her discretion, whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision; (3) [For RCRA permits only]; (4) Public notice of the hearing shall be given as specified in §124.10. (b) [Designation of a Presiding Officer]; (c) [Submittal of oral and written statements]; (d) [Hearing transcript]; (e) [Option to use Subpart F procedures].</p>	<p>As noted in the side-by-side for 40 CFR 124.11, the LQD's provisions for public hearings are included in W.S. §35-11-406(k). However, there are two differences between the Wyoming Statutes and the EPA Rules. The first difference is related to the discretion of the LQD Administrator (or the WDEQ Director) to hold public hearings; and the second is related to the time frame for the public notice of the hearing. While the Administrator and Director can hold informal conferences for some actions (e.g., resolution of comments on coal permits), the Environmental Quality Council is authorized to hold public hearings (W.S. §§ 35-11-109, 110, & 112). Therefore, without a statute change, it is not clear that the LQD rules can allow as much flexibility as the EPA rules. With respect to the time frame for the public notice of a hearing, W.S. §35-11-406(k) requires only a two-week notice, as opposed to the thirty-day notice required per 40 CFR 124.10(b)(2). Again, a statute change would be necessary to address this difference.</p>
<p>40 CFR 124.13 through 124.16</p>	<p>Only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary. (See W.S. § 16-3-107 <i>et seq.</i> for the provisions of the Wyoming Administrative Procedures Act and the WDEQ Rules of Practice & Procedure, which discuss record requirements.)</p>
<p>40 CFR 124.17 Response to comments. (a)(Applicable to State programs...145.11(UIC)....) At the time that any final permit decision is issued under §124.15, the Director shall issue a response to comments. States are only required to issue a response to comments when a final permit is issued. This response shall:</p> <p>40 CFR 124.17(a)(1) Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reason for the change; and</p>	<p>W.S. § 35-11-406(p) (quoted above in the side-by-side for 40 CFR 124.6(b)) requires that the Director send a copy of the final written decision after a conference or hearing to all parties, but it does not specify that the written decision also include response to comments. Therefore, the following rule is proposed to address the response to comments.</p> <p>Chapter 11, Section 21(c)(iii) <u>In addition to the requirements of W.S. § 35-11-406(p), at the time that any permit or Research and Development Testing License is issued, the Director shall issue a response</u></p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.17(a)(2) Briefly describe and respond to all significant comments on the draft permit or the permit application (for section 404 permits only) raised during the public comment period, or during any hearing.</p> <p>(b) [For EPA-issued permits only.]</p> <p>(c) <i>(Applicable to State programs...§145.11 (UIC)....)</i> The response to comments shall be available to the public.</p>	<p>Chapter 11, Section 21(c)(iii) cont'd <u>to objections. This response shall:</u></p> <p><u>(A) Specify which provisions, if any, of the proposed permit have been changed in the final approved permit, and the reasons for the change;</u></p> <p><u>(B) Briefly describe and respond to all significant objections on the permit application raised during the public comment period, or during any hearing; and</u></p> <p><u>(C) Be sent to the applicant and objectors, along with a copy of the Director's decision, and be available to the public.</u></p> <p><u>(iv) The Administrator will publish a summary of the decision in a newspaper of general circulation in the general area of the proposed operation.</u></p>
<p>40 CFR 124.18 Administrative record for final permit when EPA is the permitting authority.</p>	<p>Only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary. (See W.S. §16-3-101 <i>et seq.</i> for the provisions of the Wyoming Administrative Procedures Act and the WDEQ Rules of Practice & Procedure, which discuss record requirements.)</p>
<p>40 CFR 124.19 Appeal of RCRA, UIC, and PSD permits.</p>	
<p>40 CFR 124.20 Computation of time.</p>	
<p>40 CFR 124.21 Effective date of part 124.</p> <p>(a) Except for paragraphs (b) and (c) of this section, part 124 will become effective July 18, 1980. Because this effective date will precede the processing of any RCRA or UIC permits, part 124 will apply in its entirety to all RCRA and UIC permits.</p> <p>(b) [For RCRA permits];</p> <p>(c) All provisions of part 124 pertaining to the UIC program will become effective July 18, 1980, but shall</p>	<p>This section was included for informational purposes only. No counterpart LQD rules are necessary.</p>

Attachment B1
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 124 - Procedures for Decision Making

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 124.21 cont'd not be implemented until the effective date of 40 CFR part 146. (d) [For NPDES permits]; (e) [For PSD permits].</p>	<p>This section was included for informational purposes only. No counterpart LQD rules are necessary.</p>
Subpart B - Specific Procedures Applicable to RCRA Permits	
LQD does not process RCRA permit applications; therefore, no counterpart rules are necessary.	
Subpart C - Specific Procedures Applicable to PSD Permits	
LQD does not process PSD permit applications; therefore, no counterpart LQD rules are necessary.	
Subpart D - Specific Procedures Applicable to NPDES Permits	
LQD does not process NPDES permit applications; therefore, no counterpart LQD rules are necessary.	
Subpart E - Evidentiary Hearing for EPA-Issued NPDES Permits and EPA-Terminated RCRA Permits	
Only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary.	
Subpart F - Non-Adversary Panel Procedures	
Only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary.	

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
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Subpart A - General Provisions

40 CFR 144.1 Applicability

(a) *Contents of part 144.* [General information.]

(b) *Applicability.*

(1) The regulations in this part establish minimum requirements for UIC programs. To the extent set forth in part 145, each State must meet these requirements in order to obtain primary enforcement authority of the UIC program in that state.

(2) [For States in which EPA administers program.]

40 CFR 144.1(c) [Office of Management & Budget clearance.]

40 CFR 144.1(d) Authority

(1) Section 1421 of SDWA [Safe Drinking Water Act] requires the Administrator to promulgate regulations establishing minimum requirements for effective UIC programs.

(2) - (6) [References to other sections of Safe Drinking Water Act.]

40 CFR 144.1(e) Overview of the UIC Program.

An UIC program is necessary in any State listed by EPA under section 1422 of the SDWA. [Original 1980 date for State submittal of programs.] Once a program is established, SDWA provides that all underground injections in listed States are unlawful and subject to penalties unless authorized by a permit or rule. This part sets forth the requirements governing all UIC programs, authorizations by permit or rule and prohibits certain types of injection. The technical regulations governing these authorizations appear in 40 CFR part 146.

40 CFR 144.1(f) Structure of the UIC program

(1) *Part 144.* [Overview of contents of each Subpart, not all of which are applicable to LQD.]

(2) *Part 145.* While part 144 sets forth minimum requirements for all UIC Programs, these requirements are specifically identified as elements of

This section is included for informational purposes only. No counterpart rules are necessary for the portion of the UIC program administered by the Wyoming Department of Environmental Quality, Land Quality Division (LQD).

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.1(f)(2) continued a State application for primacy to administer an UIC Program in Part 145. Part 145 also sets forth the necessary elements of a State submission and the procedural requirements for approval of State programs.</p> <p>40 CFR 144.1(f)(3) Part 124. The public participation requirements that must be met by UIC Programs, whether administered by the State or by EPA, are set forth in part 124. EPA must comply with all part 124 requirements; State administered programs must comply with part 124 as required by part 145. [Supercedes 40 CFR Part 25.]</p> <p>40 CFR 144.1(f)(4) Part 146. This part sets forth the technical criteria and standards that must be met in permits and authorizations by rules as required by part 144.</p> <p>40 CFR 144.1(g) Scope of the permit or rule requirement. The UIC Permit Program regulates underground injections by five classes of well...All owners or operators of these injection wells must be authorized either by permit or rule by the Director. In carrying out the mandate of the SDWA, this subpart provides that no injection shall be authorized by permit or rule if it results in the movement of fluid containing any contaminatnin into Underground Sources of Drinking Water....., if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 142 or may adversely affect the health of person. (§144.12). [Discussion of Class IV and V wells, which are not part of the program administered by LQD.] During UIC program development, the Director may identify aquifers and portions of aquifer which are actual or potential sources of drinking water. This will provide an aid to the Director in carrying out his or her duty to protect all USDWs. An aquifer is a USDW if it fits the definition, even if it has not been "identified." The</p>	<p>This section is included for informational purposes only. No counterpart rules are necessary for the portion of the UIC program administered by the Wyoming Department of Environmental Quality, Land Quality Division (LQD).</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.1(f)(2) continued using criteria in §146.04. Such aquifers are those which would otherwise qualify as "underground sources of drinking water" to be protected, but which have no real potential to be used as drinking water sources. Therefore, they are not USDWs. No aquifer is an "exempted aquifer" until it has been affirmatively designated under the procedures in §144.7. Aquifers which do not fit the definition of "underground sources of drinking water" are not "exempted aquifers." They are simply not subject to the special protection afforded USDWs.</p> <p>40 CFR 144.1(g)(1) & (2) Specific inclusions & exclusions. [Lists of various types of wells (e.g., septic tanks) that are specifically included in or excluded from the UIC program. None of these are directly related to in situ mining.]</p> <p>40 CFR 144.1(g)(3) [Only applicable to Class IV wells which are not part of the program administered by LQD.]</p> <p>40 CFR 144.1(h) [Only applicable to Class I wells which are not part of the program administered by LQD.]</p>	<p>This section is included for informational purposes only. No counterpart rules are necessary for the portion of the UIC program administered by the Wyoming Department of Environmental Quality, Land Quality Division (LQD).</p>
<p>40 CFR 144.2 Promulgation of Class II programs for Indian Lands.</p>	<p>Because LQD does not administer the program for Class II wells, counterpart LQD rules are not necessary.</p>
<p>40 CFR 144.3 Definitions Terms not defined in this section have the meaning given by the appropriate Act. When a defined term appears in a definition, the defined term is sometimes placed within quotation marks as an aid to readers....</p> <p>40 CFR 144.3 Exempted aquifer means an "aquifer" or its portion that meets the criteria in the definition of "underground source of drinking water" but which has been exempted according to the procedures in §144.7....</p>	<p>Most of the definitions are only applicable to EPA-administered programs, so only those that are applicable to the LQD program are included in this side-by-side.</p> <p>Chapter 11, Section 1(g) <u>"Exempted aquifer" means an aquifer or its portion that meets the criteria in the definition of "underground source of water" but which has been exempted according to the procedures of Section 10 of this Chapter.</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.3 <i>Underground source of drinking water (USDW)</i> means an aquifer or its portion:</p> <p>40 CFR 144.3(a)(1) Which supplies any public water system; or</p> <p>40 CFR 144.3(a)(2) Which contains a sufficient quantity of ground water to supply a public water system; and</p> <p>40 CFR 144.3(a)(2)(i) Currently supplies drinking water for human consumption; or</p> <p>40 CFR 144.3(a)(2)(ii) Contains fewer than 10,000 mg/l total dissolved solids; and</p> <p>40 CFR 144.3(b) Which is not an exempted aquifer.</p>	<p>Chapter 11, Section 1(v) "<u>Underground source of water</u>" (USW) means those aquifers or portions thereof which have a total dissolved solids content of less than 10,000 mg/l, or those that have been classified as a "known source of supply" pursuant to <u>Chapter 8, Section 4(c), Quality Standards for Wyoming Groundwaters, Water Quality Division Rules and Regulations (as amended March 12, 1993)</u>. (Note: The proposed definition is designed to take into account both the EPA definition (40 CFR 144.3 and 146.3) and the Wyoming Department of Environmental Quality, Water Quality Division classification system.)</p>
<p>40 CFR 144.4 Considerations under Federal law. The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed.</p> <p>(a) <i>The Wild and Scenic Rivers Act....</i></p> <p>(b) <i>The National Historic Preservation Act of 1966....</i></p> <p>(c) <i>The Endangered Species Act....</i></p> <p>(d) <i>The Coastal Zone Management Act....</i></p> <p>(e) <i>The Fish and Wildlife Coordination Act....</i></p> <p>(f) <i>Executive Orders....</i></p>	<p>The LQD has procedures in place for notifying various federal and state agencies in the permitting process, so no counterpart LQD rules are necessary. In addition, laws and policies of other agencies are taken into account under W.S. § 35-11-406(m): "...The director shall not deny a permit except for one (1) or more of the following reasons:...(iii) Any part of the proposed operation, reclamation program, or the proposed future use is contrary to the law or policy of this state, or the United States;...."</p>

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Side-by-Side Comparison
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EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>See 40 CFR 144.6 above.</p> <p>40 CFR 144.6(c) <i>Class III</i>. Wells which inject for extraction of minerals including:</p> <p>(1) Mining of sulfur by the Frasch process;</p> <p>(2) In situ production of uranium or other metals; this category includes only in-situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V.</p> <p>(3) Solution mining of salts or potash.</p>	<p>important mineral in Wyoming. Third, LQD is specifically excluding those wells which are being tested for trona tailings disposal and secondary trona recovery, to be consistent with the EPA and WQD approaches. (These disposal/recovery wells are Class V wells per WQD.) Fourth, wells used for fossil fuel recovery are regulated by WQD and LQD as Class III wells. Although EPA would apparently include all such wells as Class V wells (under 40 CFR 146.5), the State considers the more comprehensive Class III requirements more appropriate, based on the State's experience with such wells</p> <p>Chapter 11, Section 1(c) "Class III well" means a well used for in situ mining for the injection of recovery fluid for the purpose of extracting minerals, or products, including a well used in:</p> <p>(i) Mining of sulfur by the Frasch process;</p> <p>(ii) In situ mining of uranium or other metals; this category includes only in situ production from ore bodies which have not been conventionally mined. Wells used for solution mining (such as stopes leaching) of conventional mines are classified as Class V wells;</p> <p>(iii) In situ mining of salts, trona, or potash. With the exception that wells, used in reclamation activities, to inject into previously mined areas of underground trona mines will be classified as Class V wells rather than Class III wells (and therefore not regulated under this Chapter), regardless of whether such wells are used for secondary recovery of trona; or</p> <p>(iv) Fossil fuel recovery, including oil shale and tar sands.</p> <p>(v) Experimental technologies, such as pilot scale in situ mining wells in previously unmined areas.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.6(d) Class IV.[Program not administered by LQD.] 40 CFR 144.6(e) Class V. [Program not administered by LQD.]</p>	
<p>40 CFR 144.7 Identification of underground sources of drinking water and exempted aquifers. (a) [Similar to 40 CFR 144.1(g) allowing the Director to identify, and requiring protection of underground sources of drinking water.] 40 CFR 144.7(b)(1) The Director may identify (by narrative description, illustrations, maps, or other means) and describe in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and definite, all aquifers or parts thereof which the Director proposes to designate as exempted aquifers using the criteria in 40 CFR 146.04. 40 CFR 144.7(b)(2) No designation of an exempted aquifer submitted as part of a UIC Program shall be final until approved by the Administrator as part of a UIC program. 40 CFR 144.7(b)(3) Subsequent to program approval or promulgation, the Director may, after notice and opportunity for a public hearing, identify additional exempted aquifers. For approved State programs exemption of aquifers identified (i) under §146.04(b) shall be treated as a program revision under §145.32; (ii) under §146.04(c) shall become final if the State Director submits the exemption in writing to the Administrator and the Administrator has not disapproved the designation within 45 days. Any disapproval by the Administrator shall state the reasons and shall constitute final Agency action for purposes of judicial review.</p>	<p>Sections 144.7(b)(1)&(2) are included as background for the discussion under 40 CFR 144.7(b)(3). The critical aspect of aquifer exemptions is that they are program amendments, i.e., the EPA must review and approve an exemption and it is noted as a change in the documentation of the EPA approval of the State Program.</p> <p>Chapter 11, Section 10(c) <u>A request for an aquifer exemption shall be presented by the Administrator to the EPA as a state program revision pursuant to Code of Federal Regulations, Title 40, Part 145, Section 32 (40 CFR § 145.32 as amended July 1, 2001).</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.7(c)(1) For Class III wells, the Director shall require an applicant for a permit which necessitates an aquifer exemption under §146.04(b)(1) to furnish the data necessary to demonstrate that the aquifer is expected to be minerals or hydrocarbon producing. Information contained in the mining plan for the proposed project, such as a map and general description of the mining zone, general information on the mineralogy and geochemistry of the mining zone, analysis of the amenability of the mining zone to the proposed mining method, and a timetable of planned development of the receiving strata shall be considered by the Director in addition to the information required by §144.31(g).</p>	<p>To help ensure all the information required by 40 CFR 144.7(c)(1) is submitted in a permit application, language has been added to the rules on Baseline/Adjudication information (Chapter 11, Section 3(a), quoted below). More specifics about the required information are also included in the proposed rules (Chapter 11, Section 10(b), quoted below). In the proposed rules, the long paragraph from the 40 CFR 144.7(c)(1) was split into subsections for clarity.</p> <p>Chapter 11, Section 3(b)(z)(ix) A geochemical, lithological, and mineralogical description of the receiving strata and any aquifers that may be affected by the injection of recovery fluid.</p> <p>Chapter 11, Section 10(b) <u>An aquifer, or a portion thereof, which meets the criteria for an Underground Source of Water as defined in Section 1 of this Chapter may be designated as an "exempted aquifer":...</u></p> <p><u>(ii) As demonstrated by information in the permit or Research and Development Testing License application, including:</u></p> <p><u>(A) A map and general description of the receiving strata identifying and describing in geographic and/or geometric terms (such as vertical and lateral limits and gradient) which are clear and define the extent of the aquifer proposed for exemption;</u></p> <p><u>(B) General information on the mineralogy and geochemistry of the receiving strata; and</u></p> <p><u>(C) Analysis of the amenability of the receiving strata to the proposed mining method; and a timetable of planned development of the receiving strata.</u></p>
<p>40 CFR 144.7(c)(2) [Only applicable to Class II wells which are not part of the program administered by LQD.]</p>	<p>No counterpart LQD rules are needed.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.8 Noncompliance and program reporting by the Director. The Director shall prepare quarterly and annual reports as detailed below. When the state is the permit-issuing authority, the State Director shall submit any reports required under this section to the Regional Administrator. [EPA procedures] (a) Quarterly reports. [Specifics such as format, content, and so forth.] (b) Annual reports. [Specifics on content.] (c) Schedule. [Specific reporting dates.]</p>	<p>All of this section relates to the reporting that the State, not a permittee, is required to provide to EPA. WDEQ responsibilities for this reporting are handled through the EPA/State program requirements and the joint agreement of May 1996 between LQD and WQD. Therefore, no counterpart LQD rules are necessary.</p>
<p>40 CFR 144.9 & 10 These sections have not yet been used by EPA.</p>	<p>No counterpart LQD rules are needed.</p>
<p>Subpart B - General Program Requirements</p>	
<p>40 CFR 144.11 Prohibition of unauthorized injection. Any underground injection, except as authorized by permit or rule issued under the UIC program, is prohibited. The construction of any well required to have a permit is prohibited until the permit has been issued.</p>	<p>Two proposed LQD rules (Chapter 11, Sections 11(a) and (d), quoted below) combine requirements in 40 CFR 144.11 and 12 and 146.34. <u>Chapter 11, Section 11(a) No Class III well construction may commence until a permit or Research and Development Testing License has been issued which includes well construction information in accordance with the requirements of Section 6 of this Chapter. Construction of wells needed to obtain the information required in Section 3 of this Chapter may be allowed with approval of the Administrator; however, such wells may not be used for injection.</u> <u>Chapter 11, Section 11(d) No operator shall construct, operate, maintain, convert, plug, abandon, or conduct any injection or other mining-related activity in a manner that allows the movement of fluid containing any contaminant into zones or intervals other than those zones authorized in the approved permit or Research and Development Testing License. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.12 Prohibition of movement of fluid into underground sources of drinking water.</p> <p>40 CFR 144.12(a) No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 142 or may otherwise adversely affect the health of persons. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.</p> <p>40 CFR 144.12(b) For Class I, II and III wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, except as authorized under part 146, the Director shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, these additional requirements shall be imposed by modifying the permit in accordance with §144.39, or the permit may be terminated under §144.40 if cause exists, or appropriate enforcement action may be taken if the permit has been violated. In the case of wells authorized by rule, see §§144.21 through 144.24. For EPA administered programs, such enforcement action shall be taken in accordance with appropriate sections of the SDWA.</p> <p>40 CFR 144.12(c) & (d) [Only applicable to Class II wells which are not part of the program administered by LQD.]</p>	<p><u>Chapter 11, Section 11(d) No operator shall construct, operate, maintain, convert, plug, abandon, or conduct any injection or other mining-related activity in a manner that allows the movement of fluid containing any contaminant into zones or intervals other than those zones authorized in the approved permit or Research and Development Testing License. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.</u></p> <p><u>Chapter 11, Section 13(a) Corrective actions are:</u> <u>(ii) Needed if any water quality monitoring of an Underground Source of Water indicates the movement of any contaminant into an Underground Source of Water, except as specifically authorized in the approved permit or Research and Development Testing License, in which case the Administrator shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well and limitation of injection pressure) as are necessary to prevent such movement. These additional requirements shall be imposed by requiring the operator to revise the permit or Research and Development Testing License, the permit or Research and Development Testing License may be revoked, or appropriate enforcement action may be taken if the permit or Research and Development Testing License has been violated.</u></p> <p>No counterpart LQD rules are needed.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.12(e) Notwithstanding any other provision of this section, the Director may take emergency action upon receipt of information that a contaminant which is present in or likely to enter a public water system or underground source of drinking water may present an imminent and substantial endangerment to the health of persons. If the Director is an EPA official, he must first determine that the appropriate State and local authorities have not taken appropriate action to protect the health of such persons, before taking emergency action.</p>	<p>A similar emergency provision is provided to the WDEQ Director through W.S. § 35-11-115; therefore, no counterpart LQD rules are needed.</p> <p>W.S. § 35-11-115 Power of the director to issue emergency orders.</p> <p>(a) Any other provisions of law to the contrary notwithstanding, if the director finds that a condition of air, water or land pollution exists and that it creates an emergency requiring immediate action to protect human or animal health or safety, the director, with the concurrence of the governor, shall order any persons causing or contributing to such pollution to reduce or discontinue immediately the actions causing the condition of pollution and such order shall fix a time and place for hearing before the council within forty-eight (48) hours thereafter. The council shall affirm, modify or set aside the director's order within forty-eight (48) hours following the adjournment of the hearing.</p> <p>(b) If the director has evidence that any pollution source presents an immediate and substantial danger to human or animal health or safety, he may institute, through the attorney general, a civil action for immediate injunctive relief to halt any activity causing the danger. The court may issue an ex-parte order and shall schedule a hearing on the matter within three (3) working days from the date the petition for injunctive relief is filed.</p> <p>W.S. § 35-11-115(c) Nothing in this section shall be construed to limit any power which the governor or any officer may have to declare an emergency and act on the basis of such declaration, if such power is conferred by statute or constitutional provision or inheres in the office.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.13 Prohibition of Class IV wells. [Only applicable to Class IV wells which are not part of the program administered by LQD.]</p>	<p>No counterpart LQD rules are needed.</p>
<p>40 CFR 144.14 Requirements for wells injecting hazardous waste. [LQD is not authorized to regulate hazardous waste; therefore, no such wells can be in the LQD portion of the UIC program.]</p>	
<p>40 CFR 144.15 [Reserved]</p>	
<p>40 CFR 144.16 Waiver of requirement by Director. (a) <i>When injection does not occur into, through or above an underground source of drinking water, the Director may authorize a well or project with less stringent requirements for area of review, construction, mechanical integrity, operation, monitoring, and reporting than required in 40 CFR part 146 or §144.52 to the extent that the reduction in requirements will not result in an increased risk of movement into an underground source of drinking water.</i> 40 CFR 144.16(b) When injection occurs through or above an underground source of drinking water, but the radius of endangering influence when computed under §146.06(a) is smaller or equal to the radius of the well, the Director may authorize a well or project with less stringent requirements for operation, monitoring, and reporting than required in 40 CFR part 146 or §144.52 to the extent that the reduction in requirements will not result in an increased risk of movement of fluids into an underground source of drinking water. (c) When reducing requirements under paragraph (a) or (b) of this section, the Director shall prepare a fact sheet under §124.8 explaining the reasons for the action.</p>	<p>The "waiver" portion of the EPA rule is not proposed for adoption because the subsurface conditions and ground water concerns in the State are such that it is unlikely a "waiver" of the type considered by EPA would be advisable. In addition, an applicant can still apply for a variance under W.S. § 35-11-601. Therefore, no counterpart LQD rules are needed.</p> <p>W.S. § 35-11-601(a) Any person who owns or is in control of any real or personal property, any plant, building, structure, process or equipment may apply to the administrator of the appropriate division for a variance from any rule, regulation, standard or permit promulgated under this act. A variance may be granted upon notice and hearing...</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.17 Records. The Director or the Administrator may require, by written notice on a selective well-by-well basis, an owner or operator of an injection well to establish and maintain records, make reports, conduct</p> <p>40 CFR 144.17 cont'd monitoring, and provide other information as is deemed necessary to determine whether the owner or operator has acted or is acting in compliance with Part C of the SDWA or its implementing regulations.</p>	<p>The Wyoming Statutes include both specific and general provisions on monitoring and reporting; therefore, no counterpart LQD rules are needed. [See side-by-side for 40 CFR 144.51 for more details on monitoring and reporting requirements.]</p> <p>W.S. § 35-11-109. Powers and duties of director. (a)(iv)...prepare and require permittees to prepare reports and install, use and maintain any monitoring equipment or methods reasonably necessary for compliance with the provisions of this act....</p> <p>W.S. § 35-11-430. Duties of in situ mining operator; records; annual report. (a) The operator shall submit an annual report containing the general categories of environmental protection and reclamation information pursuant to W.S. 35-11-411 [Annual Reports].</p> <p>W.S. § 35-11-430(b) The operator shall maintain records at the mine site of all information resulting from monitoring activities required in the permit....</p>
<p>40 CFR 144.18 - 20 These sections have not yet been used by EPA.</p>	<p>No counterpart LQD rules are needed.</p>
<p>Subpart C - Authorization of Underground Injection by Rule</p>	
<p>40 CFR 144.21 - 144.28 [Permitting by Rule]</p>	<p>The LQD does not authorize permitting by rule for Class III wells; therefore, no counterpart LQD rules are necessary.</p>
<p>40 CFR 144.29 & 30 These sections have not yet been used by EPA.</p>	<p>No counterpart LQD rules are needed.</p>
<p>Subpart D - Authorization by Permit</p>	
<p>40 CFR 144.31 Application for a permit; authorization by permit. (a) Permit application. Except for owners or operators authorized by rule, all underground injections wells are prohibited unless authorized by permit. Persons currently authorized by rule must still</p>	<p>Chapter 11, Section 2(b)(c) No in situ mining operation shall commence or be conducted unless a valid mining permit or Research and Development Testing License has been issued to the operator from the Department. Applications for an In-Situ Mining permit or Research and Development Testing License</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.31 cont'd apply for a permit under this section unless authorization was for the life of the well or project. Rules authorizing well injections for which permit applications have been submitted shall lapse for a particular well injection or project upon the effective date of the permit or permit denial for that well injection or project. Procedures for applications, issuance and administration of emergency permits are found exclusively in §144.34....[Only applicable to hazardous waste injection wells].</p> <p>40 CFR 144.31(b) Who applies? When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit.</p> <p>40 CFR 144.31(c) Time to apply. Any person who performs or proposes an underground injection for which a permit is or will be required shall submit an application to the Director in accordance with the UIC program as follows:</p>	<p>Chapter 11, Section 2(b)(c) cont'd shall be filed with the Administrator of the Land Quality Division. The applicant shall file six (6) <u>three</u> copies of the application, and the Administrator of the Land Quality Division shall forward three (3) <u>copies</u> for filing with the Administrator of the Water Quality Division; one copy of the application to the EPA when the application is determined complete. Applications shall be in a format required by the Department Administrator.</p> <p>The approach in the State of Wyoming is similar, although there are some considerations unique to the size and scope of mining operations, including in situ operations, in the State. First, while it is the operator's responsibility to apply for a permit, the application must include information such as: "[t]he names and last known addresses of the owners of record of the surface and mineral rights on the land to be covered by the proposed permit (W.S. § 35-11-406(a)(iv)); and "[a] sworn statement stating that the applicant has the right and power by legal estate owned to mine from the land for which the permit is desired (W.S. § 35-11-406(a)(ii)). In addition, more than one operator may conducting mining operations on a given permit; however, each operator (including the permittee) must have a License to Mine (W.S. § 35-11-410)). All the information related to ownership, right-to-mine, and Licenses to Mine for a given permit is contained in the Adjudication File for that permit.</p> <p>All known operators have complied with this provision.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.31(c)(1) For existing wells, as expeditiously as practicable and in accordance with the schedule in any program description under §145.23(f) or (for EPA administered programs) on a schedule established by the Regional Administrator, but no later than 4 years from the approval or promulgation of the UIC program, or as required under §144.14(b) for wells injecting hazardous waste. [The remainder of this subsection is for EPA administered programs.]</p>	<p>All known operators have complied with this provision.</p>
<p>40 CFR 144.31(c)(2) For new injection wells, except new wells in projects authorized under §144.21(b) or covered by an existing area permit under §144.33(c), a reasonable time before construction is expected to begin.</p>	<p>It is the operator's responsibility to submit a complete, technically adequate application for a permit in a timely manner. Time frames for LQD review are specified in statute (W.S. § 35-11-406(h)) (although no time frames for operator response are specified), and time frames for public notice/comment are also specified in statute (W.S. § 35-11-406(k)); therefore, no counterpart LQD rule is needed.</p>
<p>40 CFR 144.31(d) <i>Completeness.</i> The Director shall not issue a permit before receiving a complete application for a permit except for emergency permits. An application for a permit is complete when the Director receives an application form and any supplemental information which are completed to his or her satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity. [The remainder of this subsection is for EPA administered permits.]</p>	<p>As noted in the side-by-side for 40 CFR 124.3(a)(2), LQD has a two-step process for an initial permit review. The first step is a completeness determination (W.S. § 35-11-406(g)), and the second step is a technical adequacy determination (W.S. § 35-11-406(h)). (For permit revisions, the review process starts with the second step, the technical adequacy determination.) Similarly, there are also application requirements for Research and Development Licenses (W.S. § 35-11-431(a)). (The relevant statute quotes are included in 40 CFR 124.3(a).) Therefore, no counterpart LQD rules are necessary.</p>
<p>40 CFR 144.31(e) <i>Information requirements.</i> All applicants for permits shall provide the following information to the Director, using the application form provided by the Director.</p>	<p>The LQD requires submittal of a standard application form (Form 1-UIC), a copy of which is attached; however, due to the size of the in situ operations in Wyoming, the supporting information is submitted in</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

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<p>40 CFR 144.31(e)(1) The activities conducted by the applicant which require it to obtain permits under RCRA, UIC, the National Pollution Discharge Elimination system (NPDES) program under the Clean Water Act, or the Prevention of Significant Deterioration (PSD) program under the Clean Air Act.</p> <p>40 CFR 40 CFR 144.31(f) Name, mailing address, and location of the facility for which the application is submitted.</p> <p>40 CFR 144.31(e)(3) Up to four SIC codes which best reflect the principal products or services provided by the facility.</p>	<p>3-ring binders. (Note: the form is shown as 'Draft' in Attachment I because of the need to add a space for the SIC number (see side-by-side for 40 CFR 144.31(e)(3) below).</p> <p>Chapter 11, Section 3(a)(i) <u>A description of the activities conducted by the applicant for which permits are required under: the Resource Conservation and Recovery Act (RCRA), the Underground Injection Control program of the Safe Drinking Water Act; the National Pollution Discharge Elimination System (NPDES) program of the Clean Water Act; and the Prevention of Significant Deterioration program of the Clean Air Act.</u></p> <p>Because the in situ operations in Wyoming are in rural locations, there is often not a mailing address for the operation (but one is required for the operator (see the side-by-side for 40 CFR 144.31(e)(4) below)). However, the applicant is required to provide the legal location:</p> <p>W.S. § 35-11-406(a)(vi) An identification of the land to be included in the permit area to include:</p> <ul style="list-style-type: none"> (A) The location of lands by legal subdivision, section, township, range, county, and municipal corporation, if any; (B) The name, if any, by which such lands or any part thereof are known; (C) The approximate number of acres to be affected, including the total number of acres in the area covered by the permit application; (D) The nearest town, village, or city. <p>Applicable SIC codes will be included in the LQD's Form 1-UIC (for regular in situ permits) and 5RD (for Research and Development Testing Licenses). Copies of these two forms, with the proposed changes to include the SIC code highlighted, are included as Attachments I and II, respectively.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.31(e)(4) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.</p>	<p>By statute, the applications for permits, Licenses to Mine (required of all operators), and Research and Development Licenses must include the operator's name and address (W.S. §§ 35-11-406(a)(i), 410(b)(i), and 428(a), respectively). The telephone number is required on the Form 1-UIC (for regular in situ permits) and 5RD (for Research and Development Testing Licenses). Copies of these two forms are included as Attachments I and II, respectively. Ownership status is provided through the statutory provision that requires that the applicant provide a sworn statement as to "the right and power by legal estate owned to mine the land for which the permit is desired" (W.S. §§ 35-11-406(a)(ii) and 428(a)), and expanded on in Appendices A, B, C, and E (see Attachments I and II). The status as Federal, State, private, public, or other entity should be clear from the Form 1-UIC or 5RD, and is clarified further in the required reclamation bond form, an example of which is included as Attachment III.</p>
<p>40 CFR 40 CFR 144.31(e)(5) Whether the facility is located on Indian lands.</p>	<p>LQD has no jurisdiction on Indian Lands; therefore, no counterpart LQD rule is required.</p>
<p>40 CFR 40 CFR 144.31(e)(6) A listing of all permits or construction approvals received or applied for under any of the following programs:</p> <ul style="list-style-type: none"> (i) Hazardous Waste Management program under RCRA. (ii) UIC program under SDWA. (iii) NPDES program under CWA. (iv) Prevention of Significant Deterioration (PSD) program under the Clean Air Act. (v) Nonattainment program under the Clean Air Act. (vi) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act. 	<p>Chapter 11, Section 3(a)(ii) <u>A listing of all permits or construction approvals received or applied for in association with the in situ permit activity under the following programs:</u></p> <ul style="list-style-type: none"> <u>(A) Hazardous Waste Management program under RCRA;</u> <u>(B) UIC program under the Safe Drinking Water Act (as it pertains to wells other than Class III wells);</u> <u>(C) NPDES program under the Clean Water Act (CWA);</u> <u>(D) Prevention of Significant Deterioration (PSD) program under the Clean Air Act (CAA);</u> <u>(E) Nonattainment program under the CAA;</u> <u>(F) National Emission Standards for Hazardous Pollutants preconstruction approval under the CAA;</u>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 40 CFR 144.31(e)(6) cont'd (vii) Ocean dumping permits under the Marine Protection Research and Sanctuaries Act. (viii) Dredge and fill permits under section 404 of CWA. (ix) Other relevant environmental permits, including State permits.</p> <p>40 CFR 40 CFR 144.31(e)(7) A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the source depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, and other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within a quarter mile of the facility property boundary.</p>	<p>Chapter 11, Section 3(a)(ii) cont'd <u>(G) Dredge and fill permits under Section 404 of the CWA;</u> <u>(H) U.S. Nuclear Regulatory Commission Source Material License; or</u> <u>(I) Other relevant environmental permits, including State permits.</u></p> <p>Because of the scale of most in situ mining operations in Wyoming, the LQD does not require the applicant to submit a single map which shows all the information required per 40 CFR 144.31(e)(7) but does require that the information be submitted on one or more maps, as outlined below. It is not clear what is meant by "one mile beyond the property boundaries of the source." At in situ mining operations in Wyoming, the "source", i.e., injection wells, are located within monitor well rings within wellfields within the permit area. Wyoming Statutes require submittal of maps showing the various facilities on the permit area and on "adjacent lands," which are defined as those lands within ½ mile outside the permit area (W.S. §§ 35-11-406(a)(ix) and 35-11-103(e)(7)). Therefore, it is more than likely that facilities within one mile of the "source" would be well within the map boundaries. In addition, submittal of a topographic map, with information on the various facilities, is required for the Mine Plan:</p> <p>Chapter 11, Section 4(a)(i) Contour (topographic) map(s) which accurately locate and identify the permit area and show the location of any public highways, dwellings, utilities and easements within the permit area and adjacent lands in relation to all proposed affected lands and proposed activities associated with the operation including, but not limited to: plant site, chemical storage areas, well-field areas, monitor wells, roads, temporary and permanent drainage diversions, impoundments, stockpiles for topsoil, ore product and waste, and all processing</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>See 40 CFR 40 CFR 144.31(e)(7) above.</p> <p>40 CFR 40 CFR 144.31(e)(8) A brief description of the nature of the business.</p> <p>40 CFR 40 CFR 144.31(e)(9) For EPA-administered programs, the applicant shall identify and submit on a list with the permit application, the names and addresses of all owners of record of land within one-quarter mile of the facility boundary....</p> <p>40 CFR 40 CFR 144.31(e)(10) A plugging and abandonment plan that meets the requirements of 146.10 of this chapter and is acceptable to the Director.</p> <p>40 CFR 40 CFR 144.31(f) <i>Recordkeeping.</i> Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under §144.31 for a period of at least 3 years from the date the application is signed.</p>	<p>facilities. <u>The map(s) shall also clearly illustrate the location of monitoring wells required by Section 14 of this Chapter.</u></p> <p>As mining progresses, the number of injection wells increases; therefore, the operator is required to update the map showing the well locations each year through the Annual Report:</p> <p>Chapter 11, Section 4(a)15(c)(ii) A map(s) showing the location of all wells installed in conjunction with the mining activity....</p> <p>Information on surface and groundwater, including well locations, water rights, and so forth, must be submitted as part of the Baseline Information for the permit per Chapter 11, Sections: 3(a)(x) - Surface Water; 3(a)(xi) - Groundwater; and 3(a)(xii) - Abandoned Wells and Drill Holes.</p> <p>No counterpart LQD rule is required as the LQD program applies only to in situ mining and detailed information about the operation is included in the required Mine and Reclamation Plans.</p> <p>Only applicable to EPA-issued permits; therefore, no counterpart LQD rules are necessary. (See W.S. § 406(a)(i)-(v) and Forms 1-UIC and 5RD (Attachments I and II) for similar requirements in the Wyoming Statutes.)</p> <p>Chapter 11, Section 5(a)(iii) <u>A plan for well repair, plugging, and conversion as required by Section 8 of this Chapter.</u> (The terminology is slightly different for consistency within the LQD program.)</p> <p>The following proposed LQD rule combines the requirements of 40 CFR 144.31 and 144.51. W.S. § 35-11-430(b) includes the same requirements as the EPA rules but does not specify a time frame for records retention. Also, the life spans of many wellfields at the three operating in situ mines in</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>See 40 CFR 40 CFR 144.31(f) above.</p>	<p>Wyoming exceed three years, and the information on initial conditions and operating conditions is critical in evaluating operating and restoration success. Therefore, the LQD considers records retention until permit or license termination essential. In recognition of the fact that all records may not be critical, some leeway is provided by allowing the operator to request a shorter retention time (but not less than the three years required by the EPA).</p> <p>Chapter 11, Section 716(b) <u>The operator shall:</u></p> <p>(i) <u>Retain records of all monitoring information, including the following:</u></p> <p style="padding-left: 20px;">(A) <u>Records of all data used to complete permit and license applications and any supplemental information submitted under Sections 3, 4 and 5 of this Chapter;</u></p> <p style="padding-left: 20px;">(B) <u>Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit or Research and Development Testing License, and records of all data used to complete the application for the permit or Research and Development Testing License;</u></p> <p style="padding-left: 20px;">(C) <u>The nature and composition of all injected fluids; and</u></p> <p style="padding-left: 20px;">(D) <u>Information requested by the Administrator for inclusion in the Annual Report per W.S. § 35-11-411.</u></p> <p>(ii) <u>Retain the records listed in subsections (A) through (D) at the mine site until termination of the permit or Research and Development Testing License, unless otherwise authorized by the Administrator. However, the record retention schedule cannot be less than three years after the date of the sample, measurement, report, or application. The Administrator may require the operator to deliver the records to the Administrator at the conclusion of the retention period.</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.32 Signatories to permit applications and reports.</p> <p>(a) Applications. All permit applications, except those submitted for Class II wells (see paragraph (b) of this section), shall be signed as follows:</p> <p>(1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:</p> <p>(i) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or</p> <p>(ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures</p> <p><i>Note: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in §144.32(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under</i></p>	<p>The order of the requirements in the EPA rules has been changed in the proposed LQD rules simply to combine the discussion of "applications" and "reports":</p> <p>Chapter 11, Section 2(h) <u>All applications required by the Administrator which pertain to Class III injection wells shall be signed by a responsible corporate officer. All reports or other information required by the Administrator which pertain to Class III injection wells shall be signed by a responsible corporate officer or duly authorized representative [see side-by-side for 40 CFR 144.32(d), below].</u></p> <p>Chapter 11, Section 2(i) <u>"Responsible corporate officer" means:</u></p> <p>(A) <u>A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs policy or decision-making functions for the corporation, or</u></p> <p>(B) <u>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, or</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p><i>§144.32(a)(1)(ii) rather than to specific individuals.</i></p> <p>40 CFR 144.32(a)(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or</p> <p>40 CFR 144.32(a)(3) <i>For a municipality, State, Federal, or other public agency:</i> by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes: (i) The chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).</p> <p>40 CFR 144.32(b) Reports. All reports required by permits, other information requested by the Director, and [Class II well applications] shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:</p> <p>40 CFR 144.32(b)(1) The authorization is made in writing by a person described in paragraph (a) of this section;</p> <p>40 CFR 144.32(b)(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and</p>	<p>Chapter 11, Section 2(i)(C) <u>In the case of a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or</u></p> <p>Chapter 11, Section 2(i)(D) <u>For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:</u> <u>(I) The chief executive officer of the agency, or</u> <u>(II) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).</u></p> <p>Chapter 11, Section 2(ii) <u>"Duly authorized representative" means a person who is authorized to sign a document to be submitted to the Land Quality Division as part of the official record regarding an in situ mining permit or Research and Development Testing License. A person shall qualify for this title only if:</u></p> <p>Chapter 11, Section 2(ii)(A) <u>The authorization is made in writing by a responsible corporate officer;</u></p> <p>Chapter 11, Section 2(ii)(B) <u>The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.32(b)(3) The written authorization is submitted to the Director.</p> <p>40 CFR 144.32(c) <i>Changes to authorization.</i> If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.</p> <p>40 CFR 144.32(d) <i>Certification.</i> Any person signing a document under paragraph (a) or (b) of this section shall make the following certification: Any responsible corporate officer or duly authorized representative signing a document under this Section shall make the following certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.</p>	<p>Chapter 11, Section 2(ii)(C) <u>The written authorization is submitted to the Director.</u></p> <p>Chapter 11, Section 2(iii) <u>If the responsible corporate officer or duly authorized representative is no longer correctly listed with the Administrator, a new name must be submitted, with required written authorization as required by Section 2(h)(i) and (ii) of this Chapter, to the Administrator prior to or with any reports, information, or applications to be signed by that individual.</u></p> <p>Chapter 11, Section 2(h) continued <u>Any responsible corporate officer or duly authorized representative signing a document under this Section shall make the following certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.</u></p>
<p>40 CFR 144.33 Area permits.</p>	<p>The LQD is not authorized to issue area or emergency permits; therefore, no counterpart rules are needed.</p>
<p>40 CFR 144.34 Emergency permits.</p>	

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.35 Effect of a permit. (a) [Class III wells are excepted from this subsection.]</p> <p>(b) The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.</p> <p>(c) The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations.</p>	<p>No counterpart LQD rule is needed.</p> <p><u>Chapter 11, Section 9(a)(v) The permit or Research and Development Testing License does not convey any property rights of any sort or any exclusive privilege.</u></p> <p>Because the powers and duties of the WDEQ are limited by the Wyoming Environmental Quality Act (W.S. § 35-11-101 <i>et seq.</i>), no counterpart LQD rule is considered necessary.</p>
<p>40 CFR 144.36 Duration of permits. (a) UIC permits for Class III wells shall be issued for a period up to the operating life of the facility. The Director shall review each issued Class III well UIC permit at least once every 5 years to determine whether it should be modified, revoked and reissued, terminated, or a minor modification made as provided in §§144.39, §§144.40, and §§144.41.</p> <p>40 CFR 144.36(b) Except as provided in §144.37, the term of a permit shall not be extended by modification beyond the maximum duration specified in this section.</p> <p>40 CFR 144.36(c) The Director may issue any permit for a duration that is less than the full allowable term under this section.</p>	<p><u>Chapter 11, Section 18(a) Permits shall be issued:</u></p> <p><u>(i) For a period coinciding with the estimated schedules for termination of all mining and reclamation activities in conformance with the approved mining plan (Section 4(a)(ii)) and reclamation plan (Section 5(a)(i)) as provided in W.S. § 35-11-405(a) and (b); and</u></p> <p><u>(ii) With the option for revision of the mining and reclamation schedules, as provided in W.S. § 35-11-429.</u></p> <p><u>(b) The Administrator shall review the permit at least once every five years to determine whether it should: remain unchanged; be revised in accordance with the requirements of Section 19 of this Chapter; or revoked in accordance with the requirements of Section 20 of this Chapter.</u></p> <p>W.S. § 35-11-405(b) states that "[a] mining permit...remains valid...until termination of all mining and reclamation operations, except as otherwise provided in this act." A Research and Development Testing License is issued for a one year period and may be renewed annually as specified by W.S. § 35-11-431. Therefore, no counterpart LQD rule is necessary for 40 CFR 144.36(b) or (c).</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.37 Continuation of expiring permits.</p>	<p>As noted in the side-by-side for 40 CFR 144.36, the Wyoming Statutes provide for time frames for permits and Research and Development Licenses. Therefore, no counterpart LQD rule is necessary.</p>
<p>40 CFR 144.38 Transfer of permits. (a) Transfers by modification. Except as provided in paragraph (b) of this section, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under §144.39(b)(2)), or a minor modification made (under §144.41(d)), to identify the new permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act.</p>	<p>W.S. § 35-11-408 provides authority for permit transfers. Such transfers may be treated as minor modifications (revisions) under certain circumstances (Chapter 11, Section 19(c)) and otherwise would be treated as major revisions.</p> <p>W.S. § 35-11-408 Permit transfer. A permit holder desiring to transfer his permit shall apply to the administrator. The potential transferee shall file with the administrator a statement of qualifications to hold a permit as though he were the original applicant for the permit and shall further agree to be bound by all of the terms and conditions of the original permit. The administrator shall recommend approval or denial of the transfer to the director. No transfer of a permit will be allowed if the current permit holder is in violation of this act, unless the transferee agrees to bring the permit into compliance with the provisions of this act.</p> <p>Chapter 11, Section 19(c) <u>A non-significant revision of any Class III Well portion of a permit or Research and Development Testing License shall meet the requirements of Chapter 7 of these regulations, except that a non-significant revision shall be for the following reasons only:...</u></p> <p><u>(iii) To allow for a change in ownership or operational control of a facility where the Administrator determines that no other change in the permit or Research and Development Testing License is necessary provided that a written agreement is submitted in a format and on forms required by the Administrator containing a specific date for transfer of permit or Research and Development Testing License responsibility, coverage, and liability between the current and new operators;</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.38 (b) <i>Automatic transfers.</i></p>	<p>The Wyoming Statutes do not provide authority for automatic transfers; therefore, no counterpart LQD rules are necessary.</p>
<p>40 CFR 144.39 Modification or revocation and reissuance of permits.</p> <p>When the Director receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit (see §144.51 of this chapter), receives a request for modification or revocation and reissuance under §124.5, or conducts a review of the permit file) he or she may determine whether or not one or more of the causes listed in paragraphs (a) and (b) of this section for modification or revocation and reissuance or both exist. If cause exists, the Director may modify or revoke and reissue the permit accordingly, subject to the limitations of paragraph (c) of this section, and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. See §124.5(c)(2) of this chapter. If cause does not</p>	<p>With respect to terminology, the EPA rules refer to permit "modification;" however, all existing LQD Coal and Noncoal rules refer to permit "revision." Therefore, in the proposed rules, the term "revision" is used instead of "modification." Similarly, the EPA rules refer to "revocation and reissuance" of permits. However, the Wyoming Environmental Quality Act does not differentiate between revocation and termination of permits - in either case, a revoked permit would need to be re-issued before mining could resume. Therefore, the EPA rules relating solely to "revocation and reissuance" have not been incorporated into the proposed LQD rules. In Chapter 11 of the proposed LQD rules, permit and license revisions are addressed in Section 19, and revocations are addressed in Section 20.</p> <p>Chapter 11, Section 19(a) <u>A permit, license to mine, or Research and Development Testing License may be revised as a significant or non-significant revision as specified in Sections 19(b) and 19(c), respectively,...</u></p> <p>The remainder of this portion of 40 CFR 144.39 is addressed in the side-by-sides for 40 CFR 144.29(a) and 144.41.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>exist under this section or §144.41 of this chapter, the Director shall not modify or revoke and reissue the permit. If a permit modification satisfies the criteria in §144.41 for "minor modifications" the permit may be modified without a draft permit or public review. Otherwise, a draft permit must be prepared and other procedures in part 124 must be followed.</p> <p>40 CFR 144.39(a) Causes for modification. The following are causes for modification. For Class III wells the following may be causes for revocation and reissuance as well as modification; and for all other wells the following may be cause for revocation or reissuance as well as modification when the permittee requests or agrees.</p> <p>40 CFR 144.39(a)(1) Alterations. There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.</p> <p>40 CFR 144.39(a)(2) Information. The Director has received information. Permits other than for Class II and III wells may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance. For UIC area permits (§144.33), this cause shall include any information indicating that cumulative effects on the environment are unacceptable.</p>	<p>The remainder of this portion of 40 CFR 144.39 is addressed in the side-by-sides for 40 CFR 144.29(a) and 144.41.</p> <p>Chapter 11, Section 19(b) <u>The occurrence of any of the following with regards to a Class III Well portion of a permit or Research and Development Testing License shall result in the operator being required to revise the permit or Research and Development Testing License. These revisions shall be treated as significant revisions and require public notice as specified in Chapter 7 of these regulations and Section 21 of this Chapter. In addition, the State Decision Document will be updated for these revisions:</u></p> <p>Chapter 11, Section 19(b)(i) <u>Any material or substantial alterations or additions to the facility which occurred after issuance of the permit or license, which justify the application of permit or license conditions that are different or absent in the existing permit or license....</u></p> <p>Because of the size and scope of mining operations in Wyoming, including in situ operations, the LQD considers permit revisions to keep permits up-to-date essential. If new information is received, it may need to be incorporated into the permit regardless of whether it would have resulted in application of different permit conditions. Therefore, no counterpart LQD rule is proposed.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.39(b) <i>Causes for modification or revocation and reissuance.</i> The following are causes to modify or, alternatively, revoke and reissue a permit:</p> <p>40 CFR 144.39(b)(1) Cause exists for termination under §144.40, and the Director determines that modification or revocation and reissuance is appropriate.</p> <p>40 CFR 144.39(b)(2) The Director has received notification (as required in the permit, see §144.41(d)) of a proposed transfer of the permit. A permit also may be modified to reflect a transfer after the effective date of an automatic transfer (§144.38(b)) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new permittee.</p> <p>40 CFR 144.39(b)(3) A determination that the waste being injected is a hazardous waste as defined in §261.3 either because the definition has been revised, or because a previous determination has been changed.</p> <p>40 CFR 144.39(c) <i>Facility siting.</i> Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.</p>	<p>Chapter 11, Section 19(b)(iii) <u>Cause exists for revocation, as described in Section 20 of this Chapter, but the Administrator determines that revision is appropriate;</u></p> <p>As noted in the side-by-side for 40 CFR. 144.38(a), W.S. § 35-11-408 provides authority for permit transfers. Such transfers may be treated as minor modifications (revisions) under certain circumstances (Chapter 11, Section 19(c)) and otherwise would be treated as major revisions. However, the LQD does not have the authority for automatic transfers; therefore, no counterpart LQD rule is proposed. LQD is not authorized to regulate hazardous waste; therefore, no counterpart rule is proposed. If a change such as that envisioned in the EPA rules occurred, then regulation of the operation would transfer to WQD.</p> <p>Chapter 11, Section 19(d) <u>Suitability of the Class III well location will not be considered at the time of permit revision unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of permit issuance.</u></p>
<p>40 CFR 144.40 Termination of permits.</p> <p>40 CFR 144.40(a) The Director may terminate a permit during its term, or deny a permit renewal application for the following causes:</p>	<p>With respect to terminology, the EPA rules refer to "termination" of permits; however, all the existing LQD rules refer to "revocation" of permits. Therefore, the term "revocation" has been retained.</p> <p>Chapter 11, Section 20(b) <u>The Director or Administrator may revoke a permit. Licence to Mine, or Research and Development Testing License:...</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
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Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.41 Minor modifications of permits. Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following the procedures of part 124. Any permit modification not processed as a minor modification under this section must be made for cause and with part 124 draft permit and public notice as required in §144.39. Minor modifications may only:</p> <p>(a) Correct typographical errors;</p> <p>(b) Require more frequent monitoring or reporting by the permittee;</p> <p>40 CFR 144.41(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; or</p> <p>40 CFR 144.41(d) Allow for a change in ownership or operational control of a facility where the Director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees has been submitted to the Director.</p> <p>40 CFR 144.41(e) Change quantities or types of fluids injected which are within the capacity of the facility as permitted and, in the judgment of the Director, would not interfere with the operation of the facility or its ability to meet conditions described in the permit and would not change its classification.</p>	<p>Chapter 11, Section 19(c) <u>A non-significant revision of any Class III Well portion of a permit or Research and Development Testing License shall meet the requirements of Chapter 7 of these regulations, except that a non-significant revision shall be for the following reasons only:</u></p> <p><u>(i) To correct typographical errors;</u></p> <p><u>(ii) To require more frequent monitoring or reporting by the operator;</u></p> <p><u>(iii) To 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 schedule of compliance and does not interfere with attainment of the final compliance date requirement;</u></p> <p><u>(iv) To allow for a change in ownership or operational control of a facility where the Administrator determines that no other change in the permit or Research and Development Testing License is necessary provided that a written agreement is submitted in a format and on forms required by the Administrator containing a specific date for transfer of permit or Research and Development Testing License responsibility, coverage, and liability between the current and new operators;</u></p> <p>Chapter 11, Section 19(c)(v) <u>To change quantities or types of fluids injected which are within the capacity of the facility as permitted or licensed and would not interfere with the operation of the facility or its ability to meet conditions described in the permit or Research and Development Testing License and would not change its classification;</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.41(f) Change construction requirements approved by the Director pursuant to §144.52(a)(1) (establishing UIC permit conditions), provided that any such alteration shall comply with the requirements of this part and part 146.</p> <p>40 CFR 144.41(g) Amend a plugging and abandonment plan which has been updated under §144.52(a)(6).</p>	<p>Chapter 11, Section 19(c)(vi) <u>To change construction requirements approved by the Administrator pursuant to Section 6 of this Chapter, provided that any such alteration shall comply with the requirements of this subsection; or</u></p> <p>Chapter 11, Section 19(c)(vii) <u>To amend a well plugging/conversion plan which has been updated under Section 8 of this Chapter.</u></p>
<p>40 CFR 144.42 - 50 These sections have not yet been used by EPA.</p>	<p>No counterpart LQD rules are needed.</p>
<p>Subpart E - Permit Conditions</p>	
<p>40 CFR 144.51 Conditions applicable to all permits. The following conditions apply to all UIC permits. All conditions applicable to all permits shall be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to these regulations (or the corresponding approved State regulations) must be given in the permit.</p> <p>40 CFR 144.51(a) <i>Duty to comply.</i> The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit under §144.34.</p> <p>40 CFR 144.51(b) <i>Duty to reapply.</i> If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.</p>	<p>Chapter 11, Section 9(a) <u>The following conditions shall apply to permits and Research and Development Testing Licenses. Each condition shall be incorporated into the permit or Research and Development Testing License either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit or Research and Development Testing License.</u></p> <p>Chapter 11, Section 9(a)(i) <u>The operator has a duty to comply with all terms and conditions of the approved permit or Research and Development Testing License.</u></p> <p>(A) <u>Any permit or Research and Development Testing License noncompliance is grounds for enforcement action and any Research and Development Testing License noncompliance is grounds for denial of a Research and Development Testing License renewal application.</u></p> <p>Once mining and reclamation operations are terminated in accordance with the requirements of the LQD rules, then a permit is no longer valid or in force, so an operator is required to reapply (W.S. § 35-11-405(b)). Therefore, no counterpart LQD rule is needed.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.51(c) <i>Need to halt or reduce activity not a defense.</i> 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.</p> <p>40 CFR 144.51(d) <i>Duty to mitigate.</i> The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.</p> <p>40 CFR 144.51(e) <i>Proper operation and maintenance.</i> The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.</p> <p>40 CFR 144.51(f) <i>Permit actions.</i> This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.</p>	<p>Chapter 11, Section 9(a)(ii) <u>It shall not be a defense for an operator 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 or Research and Development Testing License.</u></p> <p>Chapter 11, Section 9(a)(iii) <u>The operator has a duty to take all reasonable steps to minimize, mitigate, or correct any adverse impact on the environment resulting from noncompliance with this permit or Research and Development Testing License.</u></p> <p>Chapter 11, Section 9(a)(iv) <u>The operator shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the operator to achieve compliance with the terms and conditions of the permit or Research and Development Testing License. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of the permit or Research and Development Testing License.</u></p> <p>Chapter 11, Section 9(a)(i)(B) <u>The filing of a request by the operator for a permit or Research and Development Testing License revision per Chapter 7 or Section 19 of this Chapter does not waive any permit or Research and Development Testing License condition.</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.51(g) <i>Property rights.</i> This permit does not convey any property rights of any sort, or any exclusive privilege.</p> <p>40 CFR 144.51(h) <i>Duty to provide information.</i> The permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.</p> <p>40 CFR 144.51(i) <i>Inspection and entry.</i> The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:</p> <ul style="list-style-type: none"> (1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit; (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit; (3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and (4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location. 	<p>Chapter 11, Section 9(a)(v) <u>The permit or Research and Development Testing License does not convey any property rights of any sort or any exclusive privilege.</u></p> <p>Chapter 11, Section 9(a)(vi) <u>The operator has a duty to provide to the Administrator, within a time specified, any information which the Administrator may request to determine whether cause exists for revising or revoking the permit or Research and Development Testing License, or to determine compliance with this permit or Research and Development Testing License. The operator shall also furnish to the Administrator, upon request, copies of records to be kept as required by the permit or Research and Development Testing License.</u></p> <p>Chapter 11, Section 2(f) <u>The operator shall allow the Administrator, or an authorized representative of the Division, to enter and inspect any property as provided by W.S. §§ 35-11-109(a)(iv), (v) and (vi).</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.51(j) <i>Monitoring and records.</i> (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.</p> <p>(2) The permittee shall retain records of all monitoring information, including the following:</p> <p>40 CFR 144.51(j)(2)(i) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time; and</p> <p>40 CFR 144.51(j)(2)(ii) The nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures specified under §144.52(a)(6), or under part 146 subpart G as appropriate. The Director may require the owner or operator to deliver the records to the Director at the conclusion of the retention period. For EPA administered programs, the owner or operator shall continue to retain the records after the three year retention period unless he delivers the records to the Regional Administrator or obtains written approval from the Regional Administrator to discard the records.</p>	<p>Chapter 11, Section 14(a)(v) <u>Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.</u></p> <p>Chapter 11, Section 716(b) <u>The operator shall...</u> (ii) <u>Retain records of all monitoring information, including the following:</u> (A) <u>Records of all data used to complete permit and license applications and any supplemental information submitted under Sections 3, 4 and 5 of this Chapter;</u></p> <p>Chapter 11, Section 16(b)(i)(B) <u>Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit or Research and Development Testing License, and records of all data used to complete the application for the permit or Research and Development Testing License;</u></p> <p>Chapter 11, Section 16(b)(i)(C) <u>The nature and composition of all injected fluids; and...</u> Chapter 11, Section 16(b)(ii) <u>Retain the records listed in subsections 16(b)(i)(A) through 16(b)(i)(D) at the mine site until termination of the permit or Research and Development Testing License, unless otherwise authorized by the Administrator. However, the record retention schedule cannot be less than three years after the date of the sample, measurement, report, or application. The Administrator may require the operator to deliver the records to the Administrator at the conclusion of the retention period.</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.51(j)(3) Records of monitoring information shall include:</p> <ul style="list-style-type: none"> (i) The date, exact place, and time of sampling or measurements; (ii) The individual(s) who performed the sampling or measurements; (iii) The date(s) analyses were performed; (iv) The individual(s) who performed the analyses; (v) The analytical techniques or methods used; and (vi) The results of such analyses. 	<p>W.S. § 35-11-430(b) requires the following and is cross-referenced in proposed Section 15(a) (records submitted to LQD, quoted below) and 16(a) (records maintained on-site for inspection by LQD, quoted below):</p> <p>(b) The operator shall maintain records at the mine site of all information resulting from monitoring activities required in the permit. The records shall state:</p> <ul style="list-style-type: none"> (i) The date, place, time and method of sampling and the personnel responsible for sampling; (ii) The date on which analysis was performed and the personnel who performed the analysis; (iii) Analytical techniques used; and (iv) The results of the analysis. <p>Chapter 11, Section 715(a) The operator shall maintain records at the mine site in accordance with W.S. § 35-11-430(b) and All chemical analyses submitted to the Administrator in accordance with a valid permit or Research and Development License shall include:</p> <ul style="list-style-type: none"> (i) A description of, or reference for, the procedures and methods used for sample collection, preservation, and quality control; (ii) The name, address, and telephone number of the laboratory performing the analyses, <u>and the laboratory job identification number and the date the analyses were performed.</u> <p>Chapter 11, Section 716(a) The operator shall maintain records at the mine site in accordance with W.S. § 35-11-430(b), including, for any laboratory analyses that an operator is allowed to retain on site for inspection rather than submit to the Administrator; and all chemical analyses submitted to the Administrator in accordance with a valid permit or</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>See 40 CFR 144.51(j)(3) above.</p> <p>40 CFR 144.51(k) Signatory requirement. All applications, reports, or information submitted to the Administrator shall be signed and certified. (See §144.32.)</p> <p>40 CFR 144.51(l) Reporting requirements. (1) Planned changes. The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.</p> <p>40 CFR 144.51(l)(2) Anticipated noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.</p> <p>40 CFR 144.51(l)(3) Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act. (See §144.38; in some cases, modification or revocation and reissuance is mandatory.)</p>	<p>Chapter 11, Section 7 16(a) cont'd Research and Development License shall include: (i) A description of, or reference for, the procedures and methods used for sample collection, preservation, and quality control; (ii) The name, address, and telephone number of the laboratory performing the analyses, <u>and the laboratory job identification number and the date the analyses were performed.</u></p> <p>Chapter 11, Section 715(iii) Signatures as required by Section 2(h) of this Chapter.</p> <p>Chapter 11, Section 9(a)(vii)... (A) <u>The operator shall give notice to the Administrator as soon as possible of any planned physical alterations or additions to the permitted or licensed facility and</u></p> <p>The LQD's Attorney General representative questioned why the LQD would require an operator tell the LQD it is preparing to violate the law when we could not approve such an action. Consequently, no counterpart LQD rule is considered necessary.</p> <p>The LQD already has statutory provisions for permit transfer which require application and approval by the Director prior to a transfer taking effect. Therefore, no counterpart LQD rule is considered necessary.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.51(l)(4) <i>Monitoring reports.</i> Monitoring results shall be reported at the intervals specified elsewhere in this permit.</p>	<p>Chapter 11, Section <u>9(a)(ix)</u> <u>The following shall also constitute conditions of the permit...</u> (B) <u>Monitoring requirements as specified in Section 14 of this Chapter.</u></p>
<p>40 CFR 144.51(l)(5) <i>Compliance schedules.</i> Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date.</p>	<p>Chapter 11, Section <u>15(b)(i)(C)</u> <u>The schedule shall specify dates for the submission of progress reports, no later than 30 days following each interim date and the final date of compliance.</u></p>
<p>40 CFR 144.51(l)(6) <i>Twenty-four hour reporting.</i> The permittee shall report any noncompliance which may endanger health or the environment, including:</p>	<p>The existing LQD rules provide for confirmation of an excursion prior to reporting; however, to ensure the LQD rules are as effective as the EPA rules, provisions for 24-hour reporting prior to (and after) confirmation of an excursion are included in the proposed Sections 12(a) and (b). Only excerpts from the proposed Section 12(a) are included below. The procedures for confirmation of an excursion are described in the proposed rule and Statement of Reasons for Section 12(b). Chapter 11, Section 2(e)<u>12(a)</u> <u>The operator shall:</u> (i): Verbally report any confirmed excursion to the Administrator <u>any noncompliance, including excursions, which may endanger public health or the environment</u> within 24 hours, and of the time the operator becomes aware of the occurrence, including:</p>
<p>40 CFR 144.51(l)(6)(i) Any monitoring or other information which indicates that any contaminant may cause an endangerment to a USDW; or</p>	<p>Chapter 11, Section <u>12(a)(i)(A)</u> <u>Any monitoring or other information which indicates that any contaminant may cause endangerment to an Underground Source of Water; and</u></p>
<p>40 CFR 144.51(l)(6)(ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.</p>	<p>Chapter 11, Section <u>12(a)(ii)(B)</u> <u>Any noncompliance with a permit or Research and Development Testing License or malfunction of the injection system which may cause fluid migration into, or between Underground Sources of Water.</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances.</p> <p>A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.</p> <p>40 CFR 144.51(l)(7) <i>Other noncompliance.</i> The permittee shall report all instances of noncompliance not reported under paragraphs (l) (4), (5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section.</p> <p>40 CFR 144.51(l)(8) <i>Other information.</i> Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.</p> <p>40 CFR 144.51(m) <i>Requirements prior to commencing injection.</i> Except for all new wells authorized by an area permit under §144.33(c), a new injection well may not commence injection until construction is complete, and</p>	<p>Chapter 11, Section 2(e)12(a) The operator shall: (i); Verbally report any confirmed excursion to the Administrator <u>any noncompliance, including excursions, which may endanger public health or the environment</u> within 24 hours, and of the time the operator becomes aware of the occurrence, including: (ii) <u>Provide a written report to the Administrator within five days of the operator becoming aware of the noncompliance occurrence.</u></p> <p>Chapter 11, Section 12(e) <u>The operator shall report all instances of noncompliance not reported under this section at the time monitoring reports are submitted.</u></p> <p>Chapter 11, Section 9(a)(vii)(B) <u>When the operator becomes aware of failure to submit any relevant facts in a permit or Research and Development Testing License application, or submitted incorrect information in a permit or Research and Development Testing License application or in any report to the Administrator, the operator shall promptly submit such facts or information to the Administrator.</u></p> <p>Chapter 11, Section 11(b) <u>The operator may not commence injection in a new injection well until construction is complete, and:</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.51(m)(1) The permittee has submitted notice of completion of construction to the Director; and</p> <p>40 CFR 144.51(m)(1)(i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or</p> <p>40 CFR 144.51(m)(1)(ii) The permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in paragraph (m)(1) of this section, in which case prior inspection or review is waived and the permittee may commence injection. The Director shall include in his notice a reasonable time period in which he shall inspect the well.</p> <p>40 CFR 144.51(n) The permittee shall notify the Director at such times as the permit requires before conversion or abandonment of the well or in the case of area permits before closure of the project.</p> <p>40 CFR 144.51(o) A Class I, II or III permit shall include and a Class V permit may include, conditions which meet the applicable requirements of Sec. 146.10 of this chapter to insure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. Where the plan meets the requirements of Sec. 146.10 of this chapter, the Director shall incorporate it into the permit as a permit condition. Where the Director's review of an application indicates that the permittee's plan is inadequate, the Director may require the applicant to</p>	<p>Chapter 11, Section 11(b)(i) <u>The operator has submitted notice of completion of construction to the Administrator; and</u></p> <p>Chapter 11, Section 11(b)(ii) <u>With respect to inspection and review:</u> (A) <u>The Administrator has inspected or otherwise reviewed the new injection well and finds the well is in compliance with the permit or Research and Development Testing License; or</u></p> <p>Chapter 11, Section 11(b)(ii)(B) <u>The operator has not received notice from the Administrator of the intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in paragraph (b)(i) of this subsection, in which case prior inspection or review is waived and the operator may commence injection. The Administrator shall include in the notice a reasonable time period in which he or she shall inspect the well.</u></p> <p>Chapter 11, Section 8(d) <u>The operator shall notify the Administrator, as required by the permit or Research and Development Testing License, before plugging a Class III well or converting a Class III well to a well intended for uses other than those defined in Section 1(c) of this Chapter.</u></p> <p>Chapter 11, Section 9(a)(ix) <u>The following shall also constitute conditions of the permit:...</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.51(o) cont'd revise the plan, prescribe conditions meeting the requirements of this paragraph, or deny the permit. For purposes of this paragraph, temporary or intermittent cessation of injection operations is not abandonment.</p> <p>40 CFR 144.51(p) Plugging and abandonment report. For EPA-administered programs, within 60 days after plugging a well or at the time of the next quarterly report (whichever is less) the owner or operator shall submit a report to the Regional Administrator. If the quarterly report is due less than 15 days before completion of plugging, then the report shall be submitted within 60 days. The report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:</p> <p>40 CFR 144.51(p)(1) A statement that the well was plugged in accordance with the plan previously submitted to the Regional Administrator; or</p> <p>40 CFR 144.51(p)(2) Where actual plugging differed from the plan previously submitted, and updated version of the plan on the form supplied by the regional administrator, specifying the differences.</p> <p>40 CFR 144.51(q) Duty to establish and maintain mechanical integrity.</p> <p>(1) The owner or operator of a Class I, II or III well permitted under this part shall establish prior to commencing injection or on a schedule determined by</p>	<p>Chapter 11, Section 9(a)(ix) <u>The following shall also constitute conditions of the permit...</u></p> <p>Chapter 11, Section 15(b) <u>Quarterly monitoring reports shall include, at a minimum:...</u></p> <p>Chapter 11, Section 15(b)(iv) <u>The results of well repair and plugging required per Section 8 of this Chapter, including a statement that:</u></p> <p>Chapter 11, Section 15(b)(iv)(A) <u>Wells were plugged in accordance with the approved permit or Research and Development Testing License; or</u></p> <p>Chapter 11, Section 15(b)(iv)(B) <u>Documentation that prior approval was obtained from the Administrator where plugging procedures differed from the procedures approved in the permit or Research and Development Testing License. This documentation shall be included in the report, and contain a description of the procedures used specifying the differences between the permit or Research and Development Testing License approved method and the alternate method.</u></p> <p>Chapter 11, Section 7(a)(i) <u>The operator of a Class III well shall establish mechanical integrity as defined in Section 1 of this Chapter for each well prior to commencing injection and shall maintain mechanical integrity for each well until it is plugged or</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.51(q)(1) cont'd the Director, and thereafter maintain mechanical integrity as defined in Sec. 146.8 of this chapter. For EPA-administered programs, the Regional Administrator may require by written notice that the owner or operator comply with a schedule describing when mechanical integrity demonstrations shall be made.</p> <p>40 CFR 144.51(q)(2) When the Director determines that a Class I, II, or III well lacks mechanical integrity pursuant to Sec. 146.8 of this chapter, he shall give written notice of his determination to the owner or operator. Unless the Director requires immediate cessation, the owner or operator shall cease injection into the well within 48hours of receipt of the Director's determination. The Director may allow plugging of the well pursuant to the requirements of Sec. 146.10 of this chapter or require the permittee to perform such additional construction, operation, monitoring, reporting and corrective action as is necessary to prevent the movement of fluid into or between USDWs caused by the lack of mechanical integrity. The owner or operator may resume injection upon written notification from the Director that the owner or operator has demonstrated mechanical integrity pursuant to Sec. 146.8 of this chapter.</p> <p>40 CFR 144.51(q)(3) The Director may allow the owner or operator of a well which lacks mechanical integrity pursuant to Sec. 146.8(a)(1) of this chapter to continue or resume injection, if the owner or operator has made a satisfactory demonstration that there is no movement of fluid into or between USDWs.</p>	<p>Chapter 11, Section 7(a)(i) <u>converted in accordance with Section 8 of this Chapter.</u></p> <p>Chapter 11, Section 7(a)(v) <u>If the Administrator determines that a Class III well lacks mechanical integrity, he or she shall give written notice of this determination to the operator of the well. Unless the Administrator requires immediate cessation, the operator shall cease injection into the well within 48 hours of receipt of the Administrator's determination. The Administrator may allow plugging of the well or require the operator to perform such additional construction, operation, monitoring, reporting, and corrective action as is necessary to prevent the movement of fluid into unauthorized zones or onto the surface caused by the lack of mechanical integrity. The operator may resume injection upon written notification from the Administrator that the operator has demonstrated mechanical integrity.</u></p> <p>This portion of the EPA rule is not proposed for adoption because the subsurface conditions and groundwater concerns in the State are such that a "waiver" of the type considered by EPA is not advisable. In addition, an applicant can still apply for a variance under W.S. § 35-11-601. Therefore, no counterpart LQD rule is needed.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.52 Establishing permit conditions. (a) In addition to conditions required in §144.51, the Director shall establish conditions, as required on a case-by-case basis under §144.36 (duration of permits), §144.53(a) (schedules of compliance), §144.54 (monitoring), and [this portion of sub-section is for EPA permits only and owners and operators of hazardous wells]. Permits for other wells shall contain the following requirements, when applicable.</p> <p>40 CFR 144.52(a)(1) Construction requirements as set forth in part 146. Existing wells shall achieve compliance with such requirements according to a compliance schedule established as a permit condition. The owner or operator of a proposed new injection well shall submit plans for testing, drilling, and construction as part of the permit application. Except as authorized by an area permit, no construction may commence until a permit has been issued containing construction requirements (see §144.11). New wells shall be in compliance with these requirements prior to commencing injection operations. Changes in construction plans during construction may be approved by the Administrator as minor modifications (§144.41). No such changes may be physically incorporated into construction of the well prior to approval of the modification by the Director.</p> <p>40 CFR 144.52(a)(2) Corrective action as set forth in §144.55 and §146.7.</p> <p>40 CFR 144.52(a)(3) Operation requirements as set forth in 40 CFR part 146; the permit shall establish any maximum injection volumes and/or pressures necessary to assure that fractures are not initiated in the confining zone, that injected fluids do not migrate into any underground source of drinking water, that formation fluids are not displaced into any</p>	<p>W.S. § 35-11-801(a) gives the Director the authority, in granting permits, to "impose such conditions as may be necessary...." Specifically for in situ permits, W.S. § 35-11-429(a)(v) gives the Directory authority to establish "other conditions...to employ best practicable technology in carrying out this act."</p> <p><u>Chapter 11, Section 11(a) No Class III well construction may commence until a permit or Research and Development Testing License has been issued which includes well construction information in accordance with the requirements of Section 6 of this Chapter. Construction of wells needed to obtain the information required in Section 3 of this Chapter may be allowed with approval of the Administrator; however, such wells may not be used for injection.</u></p> <p>See side-by-sides for 40 CFR 144.55 and 146.7 for the proposed counterpart LQD rules.</p> <p><u>Chapter 11, Section 11(c) The approved permit or Research and Development Testing License shall include maximum injection volumes and/or pressures necessary to assure: fractures are not initiated in the confining zone; injected fluids do not migrate into any Underground Source of Water; and formation fluids are not displaced into any Underground Source of</u></p>

Attachment B 2
Side-by-Side Comparison
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EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.52(a)(3) cont'd underground source of drinking water, and to assure compliance with the part 146 operating requirements.</p> <p>40 CFR 144.52(a)(4) Requirements for wells managing hazardous waste....</p> <p>40 CFR 144.52(a)(5) Monitoring and reporting requirements as set forth in 40 CFR part 146.</p> <p>The permittee shall be required to identify types of tests and methods used to generate the monitoring data. [Remainder of subsection is for EPA administered programs.]</p> <p>40 CFR 144.52(a)(6) After a cessation of operations of two years the owner or operator shall plug and abandon the well in accordance with the plan unless he:</p> <p>40 CFR 144.52(a)(6)(i) Provides notice to the Regional Administrator;</p> <p>40 CFR 144.52(a)(6)(ii) Describes actions or procedures, satisfactory to the Regional Administrator, that the owner or operator will take to ensure that the well will not endanger USDWs during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived by the Regional Administrator.</p>	<p>Chapter 11, Section 11(c) cont'd <u>Water. Operating requirements shall, at a minimum, specify that:</u></p> <p>The LQD is not authorized to regulate hazardous waste; therefore, no counterpart rules are necessary.</p> <p>Chapter 11, Section 14(a) <u>A detailed monitoring program shall be approved by the Administrator and included in the permit or Research and Development Testing License application (per Section 4(a)(xvi) of this Chapter) and shall constitute a condition of the permit. The program shall describe the procedures for monitoring the quantity and quality of waters that may be affected by the operation from premining before mining through release of bond; reclamation including a description of procedures and time schedules used to confirm excursions and shall, at a minimum, specify:</u></p> <p>Chapter 11, Section 14(a)(i) Requirements for:... <u>(C) Tests and methods used to generate monitoring data..</u></p> <p>Chapter 11, Section 8(e) <u>All abandoned Class III wells shall be plugged or converted, in accordance with the Plugging/Conversion Plan in the permit or Research and Development Testing License, in order to assure that groundwater is protected and preserved for future use and to eliminate any potential physical hazard. A well is considered "abandoned" when it has not been used for a period of one year, unless the operator submits to the Administrator and receives approval for a non-significant revision (Section 19(c)(vi) of this Chapter) demonstrating their intention to use the well again and the actions and procedures they will take to ensure that the well will not endanger Underground Sources of Water in accordance with the requirements of this Chapter.</u></p>

Attachment B 2
Side-by-Side Comparison
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EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.52(a)(7)(i) Financial responsibility. The permitted, including the transferor of a permit, is required to demonstrate and maintain financial</p> <p>40 CFR 144.52(a)(7)(i) cont'd responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director until:</p> <p>40 CFR 144.52(a)(7)(i)(A) The well has been plugged and abandoned in accordance with an approved plugging and abandonment plan pursuant to 144.51(o) and 146.10 of this chapter, and submitted a plugging and abandonment report pursuant to 144.51(p);or</p> <p>40 CFR 144.52(a)(7)(i)(B) The well has been converted in compliance with the requirements of 144.51(n); or</p> <p>40 CFR 144.52(a)(7)(i)(C) The transferor of a permit has received notice from the Director that the owner or operator receiving transfer of the permit, the new permittee, has demonstrated financial responsibility for the well.</p> <p>40 CFR 144.52(a)(7)(ii) The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance, such as financial statement or other materials acceptable to the Director. [The rest of the section is for EPA administered programs and hazardous waste.]</p> <p>40 CFR 144.52(a)(8) <i>Mechanical integrity.</i> A permit for any Class III well or injection project which lacks mechanical integrity shall include a condition prohibiting injection operations until the permittee shows to the satisfaction of the Director under §146.08 that the well has mechanical integrity.</p>	<p>W.S. § 35-11-417 provides the authority for a bond "to assure that the operator shall faithfully perform all requirements of this act an comply with all rules</p> <p>Chapter 11, Section 8(e) cont'd and regulations...." With respect to specific provisions for Class III wells, the proposed rules include the following provision:</p> <p>Chapter 11, Section 9(a)(viii) <u>Prior to requesting bond reduction for abandonment of a Class III well or for conversion of a Class III well to another use, the operator shall provide documentation and receive approval from the Administrator regarding the plugging or conversion of that well.</u></p> <p>See side-by-sides for 40 CFR 144.51(n) for the proposed counterpart LQD rules.</p> <p>As noted in the side-by-side for 40 CFR 144.38(a), W.S. § 35-11-408 provides the requirements for transfers; therefore, no counterpart LQD rule is necessary.</p> <p>As noted in the side-by-side for 40 CFR 144.52(a)(7), W.S. § 35-11-417 provides authority for bonds, and a copy of LQD's reclamation bond form is attached.</p> <p>Mechanical Integrity is established as a permit condition in the proposed Chapter 11, Section 9(a)(ix), and the requirement to demonstrate mechanical integrity prior to injection is included in the proposed Chapter 11, Section 7(a)(i).</p>

Attachment B 2
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EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
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EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>See 40 CFR 144.52(a)(8) above.</p> <p>40 CFR 144.52(a)(9) Additional conditions. The Director shall impose on a case-by-case basis such additional conditions as are necessary to prevent the migration of fluids into underground sources of drinking water.</p> <p>40 CFR 144.52(b)(1) In addition to conditions required in all permits the Director shall establish conditions in permits as required on a case-by-case basis, to provide for and assure compliance with all applicable requirements of the SDWA and parts 144, 145, 146 and 124.</p> <p>40 CFR 144.52(b)(2) For a State issued permit, an applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of the permit. [This portion relates to EPA-issued permits.] For State and EPA administered programs, an applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in §144.39.</p> <p>40 CFR 144.52(b)(3) New or reissued permits, and to the extent allowed under §144.39 modified or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in §144.52.</p>	<p>Chapter 11, Section 9(a)(ix) <u>The following shall also constitute conditions of the permit...</u></p> <p>Chapter 11, Section 9(a)(ix)(C) <u>Schedule and methods to establish and maintain Mechanical Integrity as specified in Section 7 of this Chapter.</u></p> <p>Chapter 11, Section 7(a)(i) <u>The operator of a Class III well shall establish mechanical integrity as defined in Section 1 of this Chapter for each well prior to commencing injection and shall maintain mechanical integrity for each well until it is plugged in accordance with Section 8 of this Chapter.</u></p> <p>As noted in the side-by-side for 40 CFR 144.52(a), W.S. § 35-11-801(a) provides broad authority for conditions.</p> <p>As noted in the side-by-side for 40 CFR 144.52(a), W.S. § 35-11-801(a) provides broad authority for conditions.</p> <p>The Form 1-UIC and 5RD (copies attached) and the State Decision Document must be signed by the LQD Administrator and WDEQ Director prior to a permit or Research and Development Testing License being approved. These forms and documents must list all the conditions that will be put into place when the permit is approved; therefore, no counterpart LQD rules is proposed.</p> <p>As noted above, all the conditions must be incorporated into Form 1-UIC, 5RD, and the State Decision Document before the permit or Research and Development Testing License is approved.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.52(c) Incorporation. All permit conditions shall be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit.</p>	<p>Chapter 11, Section 9(a) <u>The following conditions shall apply to permits and Research and Development Testing Licenses. Each condition shall be incorporated into the permit or Research and Development Testing License either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the permit or Research and Development Testing License.</u></p>
<p>40 CFR 144.53 Schedule of compliance.</p> <p>(a) General. The permit may, when appropriate, specify a schedule of compliance leading to compliance with the SDWA and parts 144, 145, 146, and 124.</p> <p>(1) Time for compliance. Any schedules of compliance shall require compliance as soon as possible, and in no case later than 3 years after the effective date of the permit.</p> <p>(2) Interim dates. Except as provided in paragraph (b)(1)(ii) of this section, if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.</p> <p>(i) The time between interim dates shall not exceed 1 year.</p> <p>(ii) If the time necessary for completion of any interim requirement is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.</p> <p>(3) Reporting. The permit shall be written to require that if paragraph (a)(1) of this section is applicable, progress reports be submitted no later than 30 days following each interim date and the final date of compliance.</p>	<p>It is LQD's understanding that this provision relates to three situations. The <u>first</u> situation is be encountered whenever the State revises the applicable UIC regulations, such as these proposed changes to Chapter 11 of the LQD rules. This situation is addressed in:</p> <p>Chapter 11, Section 2(d)(e) Operators having an in situ mining permit or Research and Development Testing License issued before the effective date of these regulations, shall <u>by no later than May 25, 1980 within one year of the effective date of newly promulgated changes to this Chapter</u>, present evidence demonstrating compliance with the requirements of W.S. 35-11-426 through W.S. 35-11-436 <u>these regulations</u>. The Administrator shall review such evidence and shall advise the operator in writing of such additional information or procedures necessary to satisfy the provisions of this Chapter and W.S. 35-11-426 through W.S. 35-11-436.</p> <p>The one-year time frame is based on four factors. First, the operators are generally in compliance with most of the proposed provisions already; therefore, permit revisions to address the rule changes should be relatively straightforward. Second, 40 CFR 144.53(a)(1) requires that any compliance schedule which exceeds one year include an interim schedule. Rather than adopt the relatively complex rules on compliance schedules longer than one year, LQD chose to adopt a simpler approach. Third, the one-</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>See 40 CFR 144.53 above.</p>	<p>year time frame is in keeping with the statutory time frame developed when the Environmental Quality Act was first adopted (W.S. § 35-11-401(b)). Fourth, for at least the last year, LQD has tried to alert operators to upcoming changes in the rules as items were noted during permitting actions.</p> <p>The <u>second</u> situation in which a compliance schedule may be necessary relates to noncompliance or excursions, i.e., when it becomes necessary to establish a time frame for completing corrective actions. This situation is addressed in: Chapter 11, Section 13(b) <u>When appropriate, a permit or license may include, or be revised to include, a compliance schedule leading to compliance with the applicable statutes and regulations. The schedule shall be applicable whether the operator is continuing or ceasing regulated activities.</u></p> <p><u>(i) Any compliance schedule shall require compliance as soon as possible, and in no case later than 3 years after the date the schedule is put into effect. In addition:</u></p> <p style="padding-left: 40px;"><u>(A) The schedule shall set forth interim requirements, the dates for their achievement, and a projected date of compliance with all the requirements;</u></p> <p style="padding-left: 40px;"><u>(B) The time between interim dates shall not exceed 1 year; and</u></p> <p style="padding-left: 40px;"><u>(C) The schedule shall specify dates for the submission of progress reports, no later than 30 days following each interim date and the final date of compliance.</u></p> <p>The <u>third</u> situation in which EPA uses compliance schedules relates to corrective action before a permit is issued. Because the LQD believes it cannot issue a permit in situations where corrective action is needed, provisions for compliance schedules in such situations have not been considered appropriate.</p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.53(b) <i>Alternative schedules of compliance.</i></p>	<p>This provision allows for alternate schedule if an operator decides to cease conducting regulated activities, however, is not considered applicable in Wyoming. If an operator ceases activities before the permit terms and conditions remain in place and a permit revision is considered necessary.</p>
<p>40 CFR 144.54 Requirements for recording and reporting of monitoring results. All permits shall specify:</p> <p>40 CFR 144.54(a) Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);</p> <p>40 CFR 144.54(b) Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including when appropriate, continuous monitoring;</p> <p>40 CFR 144.54(c) Applicable reporting requirements based upon the impact of the regulated activity and as specified in part 146. Reporting shall be no less frequent than specified in the above regulations.</p>	<p>Chapter 11, Section 3(c)(xv)14(a) Details of a program to <u>A detailed monitoring program...shall, at a minimum, specify:</u></p> <p>Chapter 11, Section 14(a)(i) <u>Requirements for:</u> Chapter 11, Section 14(a)(i)(A) <u>The proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);</u></p> <p>Chapter 11, Section 14(a)(i)(B) <u>The intervals and frequency of monitoring, sufficient to yield data which are representative of the monitored activity, including continuous monitoring when appropriate;</u></p> <p>Chapter 11, Section 3(c)4(a) <u>All applications for a permit shall include:...</u> Chapter 11, Section 4(a)(xv) <u>Details of a program to monitoring program and reporting schedule the quantity and quality of waters that may be affected by the operation from premining through release of bond, including a description of procedures and time schedules used to confirm excursions as required by Sections 14 and 15 of this Chapter.</u></p>
<p>40 CFR 144.55 Corrective Action (a) Coverage. Applicants for Class III injection well permits shall identify the location of all known wells within the injection well's area of review which penetrate the injection zone, or [<i>only applicable to Class II wells.</i>]</p>	<p>Chapter 11, Section 3(b)(x)(a)(xi) <u>For ground waters within the permit area and on adjacent lands:</u> Chapter 11, Section 3(a)(xi)(A) <u>Locations and present owners The names (or numbers), descriptions, and a map of all water wells installed for water supply or monitoring in-use and all wells which penetrate the injection zone within the permit area and on adjacent</u></p>

Attachment B 2
Side-by-Side Comparison
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EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.55(a) cont'd</p> <p>For such wells which are improperly sealed, completed, or abandoned, the applicant shall also submit a plan consisting of such steps or modifications as are necessary to prevent movement of fluid into underground sources of drinking water ("corrective action"). Where the plan is adequate, the Director shall incorporate it into the permit as a condition.</p> <p>Where the Director's review of an application indicates that the permittee's plan is inadequate (based on the factors in §146.07), the Director shall require the applicant to revise the plan, prescribe a plan for corrective action as a condition of the permit under paragraph (b) of this section, or deny the application. The Director may disregard the provisions of §146.06 (Area of Review) and §146.07 (Corrective Action) when reviewing an application to permit an existing Class II well.</p>	<p>Chapter 11, Section 3(a)(xi)(A) cont'd lands, including a <u>The description shall include; of names of present owners, well completion data, producing interval(s), and variations in water level to the extent such information is available in the public records and from a reasonable inspection of the property. The Administrator shall require a mapping of all wells within and adjacent to the permit area.</u></p> <p>Chapter 11, Section 3(a)(xi)(B) A list and mapping of all adjudicated and permitted surface water and groundwater rights within the permit area and adjacent to the permit area shall be provided.</p> <p>Chapter 11, Section 3(b)(xi)(a)(xii) A tabulation list and map of all abandoned wells and drill holes, giving location, depth, producing interval(s), type of use, condition of casing, plugging procedures and date of completion for each well or drill hole within the permit area and on adjacent lands to the extent such information is available in public records and from a reasonable inspection of the property.</p> <p>Chapter 11, Section 4(a)(xvii) A corrective action plan, for such wells which are improperly sealed, completed, or abandoned, consisting of such steps or modifications as are necessary to prevent movement of fluid into unauthorized zones as required by Section 13 of this Chapter.</p> <p>Chapter 11, Section 13(a) <u>Corrective actions are:</u> <u>(i) Needed when a well is improperly sealed, completed, or abandoned, in which case:</u> <u>(A) Operators shall provide the well information, as required in Sections 3(a)(xi) and (xii) of this Chapter, and the corrective action plan as required in Section 4(a)(xvii) of this Chapter. Where the Administrator's review of the plan indicates that the applicant's plan is inadequate (based on the factors presented below), the Director shall require the applicant to revise the</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>40 CFR 144.55(b) Requirements</p> <p>40 CFR 144.55(b)(1) Existing injection wells. Any permit issued for an existing injection well (other than Class II) requiring corrective action shall include a compliance schedule requiring any corrective action accepted or prescribed under paragraph (a) of this section to be completed as soon as possible.</p> <p>40 CFR 144.55(b)(2) New injection wells. No owner or operator of a new injection well may begin injection until all required corrective action has been taken.</p> <p>40 CFR 144.55(b)(3) Injection pressure limitation. The Director may require as a permit condition that injection pressure be so limited that pressure in the injection zone does not exceed hydrostatic pressure at the site of any improperly completed or abandoned well within the area of review. This pressure limitation shall satisfy the corrective action requirement. Alternatively, such injection pressure limitation can be part of a compliance schedule and last until all other required corrective action has been taken.</p>	<p>Chapter 11, Section 13(a) cont'd <u>plan, prescribe a plan for corrective action as a term and condition of the permit, or deny the application.</u></p> <p>The LQD does not consider it appropriate to issue a permit knowing that corrective action is necessary; therefore, no counterpart rules are needed.</p> <p>Chapter 11, Section 7(a)(i) <u>The operator of a Class III well shall establish mechanical integrity as defined in Section 1 of this Chapter for each well prior to commencing injection and shall maintain mechanical integrity for each well until it is plugged in accordance with Section 8 of this Chapter.</u></p> <p>Chapter 11, Section 13(a) <u>Corrective actions are:</u> (ii) <u>Needed if any water quality monitoring of an Underground Source of Water indicates the movement of any contaminant into an Underground Source of Water, except as specifically authorized in the approved permit or Research and Development Testing License, the Administrator shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well and limitation of injection pressure) as are necessary to prevent such movement. These additional requirements shall be imposed by requiring the operator to revise the permit or Research and Development Testing License, the permit or Research and Development Testing License may be revoked, or appropriate enforcement action may be taken if the permit or Research and Development Testing License has been violated.</u></p>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
<p>See 40 CFR 144.55(b)(3) above.</p> <p>40 CFR 144.55(b)(4) Class III wells only. When setting corrective action requirements the Director shall consider the overall effect of the project on the hydraulic gradient in potentially affected USDWs, and the corresponding changes in potentiometric surface(s) and flow direction(s) rather than the discrete effect of each well. If a decision is made that corrective action is not necessary based on the determinations above, the monitoring program required in §146.33(b) shall be designed to verify the validity of such determinations.</p>	<p>Chapter 11, Section 11(c) <u>The approved permit or Research and Development Testing License shall include maximum injection volumes and/or pressures necessary to assure: fractures are not initiated in the confining zone; injected fluids do not migrate into any Underground Source of Water; and formation fluids are not displaced into any Underground Source of Water. Operating requirements shall, at a minimum, specify that:</u></p> <p>Chapter 11, Section 11(c)(i) <u>Except during well stimulation, injection pressure at the wellhead shall be calculated so as to assure that the pressure in the production zone during injection does not initiate new fractures or propagate existing fractures. In no case, shall injection pressure initiate fractures in the confining zone, if confinement is present, or cause the migration of injection or formation fluids into an USW:</u></p> <p>Chapter 11, Section 13(a)(i)(B) <u>In determining the adequacy of corrective action proposed by the applicant and in determining the additional steps needed to prevent fluid movement into Underground Sources of Water, the following criteria and factors shall be considered by the Administrator:</u></p> <ul style="list-style-type: none"> <u>(I) Nature and volume of injected fluid;</u> <u>(II) Nature and volume of native groundwater;</u> <u>(III) Compatibility of injected fluid and native groundwater;</u> <u>(IV) Potentially affected population;</u> <u>(V) Geology;</u> <u>(VI) Hydrology;</u> <u>(VII) Proposed method of operation as required by Section 4(a)(x) of this Chapter or history of the injection operation if the corrective action is needed in response to amending new wells into an existing operation;</u> <u>(VIII) Completion and plugging records;</u> <u>(IX) Plugging procedures in effect at the time the well was abandoned; and</u>

Attachment B 2
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 144 - Underground Injection Control (UIC) Program

EPA RULE	PROPOSED/EXISTING WYOMING RULES OR STATUTES
See 40 CFR 144.55(b)(4) above.	Chapter 11, Section 13(a)(i)(B)(VII) cont'd <u>(X) Hydraulic connections with Underground Sources of Water.</u>
40 CFR 144.56 - 59 These sections have not yet been used by EPA.	No counterpart LQD rules are needed.
Subpart F - Financial Responsibility: Class I Hazardous Waste Injection Wells	
40 CFR 144.60 - 144.70 [Class I Wells]	Because LQD does not administer the program for Class I wells, counterpart LQD rules are not necessary.

Attachment B 3
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
Subpart A - General Provisions	
<p>40 CFR 146.1 Applicability and scope. (a) This part sets forth technical criteria and standards for the Underground Injection Control Program. This part should be read in conjunction with 40 CFR parts 124, 144, and 145, which also apply to UIC programs. 40 CFR 144 defines the regulatory framework of EPA administered permit programs. 40 CFR 145 describes the elements of an approvable State program and procedures for EPA approval of State participation in the permit programs. 40 CFR part 124 describes the procedures the Agency will use for issuing permits under the covered programs. Certain of these procedures will also apply to State-administered programs as specified in 40 CFR part 145. (b) Upon the approval, partial approval or promulgation of a State UIC program by the Administrator, any underground injection which is not authorized by the Director by rule or by permit is unlawful.</p>	<p>This section is included for informational purposes only. No counterpart rules are necessary for the portion of the UIC program administered by the Wyoming Department of Environmental Quality, Land Quality Division (LQD).</p>
<p>40 CFR 146.2 Law authorizing these regulations. The Safe Drinking Water Act, 42 U.S.C. 300f <i>et seq.</i> authorizes these regulations and all other UIC program regulations referenced in 40 CFR part 144. [Additional information on RCRA programs.]</p>	<p>This section is included for informational purposes only. No counterpart rules are necessary for the portion of the UIC program administered by the Wyoming Department of Environmental Quality, Land Quality Division (LQD).</p>
<p>40 CFR 146.3 Definitions. The following definitions apply to the underground injection control program.... <i>Catastrophic collapse</i> means the sudden and utter failure of overlying "strata" caused by removal of underlying materials....</p>	<p>Most of the definitions are only applicable to EPA-administered programs, so only those that are applicable to the LQD program are included in this side-by-side. Chapter 11, Section 1(b) <u>"Catastrophic collapse" means the sudden and utter failure of overlying strata caused by removal of underlying materials.</u></p>

Attachment B 3
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 146.3 Definitions. <i>Stratum</i> (plural <i>strata</i>) means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.</p> <p><i>UIC</i> means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved [State] program."</p>	<p>Chapter 11, Section 1(t) <u>"Stratum (plural strata)" means a single sedimentary bed or layer, regardless of thickness, that consists of generally the same kind of rock material.</u></p> <p>Chapter 11, Section 1(u) <u>"UIC" means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved State program."</u></p>
<p>40 CFR 146.4 Criteria for exempted aquifers. An aquifer or a portion thereof which meets the criteria for an "underground source of drinking water" in §146.3 may be determined under 40 CFR 144.8 to be an "exempted aquifer" if it meets the following criteria:</p> <p>(a) It does not currently serve as a source of drinking water; and</p> <p>(b) It cannot now and will not in the future serve as a source of drinking water because:</p> <p>(1) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible;</p> <p>(2) It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical;</p> <p>(3) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or</p> <p>(4) It is located over a Class III well mining area subject to subsidence or catastrophic collapse; or</p>	<p>Chapter 11, Section 10(b) <u>An aquifer, or a portion thereof, which meets the criteria for an Underground Source of Water as defined in Section 1 of this Chapter may be designated as an "exempted aquifer":</u></p> <p><u>(i) If it meets the following criteria:</u></p> <p><u>(A) It does not currently serve as a source of water for Class I, II, III, Special (A) or Class IVA uses as described in Chapter VIII of the Water Quality Rules and Regulations (as amended March 12, 1993); and</u></p> <p><u>(B) It cannot now and will not in the future serve as a source of water because:</u></p> <p><u>(I) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit or Research and Development Testing License applicant to contain minerals or hydrocarbons that, considering their quantity and location, are expected to be commercially producible; or</u></p> <p><u>(II) It is situated at a depth or location which makes recovery of water for Class I, II, III, Special (A) or Class IVA as described in Chapter VIII of the Water Quality Division Rules and Regulations (as amended March 12, 1993), economically or technologically impractical; or</u></p> <p><u>(III) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or</u></p> <p><u>(IV) It is located over a Class III well mining area subject to subsidence or catastrophic collapse; or</u></p>

Attachment B 3
Side-by-Side Comparison
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EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.4(c) The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.</p>	<p>Chapter 11, Section 10(b)(i)(B)(V) <u>The total dissolved solids content of the groundwater is less than 10,000 mg/l and it is not reasonably expected to supply a public water system as defined by W.S. § 35-11-103(c)(viii).</u></p>
<p>40 CFR 146.5 Classification of injection wells. [This section is essentially the same as 40 CFR 144.6 (with a longer list of types of wells in Class V) so it is not repeated here.]</p>	<p>See the side-by-side for 40 CFR 144.6.</p>
<p>40 CFR 146.6 Area of review. The area of review for each injection well or each field, project or area of the State shall be determined according to either paragraph (a) or (b) of this section. The Director may solicit input from the owners or operators of injection wells within the State as to which method is most appropriate for each geographic area or field.</p> <p>(a) Zone of endangering influence.</p> <p>(1) The zone of endangering influence shall be:</p> <p style="padding-left: 20px;">(i) In the case of application(s) for well permit(s) under §122.38 that area the radius of which is the lateral distance in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water; or</p> <p style="padding-left: 20px;">(ii) In the case of an application for an area permit under §122.39, the project area plus a circumscribing area the width of which is the lateral distance from the perimeter of the project area, in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water.</p> <p>40 CFR 146.6(a)(2) Computation of the zone of endangering influence may be based upon the parameters listed below and should be calculated</p>	<p>This citation allows the State to determine the area of review under either subsection (a) or (b). The LQD uses the option in subsection (b) because the information required in (b) is already required information in a permit or Research and Development Testing License. It is important to note that each mine's permit area encompasses several well fields; therefore, the ¼-mile review area is seldom problematic.</p>

Attachment B 3
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<p>40 CFR 146.6(a)(2) cont'd for an injection time period equal to the expected life of the injection well or pattern. The following modified Theis equation illustrates one form which the mathematical model may take.</p> $r = \left(\frac{2.25KHt}{S10^x} \right)^{1/2}$ <p>where:</p> $x = \frac{4\pi KH(h_w - h_{bo} \cdot S_p G_b)}{2.3Q}$ <p>r = Radius of endangering influence from injection well (length) k = Hydraulic conductivity of the injection zone (length/time) H = Thickness of the injection zone (length) t = Time of injection (time) S = Storage coefficient (dimensionless) Q = Injection rate (volume/time) h_{bo} = Observed original hydrostatic head of injection zone (length) measured from the base of the lowermost underground source of drinking water h_w = Hydrostatic head of underground source of drinking water (length) measured from the base of the lowest underground source of drinking water S_pG_b = Specific gravity of fluid in the injection zone (dimensionless) π = 3.142 (dimensionless)</p> <p>(i) The injection zone is homogenous and isotropic; (ii) The injection zone has infinite area extent; (iii) The injection well penetrates the entire thickness of the injection zone;</p> <p>40 CFR 146.6(a)(2)(iv) The well diameter is infinitesimal compared to "r" when injection time is longer than a few minutes; and</p>	<p>This citation allows the State to determine the area of review under either subsection (a) or (b). The LQD uses the option in subsection (b) because the information required in (b) is already required information in a permit or Research and Development Testing License. It is important to note that each mine's permit area encompasses several well fields; therefore, the 1/4-mile review area is seldom problematic.</p>

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<p>40 CFR 146.6(a)(2) cont'd (v) The emplacement of fluid into the injection zone creates instantaneous increase in pressure.</p> <p>40 CFR 146.6(b) Fixed radius. (1) In the case of application(s) for well permit(s) under §122.38 a fixed radius around the well of not less than one-fourth (¼) mile may be used. (2) In the case of an application for an area permit under §122.39 a fixed width of not less than one-fourth (¼) mile for the circumscribing area may be used. In determining the fixed radius, the following factors shall be taken into consideration: Chemistry of injected and formation fluids; hydrogeology; population and ground-water use and dependence; and historical practices in the area.</p> <p>40 CFR 146.6(c) If the area of review is determined by a mathematical model pursuant to paragraph (a) of this section, the permissible radius is the result of such calculation even if it is less than one-fourth (¼) mile.</p>	<p>This citation allows the State to determine the area of review under either subsection (a) or (b). The LQD uses the option in subsection (b) because the information required in (b) is already required information in a permit or Research and Development Testing License. It is important to note that each mine's permit area encompasses several well fields; therefore, the ¼-mile review area is seldom problematic.</p>
<p>40 CFR 146.7 Corrective action. In determining the adequacy of corrective action proposed by the applicant under 40 CFR 144.55 and in determining the additional steps needed to prevent fluid movement into underground sources of drinking water, the following criteria and factors shall be considered by the Director:</p> <p>(a) Nature and volume of injected fluid; (b) Nature of native fluids or by-products of injection;</p> <p>(c) Potentially affected population; (d) Geology (e) Hydrology;</p>	<p>Chapter 11, Section 13(a)(i)... <u>(B) In determining the adequacy of corrective action proposed by the applicant and in determining the additional steps needed to prevent fluid movement into Underground Sources of Water, the following criteria and factors shall be considered by the Administrator:</u></p> <p><u>(I) Nature and volume of injected fluid;</u> <u>(II) Nature and volume of native groundwater;</u> <u>(III) Compatibility of injected fluid and native groundwater;</u> <u>(IV) Potentially affected population;</u> <u>(V) Geology;</u> <u>(VI) Hydrology;</u></p>

Attachment B 3
Side-by-Side Comparison
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EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.7(f) History of the injection operation;</p> <p>(g) Completion and plugging records;</p> <p>(h) Abandonment procedures in effect at the time the well was abandoned; and</p> <p>(i) Hydraulic connections with underground sources of drinking water.</p>	<p>Chapter 11, Section <u>13(a)(ii)(B)(VII)</u> <u>Proposed method of operation as required by Section 4(a)(x) of this Chapter or history of the injection operation if the corrective action is needed in response to amending new wells into an existing operation;</u></p> <p><u>(VIII) Completion and plugging records;</u></p> <p><u>(IX) Plugging procedures in effect at the time the well was abandoned; and</u></p> <p><u>(X) Hydraulic connections with Underground Sources of Water.</u></p>
<p>40 CFR 146.8 Mechanical integrity.</p> <p>(a) An injection well has mechanical integrity if:</p> <p>(1) There is no significant leak in the casing, tubing or packer; and</p> <p>(2) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore.</p> <p>40 CFR 146.8(b) One of the following methods must be used to evaluate the absence of significant leaks under paragraph (a)(1) of this section:</p> <p>(1) Following an initial pressure test, monitoring of the tubing-casing annulus pressure with sufficient frequency to be representative, as determined by the Administrator, while maintaining an annulus pressure different from atmospheric pressure measured at the surface;</p> <p>(2) Pressure test with liquid or gas; or</p>	<p>Chapter 11, Section <u>1(I)</u> <u>"Mechanical integrity" means, for an injection well, there is no significant leak in the casing, tubing or packer, and there is no significant fluid movement into an underground source of water through vertical channels adjacent to the injection well bore. The determination that there are no significant leaks or fluid movement is based on the results of the mechanical integrity testing required in Section 7 of this Chapter.</u></p> <p>Chapter 11, Section <u>7(a)(ii)</u> <u>For demonstrating mechanical integrity as defined in Section 1 of this Chapter:</u></p> <p><u>(A) One of the following methods must be used to evaluate the absence of significant leaks in the casing, tubing or packer:</u></p> <p><u>(I) Following an initial pressure test, monitoring of the tubing-casing annulus pressure with sufficient frequency to be representative, as determined by the Administrator, while maintaining an annulus pressure different from atmospheric pressure measured at the surface; or</u></p> <p><u>(II) Pressure test with liquid or gas.</u></p>

Attachment B 3
Side-by-Side Comparison
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EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.8(b)(3) [For Class II wells only, which are not part of the program administered by LQD].</p> <p>40 CFR 146.8(c) One of the following methods must be used to determine the absence of significant fluid movement under paragraph (a)(2) of this section:</p> <p>(1) The results of a temperature or noise log; or</p> <p>(2) [For Class II only, which are not part of the program administered by LQD]; or</p> <p>(3) For Class III wells where the nature of the casing precludes the use of the logging techniques prescribed at paragraph (c)(1) of this section, cementing records demonstrating the presence of adequate cement to prevent such migration;</p> <p>(4) For Class III wells where the Director elects to rely on cementing records to demonstrate the absence of significant fluid movement, the monitoring program prescribed by §146.33(b) shall be designed to verify the absence of significant fluid movement.</p> <p>40 CFR 146.8(d) The Director may allow the use of a test to demonstrate mechanical integrity other than those listed in paragraphs (b) and (c)(2) of this section with the written approval of the Administrator. To obtain approval, the Director shall submit a written request to the Administrator, which shall set forth the proposed test and all technical data supporting its use. The Administrator shall approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. Any alternate method approved by the Administrator shall be published in the Federal</p>	<p><u>Chapter 11, Section 7(a)(ii)(B) One of the following methods must be used to determine the absence of significant fluid movement into an underground source of water through vertical channels adjacent to the injection bore:</u></p> <p><u>(I) The results of a temperature or noise log; or</u></p> <p><u>(II) Where the nature of the casing precludes the use of the logging techniques prescribed above, cementing records demonstrating the presence of adequate cement to prevent such migration shall be provided; or</u></p> <p><u>(III) Where the Administrator elects to rely on cementing records to demonstrate the absence of significant fluid movement, the monitoring program prescribed by Section 14 of this Chapter shall be designed to verify the absence of significant fluid movement.</u></p> <p><u>Chapter 11, Section 7(a)(ii)(C) The Administrator may allow the operator to use a test to demonstrate mechanical integrity other than those listed in subsection (A) above. To obtain approval, the Administrator with concurrence of the Director shall submit a written request to the EPA, which shall set forth the proposed test and all technical data supporting its use. The EPA shall approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. Any alternate method approved by the EPA shall be published in the Federal Register and may be used in</u></p>

Attachment B 3
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.8(d) cont'd Register and may be used in all States unless its use is restricted at the time of approval by the Administrator.</p> <p>40 CFR 146.8(e) In conducting and evaluating the tests enumerated in this section or others to be allowed by the Director, the owner or operator and the Director shall apply methods and standards generally accepted in the industry. When the owner or operator reports the results of mechanical integrity tests to the Director, he shall include a description of the test(s) and the method(s) used. In making his/her evaluation, the Director shall review monitoring and other test data submitted since the previous evaluation.</p>	<p>Chapter 11, Section <u>7(a)(ii)(C)</u> cont'd <u>all States unless its use is restricted at the time of approval by the EPA.</u></p> <p>Chapter 11, Section <u>15(b)</u> Quarterly monitoring reports shall include, at a minimum:...</p> <p><u>(ii) The results of all mechanical integrity testing conducted during that quarter, including the following information identified by Class III well:</u></p> <p><u>(A) Date of mechanical integrity testing;</u></p> <p><u>(B) Identification of the method by which mechanical integrity was established;</u></p>
<p>40 CFR 146.9 Criteria for establishing permitting priorities.</p>	<p>There are no Class III wells currently being used for injection that are not already permitted by LQD; therefore, no counterpart LQD rules are needed.</p>
<p>40 CFR 146.10 Plugging and abandoning Class I-III wells.</p> <p>(a) Prior to abandoning Class I to III wells the well shall be plugged with cement in a manner which will not allow the movement of fluids either into or between underground sources of drinking water.</p> <p>The Director may allow Class III wells to use other plugging materials if he is satisfied that such materials will prevent movement of fluids into or between underground sources of drinking water.</p>	<p>Chapter 11, Section <u>8(f)</u> A Class III injection well shall be plugged to meet the requirements below to assure that plugging of the well will not allow the movement of fluids into or between USWs:</p> <p><u>(i) The well shall be plugged with:</u></p> <p><u>(A) Neat cement grout, sand-cement grout, concrete, or bentonite grout with a permeability of 10⁻⁷ cm/sec or less. To assure that the well is filled and there has been no bridging of the sealing material, the operator should provide LQD with documentation that the volume of material placed in the well at least equals the volume of the empty hole; or</u></p> <p><u>(B) Other plugging materials if such materials will prevent movement of fluids into or between underground sources of water and the Administrator approves the use of such materials.</u></p>

Attachment B 3
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 146.10(b) Placement of the cement plugs shall be accomplished by one of the following:</p> <p>(1) The Balance method; (2) The Dump Bailer method; (3) The Two-Plug method; or (4) An alternative method approved by the Director, which will reliably provide a comparable level of protection to underground sources of drinking water.</p> <p>40 CFR 146.10(c) The well to be abandoned 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 prescribed by the Director, prior to the placement of the cement plug(s).</p> <p>40 CFR 146.10(d) The plugging and abandonment plan required in 40 CFR 144.52(a)(6) and 144.51(n) shall, in the case of a Class III project which underlies or is in an aquifer which has been exempted under 40 CFR 146.04, also demonstrate adequate protection of USDWs. The Director shall prescribe aquifer cleanup and monitoring where he deems it necessary and feasible to insure adequate protection of USDWs.</p>	<p>Chapter 11, Section 8(d)(iii) <u>Placement of the cement plugs shall be accomplished by one of the following:</u></p> <p><u>(A) The Balance method;</u> <u>(B) The Dump Bailer method;</u> <u>(C) The Two-Plug method; or</u> <u>(D) An alternative method approved by the Administrator, which:</u></p> <p><u>(I) Includes placement of cementing materials in the interval or intervals to be sealed by methods that prevent free fall, dilution and/or separation of aggregates from sealing materials; and</u> <u>(II) Will reliably provide a comparable level of protection to underground sources of water, will reliably provide a comparable level of protection to underground sources of water.</u></p> <p>Chapter 11, Section 8(d)(iv) <u>The well to be plugged 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 prescribed by the Administrator, prior to the placement of the cement plug(s).</u></p> <p>Chapter 11, Section 8(g) <u>In the case of a Class III project which underlies or is in an aquifer which has been exempted under Section 10 of this Chapter, the Plugging/Conversion Plan in the permit or Research and Development Testing License shall also demonstrate adequate protection of USWs. The Administrator shall prescribe aquifer cleanup and monitoring where he deems it necessary and feasible to assure adequate protection of USWs.</u></p>
Subpart B - Criteria and Standards Applicable to Class I Wells	
Subpart C - Criteria and Standards Applicable to Class II Wells	
Subpart D - Criteria and Standards Applicable to Class III Wells	

Attachment B 3
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.31 Applicability. This subpart establishes criteria and standards for underground injection control programs to regulate Class III wells</p>	<p>Simply an introduction to Federal Subpart D, no LQD rule is necessary.</p>
<p>40 CFR 146.32 Construction requirements. (a) All new Class III wells shall be cased and cemented to prevent the migration of fluids into or between underground sources of drinking water.</p> <p>The Director may waive the cementing requirement for new wells in existing projects or portions of existing projects where he has substantial evidence that no contamination of underground sources of drinking water would result.</p> <p>The casing and cement used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and cementing requirements, the following factors shall be considered:</p> <ul style="list-style-type: none"> (1) Depth to the injection zone; (2) Injection pressure, external pressure, internal pressure, axial loading, etc.; (3) Hole size; (4) Size and grade of all casing strings (wall thickness, diameter, nominal weight, length, joint specification, and construction material); (5) Corrosiveness of injected fluids and formation fluids; (6) Lithology of injection and confining zones; and (7) Type and grade of cement. 	<p>Chapter 11, Section 6(g)(ii) <u>All Class III wells shall be cased and cemented to prevent the migration of fluids into or between underground sources of water.</u></p> <p>This portion of the EPA rule is not proposed for adoption because the subsurface conditions and groundwater concerns in the State are such that a "waiver" of the type considered by EPA is not advisable. In addition, an applicant can still apply for a variance under W.S. § 35-11-601. Therefore, no counterpart LQD rule is needed.</p> <p>Chapter 11, Section 6(g)(ii) <u>...The casing and cement used in the construction of each newly drilled well shall be designed for the life expectancy of the well. In determining and specifying casing and cementing requirements, the following factors shall be considered:</u></p> <ul style="list-style-type: none"> (A) <u>Depth to the production zone;</u> (B) <u>Injection pressure, external pressure, internal pressure, axial loading, or other factors as determined by the Administrator;</u> (C) <u>Drill hole annular space;</u> (D) <u>Size and grade of all casing strings (wall thickness, diameter, nominal weight, length, joint specification, and construction material);</u> (E) <u>Corrosiveness of injected fluids and formation fluids;</u> (F) <u>Lithology of receiving strata and confining zones; and</u> (G) <u>Type and grade of cement.</u>

Attachment B 3
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.32(b) Appropriate logs and other tests shall be conducted during the drilling and construction of new Class III wells. A descriptive report interpreting the results of such logs and tests shall be prepared by a knowledgeable log analyst and submitted to the Director. The logs and tests appropriate to each type of Class III well shall be determined based on the intended function, depth, construction and other characteristics of the well, availability of similar data in the area of the drilling site and the need for additional information that may arise from time to time as the construction of the well progresses. Deviation checks shall be conducted on all holes where pilot holes and reaming are used, unless the hole will be cased and cemented by circulating cement to the surface. Where deviation checks are necessary they shall be conducted at sufficiently frequent intervals to assure that vertical avenues for fluid migration in the form of diverging holes are not created during drilling.</p> <p>40 CFR 146.32(c) Where the injection zone is a formation which is naturally water-bearing the following information concerning the injection zone shall be determined or calculated for new Class III wells or projects:</p> <ul style="list-style-type: none"> (1) Fluid pressure; (2) Fracture pressure; and (3) Physical and chemical characteristic of the formation fluids. <p>40 CFR 146.32(d) Where the injection formation is not a water-bearing formation, the information in paragraph (c)(2) of this section must be submitted.</p> <p>40 CFR 146.32(e) Where injection is into a formation which contains water with less than 10,000 mg/l TDS monitoring wells shall be completed into</p>	<p>Chapter 11, Section 6(g)(i) <u>Appropriate logs and other tests shall be conducted during the drilling and construction of new Class III wells. A descriptive report prepared by a knowledgeable log analyst interpreting the results of such logs and tests shall be submitted to the Administrator. The logs and tests appropriate to each type of Class III well shall be determined based on the intended function, depth, construction and other characteristics of the well, availability of similar data in the area of the drilling site and the need for additional information that may arise from time to time as the construction of the well progresses. Deviation checks shall be conducted on all holes where pilot holes and reaming are used, unless the hole will be cased and cemented by circulating cement to the surface. Where deviation checks are necessary, they shall be conducted at sufficiently frequent intervals to assure that vertical avenues for fluid migration are not created during drilling.</u></p> <p>Chapter 11, Section 4(a)(xi) <u>The following information concerning the production zone shall be determined or calculated and submitted for new Class III wells or projects:</u></p> <ul style="list-style-type: none"> <u>(A) Where the production zone is in a receiving strata which is naturally water-bearing:</u> <ul style="list-style-type: none"> <u>(I) Fluid pressure;</u> <u>(II) Fracture pressure; and</u> <u>(III) Physical and chemical characteristics of the receiving strata fluids.</u> <u>(B) Where the receiving strata is not a water-bearing formation, the fracture pressure in the production zone.</u> <p>Chapter 11, Section 6(h)(i) <u>Where injection is into a receiving strata which contains water with less than 10,000 milligrams per liter (mg/l) Total</u></p>

Attachment B 3
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EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.32(e) cont'd the injection zone and into any underground sources of drinking water above the injection zone which could be affected by the mining operation. These wells shall be located in such a fashion as to detect any excursion of injection fluids, process by-products, or formation fluids outside the mining area or zone. If the operation may be affected by subsidence or catastrophic collapse the monitoring wells shall be located so that they will not be physically affected.</p> <p>40 CFR 146.32(f) Where injection is into a formation which does not contain water with less than 10,000 mg/l TDS, no monitoring wells are necessary in the injection stratum.</p> <p>40 CFR 146.32(g) Where the injection wells penetrate an USDW in an area subject to subsidence or catastrophic collapse an adequate number of monitoring wells shall be completed into the USDW to detect any movement of injected fluids, process by-products or formation fluids into the USDW. The monitoring wells shall be located outside the physical influence of the subsidence or catastrophic collapse.</p> <p>40 CFR 146.32(h) In determining the number, location, construction and frequency of monitoring of the monitoring wells the following criteria shall be considered:</p> <p>40 CFR 146.32(h)(1) The population relying on the USDW affected or potentially affected by the injection operation;</p>	<p>Chapter 11, Section 6(h)(i) cont'd <u>Dissolved Solids (TDS), monitoring wells shall be completed into the production zone and any Underground Source of Water which could be adversely affected by the mining operation. These wells shall be located in such a fashion as to detect any excursion of injection fluids, process by-products, or formation fluids outside the mining area or zone. If the operation may be affected by subsidence or catastrophic collapse, the monitoring wells shall be located so that they will not be physically affected.</u></p> <p>Chapter 11, Section 6(h)(ii) <u>Where injection is into a receiving strata which contains water with greater than 10,000 mg/l TDS, no monitoring wells are necessary in the production zone.</u></p> <p>Chapter 11, Section 6(h)(iii) <u>Where the injection wells penetrate an Underground Source of Water (USW) in an area subject to subsidence or catastrophic collapse, an adequate number of monitoring wells shall be completed into the USW to detect any movement of injected fluids, process by-products or formation fluids into the USW. The monitoring wells shall be located outside the physical influence of the subsidence or catastrophic collapse.</u></p> <p>Chapter 11, Section 6(h)(iv) <u>In determining the number, location, and construction of the monitoring wells and frequency of monitoring, the following criteria shall be considered:</u></p> <p>(A) <u>The uses for which the groundwater in the receiving strata is suitable under premining conditions, as determined from Chapter VIII, Water Quality Division Rules and Regulations (as amended March 12, 1993), in any aquifer affected or potentially affected by the injection operation;</u></p>

Attachment B 3
Side-by-Side Comparison
EPA Rule and Counterpart Wyoming Rule or Statute (Proposed or Existing)
EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>(2) The proximity of the injection operation to points of withdrawal of drinking water;</p> <p>(3) The local geology and hydrology;</p> <p>(4) The operating pressures and whether a negative pressure gradient is being maintained;</p> <p>(5) The nature and volume of the injected fluid, the formation water, and the process by-products; and</p> <p>(6) The injection well density.</p>	<p><u>(B) The proximity of the injection operation to points of withdrawal;</u></p> <p><u>(C) The local geology and hydrology;</u></p> <p><u>(D) The operating pressures and whether a negative pressure gradient is being maintained;</u></p> <p><u>(E) The nature and volume of the recovery fluid, the formation fluid, and the process by-products; and</u></p> <p><u>(F) The injection well density.</u></p>
<p>40 CFR 146.33 Operating, monitoring, and reporting requirements.</p> <p>(a) Operating requirements. Operating requirements prescribed shall, at a minimum, specify that:</p> <p>(1) Except during well stimulation injection pressure at the wellhead shall be calculated so as to assure that the pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures in the injection zone. In no case, shall injection pressure initiate fractures in the confining zone or cause the migration of injection or formation fluids into an underground source of drinking water.</p> <p>(2) Injection between the outermost casing protecting underground sources of drinking water and the well bore is prohibited.</p> <p>40 CFR 146.33(b) Monitoring requirements. Monitoring requirements shall, at a minimum, specify:</p> <p>(1) Monitoring of the nature of injected fluids with sufficient frequency to yield representative data on its characteristics. Whenever the injection fluid is modified to the extent that the analysis required by §146.34(a)(7)(iii) is incorrect or incomplete, a new analysis as required by §146.34(a)(7)(iii) shall be provided to the Director.</p>	<p>Chapter 11, Section 11(c)...Operating requirements shall, at a minimum, specify that:</p> <p><u>(i) Except during well stimulation, injection pressure at the wellhead shall be calculated so as to assure that the pressure in the production zone during injection does not initiate new fractures or propagate existing fractures. In no case, shall injection pressure initiate fractures in the confining zone, if confinement is present, or cause the migration of injection or formation fluids into an USW;</u></p> <p><u>(ii) Injection between the outermost casing protecting underground sources of water and the well bore is prohibited.</u></p> <p>Chapter 11, Section 14(a)(ii) Monitoring of:</p> <p><u>(A) The nature of injected fluids with sufficient frequency to yield representative data on the characteristics of the fluid. Whenever the injection fluid is modified to the extent that the previous analysis is incorrect or incomplete, a new analysis shall be provided to the Administrator;</u></p>

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<p>(2) Monitoring of injection pressure and either flow rate or volume semi-monthly, or metering and daily recording of injected and produced fluid volumes as appropriate.</p> <p>(3) Demonstration of mechanical integrity pursuant to §146.08 at least once every five years during the life of the well for salt solution mining.</p> <p>(4) Monitoring of the fluid level in the injection zone semi-monthly, where appropriate and monitoring of the parameters chosen to measure water quality in the monitoring wells required by §146.32(e), semi-monthly.</p> <p>(5) Quarterly monitoring of wells required by §146.32(g) [wells penetrating an USDW in an area subject to subsidence or catastrophic collapse].</p> <p>40 CFR 146.33(b)(6) All Class III wells may be monitored on a field or project basis rather than an individual well basis by manifold monitoring. Manifold monitoring may be used in cases of facilities consisting of more than one injection well, operating with a common manifold. Separate monitoring systems for each well are not required provided the owner/operator demonstrates that manifold monitoring is comparable to individual well monitoring.</p>	<p><u>(B) The injection pressure and either flow rate or volume at least weekly or metering and daily recording of injected and produced fluid volumes as appropriate; and</u></p> <p>LQD is proposing that all wells, regardless of whether they are salt solution wells, have a mechanical integrity test every 5 years. The reasons the LQD considers this requirement, which is not that unusual, necessary are discussed in the Statement of Principal Reasons for Chapter 11, Section 7(a)(iii).</p> <p>Chapter 11, Section 14(a)(iii) Requirements for:</p> <p><u>(A) Semi-monthly monitoring of the fluid level in the production zone, where appropriate;</u></p> <p><u>(B) Semi-monthly monitoring of the water levels and parameters chosen to measure the water quality in the monitoring wells where the receiving strata contains water with less than 10,000 milligrams per liter of Total Dissolved Solids (Section 6(g)(iii) of this Chapter).</u></p> <p><u>(C) Quarterly monitoring of the water levels and parameters chosen to detect any movement of injected fluids, process by-products or formation fluids in the monitoring wells where the injection wells penetrate an Underground Source of Water in an area subject to subsidence or catastrophic collapse (Section 6(g)(iii) of this Chapter).</u></p> <p><u>Chapter 11, Section 14(a)(ii)(C) Class III injection wells may be monitored for the parameters required by subsections (A) and (B) on a field or project basis rather than an individual well basis by manifold monitoring. Manifold monitoring may be used in cases of facilities consisting of more than one injection well operating with a common manifold. Separate monitoring systems for each well are not required provided the operator demonstrates that manifold monitoring of injection pressure is comparable to individual well monitoring.</u></p>

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EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.33(b)(c) Reporting requirements. Reporting requirements shall, at a minimum, include:</p> <p>(1) Quarterly reporting to the Director on required monitoring;</p> <p>(2) Results of mechanical integrity and any other periodic test required by the Director reported with the first regular quarterly report after the completion of the test; and</p> <p>(3) Monitoring may be reported on a project or field basis rather than individual well basis where manifold monitoring is used.</p>	<p><u>Chapter 11, Section 15(b) Quarterly monitoring reports shall include, at a minimum:...</u></p> <p><u>(ii) The results of all mechanical integrity testing conducted during that quarter, including the following information identified by Class III well:...</u></p>
<p>40 CFR 146.34 Information to be considered by the Director. This section sets forth the information which must be considered by the Director in authorizing Class III wells. Certain maps, cross sections, tabulations of wells within the area of review, and other data may be included in the application by reference provided they are current, readily available to the Director (for example, in the permitting agency's files) and sufficiently identified to be retrieved. In cases where EPA issues the permit, all the information in this section must be submitted to the Administrator.</p>	<p>In Wyoming, all Class III wells for a given in situ mining operation are generally not authorized at the same time because of the size and scope of operations. Instead, the wells are generally authorized on a wellfield-by-wellfield basis within a larger permit area for that operation. For example, an operator may propose six wellfields within a given permit area, and there may be over one hundred Class III wells proposed in each wellfield. When the permit application is first submitted, the application contains general surface and subsurface information about the entire permit area and detailed information about the conditions at one of the six proposed wellfields. The application also contains general information about the mining and reclamation procedures and specifics for the one wellfield. Therefore, when the permit is approved, only the Class III wells in that one 'detailed' wellfield are authorized. (The aquifer exemption process, as currently administered by EPA also follows this "wellfield" approach.) Within a few years, the operator will submit more detailed information about another of the wellfields (a "wellfield package" or "Hydrologic Test Document"), and upon review and approval of that information (as a permit revision), the Class III wells in that wellfield are authorized. This wellfield-by-wellfield approach then continues as necessary over the life of the mine.</p>

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EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 146.34(a) Prior to the issuance of a permit for an existing Class III well or area to operate or the construction of a new Class III well the Director shall consider the following:</p> <p>(1) Information required in 40 CFR 144.31 and 144.31(g) [essentially the Mine Plan contents];</p> <p>(2) A map showing the injection well or project area for which a permit is sought and the applicable area of review. Within the area of review, the map must show the number or name and location of all existing producing wells, injection wells, abandoned wells, dry holes, public water systems and water wells. The map may also show surface bodies of waters, mines (surface and subsurface) quarries and other pertinent surface features including residences and roads, and faults if known or suspected. Only</p>	<p>This "wellfield" approach is not required by rule, rather it is a practical system that has developed over the years that in situ mining has occurred in Wyoming. For example, neither the existing or proposed Mine Plan requirements (Chapter 11, Sections 3 and 4, respectively) discuss "wellfield packages." However, as required by the EPA rules, in particular 40 CFR 146.34, and as reflected in the LQD rules, in particular those listed below, there is specific information that must be reviewed and approved before injection into specified Class III wells can be authorized.</p> <p><u>Chapter 11, Section 11(a) No Class III well construction may commence until a permit or Research and Development Testing License has been issued which includes well construction information in accordance with the requirements of Section 6 of this Chapter. Construction of wells needed to obtain the information required in Section 3 of this Chapter may be allowed with approval of the Administrator; however, such wells may not be used for injection.</u></p> <p>In addition to the requirements of W.S. § 35-11-406(a) for maps and land descriptions, specific requirements for well and drill hole data are included in:</p> <p><u>Chapter 11, Section 3(b)(x) (a)(xi) For groundwaters within the permit area and on adjacent lands:</u></p> <p><u>(A) Locations and present owners The names (or numbers), descriptions, and a map of all water wells installed for water supply or monitoring in-use and all wells which penetrate the injection zone within the permit area and on adjacent lands, including a The description shall include: of names of present owners, well completion data, producing interval(s), and variations in water level to the extent such information</u></p>

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EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 146.34(a)(2) cont'd information of public record and pertinent information known to the applicant is required to be included on this map.</p> <p>(3) A tabulation of data reasonably available from public records or otherwise known to the applicant on wells within the area of review included on the map required under paragraph (a)(2) of this section which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of plugging and completion, and any additional information the Director may require. In cases where the information would be repetitive and the wells are of similar age, type, and construction the Director may elect to only require data on a representative number of wells.</p> <p>(4) Maps and cross sections indicating the vertical limits of all underground sources of drinking water within the area of review, their position relative to the injection formation, and the direction of water movement, where known, in every underground source of drinking water which may be affected by the proposed injection;</p> <p>(5) Maps and cross sections detailing the geologic structure of the local area;</p> <p>(6) Generalized map and cross sections illustrating the regional geologic setting;</p> <p>(7) Proposed operating data:</p>	<p>Chapter 11, Section 3(b)(x) (a)(xi) cont'd is available in the public records and from a reasonable inspection of the property. The Administrator shall require a mapping of all wells within and adjacent to the permit area.</p> <p>(B) A list and mapping of all adjudicated and permitted surface water and groundwater rights within the permit area and adjacent to the permit area shall be provided.</p> <p>Chapter 11, Section 3(b)(xi)(a)(xii) A tabulation list and map of all abandoned wells and drill holes, giving location, depth, producing interval(s), type of use, condition of casing, plugging procedures and date of completion for each well or drill hole within the permit area and on adjacent lands to the extent such information is available in public records and from a reasonable inspection of the property.</p> <p>Chapter 11, Section 3(b)(a)(viii) A description of the geology, including: (A) <u>Discussion, supported by maps, cross-sections and supporting geologist's, driller's, and geophysical logs, which identifies; formations and aquifers; geologic features that could influence aquifer properties; and the areal and stratigraphic position of the production zone in relation to other geologic features within the proposed permit or Research and Development Testing License area;</u></p> <p>Chapter 11, Section 3(b)(a)(viii) A description of the geology, including: (B) <u>A generalized map and cross-sections illustrating the regional geologic setting.</u></p> <p>Chapter 11, Section 3(c)(i) 4(a)(x) A description of the proposed method of operation, including...</p>

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<p>(i) Average and maximum daily rate and volume of fluid to be injected;</p> <p>(ii) Average and maximum injection pressure; and</p> <p>(iii) Qualitative analysis and ranges in concentrations of all constituents of injected fluids. The applicant may request Federal confidentiality as specified in 40 CFR part 2. If the information is proprietary an applicant may, in lieu of the ranges in concentrations, choose to submit maximum concentrations which shall not be exceeded. In such a case the applicant shall retain records of the undisclosed concentrations and provide them upon request to the Director as part of any enforcement investigation.</p> <p>40 CFR 146.34(a)(8) Proposed formation testing program to obtain the information required by §146.32(c).</p> <p>40 CFR 146.34(a)(9) Proposed stimulation program;</p> <p>40 CFR 146.34(a)(10) Proposed injection procedure;</p> <p>40 CFR 146.34(a)(11) Schematic or other appropriate drawings of the surface and subsurface construction details of the well;</p>	<p><u>(A) Injection rate, with the average and maximum daily rate and the volume of fluid to be injected;</u></p> <p><u>(B) Injection pressures, with average and maximum injection pressures, as required by Section 11 of this Chapter;</u></p> <p>In order to understand the mining method, the characteristics of the injected fluid, which is used to mobilize the mineral being mined, must be described: W.S. § 35-11-428(a)(iii) A mine plan...containing... (A) A description of the mining techniques. W.S. § 35-11-431(a) A special license to conduct research and development testing...shall include... (ii) A description of the nature and scope of the testing activity.</p> <p>Such information can be held confidential if it would be considered a "trade secret" (W.S. § 35-11-406(d).</p> <p>The LQD does not require submittal of proposed formation testing procedures; however, operators generally discuss collection of baseline data, wellfield monitoring locations, aquifer testing, and similar testing efforts with LQD before starting these efforts.</p> <p>Chapter 11, Section 3(c)(f) 4(a)(xi) A description of the proposed method of operation, including... <u>(C) Proposed stimulation program;</u></p> <p><u>(E) Proposed injection procedure; and</u></p> <p>Chapter 11, Section 3(c)(ix) 4(a)(xv)(B) A detailed description of the typical proposed well completion for injection and recovery wells, <u>as required by Section 6 of this Chapter.</u></p>

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EPA RULE	COUNTERPART WYOMING RULE OR STATUTE (PROPOSED OR EXISTING)
<p>40 CFR 146.34(a)(12) Plans (including maps) for meeting the monitoring requirements of §146.33(b);</p> <p>40 CFR 146.34(a)(13) Expected changes in pressure, native fluid displacement, direction of movement of injection fluid;</p> <p>40 CFR 146.34(a)(14) Contingency plans to cope with all shut-ins or well failures so as to prevent the migration of contaminating fluids into underground sources of drinking water;</p> <p>40 CFR 146.34(a)(15) A certificate that the applicant has assured, through a performance bond, or other appropriate means, the resources necessary to close, plug, or abandon the well as required by 40 CFR 144.52(a)(7) and</p> <p>40 CFR 146.34(a)(16) The corrective action proposed to be taken under 40 CFR 144.55.</p> <p>40 CFR 146.34(b) Prior to granting approval for the operation of a Class III well the Director shall consider the following information:</p>	<p>Chapter 11, Section 3(c)(xv)4(a)(xv) <u>Details of a program to monitoring program and reporting schedule the quantity and quality of waters that may be affected by the operation from premining through release of bond, including a description of procedures and time schedules used to confirm excursions as required by Sections 14 and 15 of this Chapter, respectively.</u></p> <p>Chapter 11, Section 3(c)(ii)4(a)(i) <u>Contour (topographic) map(s) which accurately locate and identify...monitoring wells required by Section 14 of this Chapter.</u></p> <p>Chapter 11, Section 4(a)(x)(F) <u>Expected changes in pressure, native groundwater displacement and direction of movement of injection fluid.</u></p> <p>Chapter 11, Section 4(a)(xvii) <u>A corrective action plan, for such wells which are improperly sealed, completed, or abandoned, consisting of such steps or modifications as are necessary to prevent movement of fluid into unauthorized zones as required by Section 13 of this Chapter.</u></p> <p>As noted in the side-by-side for 40 CFR 144.52(a)(7), W.S. § 35-11-417 provides authority for bonds, and a copy of LQD's reclamation bond form, which must be completed and approved before mining begins, is attached.</p> <p>See side-by-side for 40 CFR 146.34(a)(14).</p> <p>As noted in the side-by-side for 40 CFR 146.34(a), an operator must submit for review and approval, in the initial permit application and in later permit "wellfield packages," the Mine Plan and wellfield-specific mining information.</p>

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<p>40 CFR 146.34(b)(1) All available logging and testing data on the well;</p> <p>40 CFR 146.34(b)(2) A satisfactory demonstration of mechanical integrity for all new wells and for all existing salt solution wells pursuant to §146.08;</p> <p>40 CFR 146.34(b)(3) The anticipated maximum pressure and flow rate at which the permittee will operate;</p> <p>40 CFR 146.34(b)(4) The results of the formation testing program;</p>	<p><u>Chapter 11, Section 6(g)(i) Appropriate logs and other tests shall be conducted during the drilling and construction of new Class III wells. A descriptive report prepared by a knowledgeable log analyst interpreting the results of such logs and tests shall be submitted to the Administrator...</u></p> <p><u>Chapter 11, Section 7(a)(i) The operator of a Class III well shall establish mechanical integrity as defined in Section 1 of this Chapter for each well prior to commencing injection and shall maintain mechanical integrity for each well until it is plugged in accordance with Section 8 of this Chapter.</u></p> <p><u>Chapter 11, Section 3(c)(i) 4(a)(x) A description of the proposed method of operation, including...</u> <u>(A) Injection rate, with the average and maximum daily rate and the volume of fluid to be injected;</u> <u>(B) Injection pressures, with average and maximum injection pressures, as required by Section 11 of this Chapter;</u></p> <p><u>Chapter 11, Section 3(b)(xiii)(a)(xiv) Aquifer characteristics for the water saturated portions of the receiving strata and aquifers which may be affected by the mining process, which may include, but is not limited to, aquifer thickness, velocity and direction of groundwater movement, storage coefficients or specific yields, transmissivity or hydraulic conductivity and the direction(s) of preferred flow under hydraulic stress in the saturated zones of the receiving strata. The extent of hydraulic connection between the receiving strata and overlying and underlying aquifers, and the hydraulic characteristics of any influencing boundaries in or near the proposed well field area(s) shall be determined and described. Information needed to meet the requirements of Section 6(d) of this Chapter shall also be provided</u></p>

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EPA 40 CFR Part 146 - Underground Injection Control Program: Criteria & Standards

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<p>40 CFR 146.34(b)(5) The actual injection procedures; and</p>	<p>See side-by-side for 40 CFR 146.34(a)(7). The actual injection procedures cannot vary substantially from those described in the Mine Plan unless a revision is submitted.</p>
<p>40 CFR 146.34(b)(6) The status of corrective action on defective wells in the area of review.</p>	<p>W.S. § 35-11-415 requires prevention, throughout the mining and reclamation operation, pollution of surface and subsurface waters. In addition, the presence of defective wells could impair efficient recovery of the mineral resource. Therefore, prior to granting approval for use of Class III wells, any corrective action needs to be completed.</p>
<p>40 CFR 146.34(c) Prior to granting approval for the plugging and abandonment of a Class III well the Director shall consider the following information:</p>	<p>As noted in the side-by-side for 40 CFR 146.34(a), an operator must submit for review and approval, in the initial permit application and in later permit "wellfield packages," the Reclamation Plan and wellfield-specific reclamation/restoration information.</p>
<p>40 CFR 146.34(c)(1) The type and number of plugs to be used;</p>	<p>Chapter 11, Section 8(f)(ii) <u>The description of the [plugging] method will identify:</u></p> <p>Chapter 11, Section 8(f)(ii) cont'd (A) <u>The type and number of plugs to be used;</u></p>
<p>40 CFR 146.34(c)(2) The placement of each plug including the elevation of the top and bottom;</p>	<p>(B) <u>The placement of each plug including the elevation of the top and the bottom;</u></p>
<p>40 CFR 146.34(c)(3) The type, grade and quantity of cement to be used;</p>	<p>Chapter 11, Section 8(f)(i) <u>The well shall be plugged with:</u></p> <p>(A) <u>Neat cement grout, sand-cement grout, concrete, or bentonite grout with a permeability of 10⁻⁷ cm/sec or less. To assure that the well is filled and there has been no bridging of the sealing material, the operator should provide LOD with documentation that the volume of material placed in the well at least equals the volume of the empty hole; or</u></p>

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40 CFR 146.34(c)(4) The method of placement of the plugs, and	Chapter 11, Section <u>8(f)(ii)(C)</u> <u>The method of placement of the plugs, in accordance with Section 8(e)(ii); and</u>
40 CFR 146.34(c)(5) The procedure to be used to meet the requirements of §146.10(c).	Chapter 11, Section <u>8(f)(ii)(D)</u> <u>The procedure to be used to meet the requirements of Section 8(d)(iv).</u>
Subpart E - Criteria and Standards Applicable to Class IV Injection Wells [Reserved]	
Subpart F - Criteria and Standards Applicable to Class V Injection Wells	

Attachment C
Relevant LQD Documents

Sample Table of Contents for State Decision Document
Revisions to Public Format No. 6
Revisions to Public Notice Format No. 10
Revisions to Form 1 UIC
Revisions to Form 5RD
Reclamation Bond Form

Sample Table of Contents
State Decision Documents - Noncoal In Situ Mining Operations
February 2002

- I. General Description of the Operation
- II. Description of Existing Environment
 - A. Land Use, Topography, & Climate
 - B. Archeology & Paleontology
 - C. Soils & Radiological Survey
 - D. Vegetation & Wetlands
 - E. Wildlife
 - F. Geology
 - G. Hydrology
 - 1) Surface Water
 - a) Surface Water Features
 - b) Surface Water Rights
 - c) Surface Water Quantity & Quality
 - 2) Ground Water
 - a) Aquifers & Aquitards
 - b) Ground Water Rights
 - c) Ground Water Quantity & Quality
- III. Evaluation of Compliance
 - A. Adjudication Information
 - 1) Surface & Mineral Owners & Right-to-Mine
 - 2) Reclamation/Restoration Bond
 - B. Ground Water Classification & Aquifer Exemption
 - 1) Ground Water Classification
 - 2) Aquifer Exemption
 - C. Mine Operations
 - 1) Preliminary Activities
 - a) Archeology
 - b) Vegetation
 - c) Drilling-Related Activities
 - 2) Installation of Wellfields & Supporting Facilities
 - a) Wellfield-Specific Data Collection
 - Soils
 - Hydrology
 - b) Facilities Placement & Construction

Cont'd on next page...

Sample Table of Contents (cont'd)
State Decision Documents - Noncoal In Situ Mining Operations
February 2002

III.C (cont'd)...

3) Wellfield Operation

a) Monitoring

Wellfield Balance

Injection Pressures & Rates

Water Levels & Water Quality

Well Integrity

b) Water Treatment & Waste Disposal

c) Operation/Restoration Water Balance

D. Reclamation/Restoration

1) Reclamation of Structures & Facilities

2) Reclamation of Ground Surface & Vegetation

3) Ground Water Restoration

IV. Public Notice

A. After Completeness Review

B. After Technical Review

V. Permit Conditions

1) Water Quality Classification

2) Water Usage

3) Public Notice

Administrator's Signature

LQD PUBLIC NOTICE FORMAT NO. 6 with Proposed Changes

**Statement of Principal Reasons - LQD Proposed In Situ Noncoal Rules
Rule Package 1L (03/26/02)**

In Situ Mining: Uranium

**NEWSPAPER PUBLICATION AND NOTIFICATION
FOR PROPOSED IN SITU URANIUM MINING PERMIT OR AMENDMENT**

W.S. § 35-11-406(j) - Second Publication

Upon notification by the Land Quality Division the applicant shall commence the following. Please note that public notice or hearing is not required for an in situ uranium operation that is amending lands if the lands will not be used for underground injection activities and they do not exceed 20% of the original permit area and are contiguous with the permit area (W.S. § 35-11-406(a)(xii)):

1. A copy of the application needs to be filed with the Office of the County Clerk in the counties in which the proposed permit area is located no later than the first day of publication. THIS COPY SHOULD BE REMOVED FROM THE COUNTY CLERK'S OFFICE AFTER PERMIT APPROVAL. Immediately following filing, submit an affidavit of filing from the Office of the County Clerk to the Land Quality Division.
2. Publish a notice in a newspaper of general circulation in the locality of the proposed operation once a week for four (4) consecutive weeks (see sample format below).
3. Mail within five (5) days after the first publication, copies of the notice to all parties as given in W.S. § 35-11-406(j) (as amended in 1995) and an application mine plan map to the Wyoming Oil and Gas Commission.
4. On completion of publication submit a sworn affidavit from the newspaper and a copy of the notice to the Land Quality Division and the Water Quality Division.
5. As soon as possible and several weeks before the end of the public comment period, submit a sworn statement of mailing to the Land Quality Division. Please use the example affidavit of mailing which is attached.

Continued on next page...

LQD PUBLIC NOTICE FORMAT NO. 6 with Proposed Changes

Statement of Principal Reasons - LQD Proposed In Situ Noncoal Rules
Rule Package 1L (03/26/02)

SECOND PUBLICATION
SAMPLE FORMAT FOR URANIUM IN SITU PERMITS/AMENDMENTS

Public Notice

The (Company Name) of (Main Company Location) has applied for an in situ mining permit (amendment) from the Land Quality Division of the Department of Environmental Quality of the State of Wyoming. The mining permit (amendment) area will be located in: (legal description of permit area - Section, Township, Range, USGS 7.5' Topographic Quadrangle Map, County), Wyoming. (The area is) approximately (locate the area relative to the closest town and a natural landmark, i.e.: a water source or a physical attribute). The proposed operation is scheduled to begin (month and year) and is estimated to continue until (year). The on-site activities will include (brief description of the proposed baseline evaluation, mining, and restoration activities, including the zone to be mined, its location relative to ground water resources, and the measures that will be taken to protect those resources). The land, after mining, will be returned to a (proposed use). The groundwater to be affected will automatically be classified Class V (uranium commercial), as required by Water Quality Division Regulations, Chapter 8, upon issuance of this permit. This classification includes all ore zones presently known and identified inside the areas delineated as federal aquifer exemption areas within the permit boundary. The groundwater, after mining, will be restored to a quality of use equal to or better than and consistent with pre-mining uses. Information regarding the proposed mining operation and reclamation/restoration procedures, including the State Decision Document, may be reviewed in the office of the Land Quality Division of the Department of Environmental Quality in Cheyenne and (Lander or Sheridan, Wyoming), the office of (Company Name) in (Location), Wyoming, or the (County Name) County Clerk's Office in (County Seat), Wyoming. Written objections or comments on the proposed mining operation and groundwater classification must be received by the Administrator, Land Quality Division of the Department of Environmental Quality, Herschler Building, 122 West 25th Street, Cheyenne, WY 82002, before the close of business (Date 30 days after the last publication) as required in W. S. § 35-11-406(k). If an objection is submitted a public hearing shall be held within twenty (20) days after the final date for filing objections unless a different period is stipulated to by the parties. The Council shall publish notice of the time, date and location of the hearing in a newspaper of general circulation in the locality of the proposed operation once a week for two (2) consecutive weeks immediately prior to the hearing. The hearing shall be conducted as a contested case in accordance with the Wyoming Administrative Procedure Act (W.S. §16-3-101 through §16-3-115), and the right of judicial review shall be afforded as provided in that act. All parties as given in W.S. §35-11-406(j) will be mailed a copy of this notice. The Wyoming Oil and Gas Commission will be mailed a copy of the application mine plan map as required in W.S. §35-11-406(j).

LQD PUBLIC NOTICE FORMAT NO. 6 with Proposed Changes

Statement of Principal Reasons - LQD Proposed In Situ Noncoal Rules
Rule Package 1L (03/26/02)

Continued on next page...

Affidavit for Public Notice

BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION

IN THE MATTER OF THE (TYPE OF PERMIT))
PERMIT APPLICATION OF (ENTITY),)
TFN _____)

AFFIDAVIT OF (NAME OF AFFIANT)
OF NOTICE

I, (NAME), after being duly sworn upon my oath, deposes and states as follows:

1. I am appointed to the office of (POSITION), for (COMPANY). I am submitting this affidavit to comply with the sworn statement requirement in W.S. § 35-11-406(j). In my capacity as (POSITION), I am responsible for ensuring that (COMPANY NAME) has complied with the notice requirements in W.S. §35-11-406(j) for the above-captioned permit application. This application is for a uranium in situ mine permit/permit amendment.

2. On (DATE), (COMPANY NAME) received notice from the Department of Environmental Quality, Land Quality Division that it has determined our application is complete and suitable for final publication.

3. On (DATE), (NAME OF NEWSPAPER) printed the first notice in the required four week sequence for final publication of this application. On (DATE), (COMPANY NAME) mailed a copy of the notice to all surface owners of record of the land within the permit area, to all surface owners of record of immediately adjacent lands, and to all surface owners within one-half (½) mile of the proposed mining site. On (DATE), (COMPANY NAME) mailed a copy of the application mining plan map to the Wyoming Oil and Gas Commission.

DATED _____.

(SIGNATURE HERE)
(TYPE NAME AND TITLE HERE)

STATE OF WYOMING)ss.
COUNTY OF _____)

Subscribed, sworn to and acknowledged before me by (NAME) on this ____ day of _____, 20__

Notary Public

LQD PUBLIC NOTICE FORMAT NO. 6 with Proposed Changes

**Statement of Principal Reasons - LQD Proposed In Situ Noncoal Rules
Rule Package 1L (03/26/02)**

My Commission expires:

PROPOSED LQD PUBLIC NOTICE FORMAT NO. 10

**Statement of Principal Reasons - LQD Proposed In Situ Noncoal Rules
Rule Package 1L (03/26/02)**

**Noncoal In Situ Mining Permits
Administrator's Decision**

**NEWSPAPER PUBLICATION AND NOTIFICATION
OF ADMINISTRATOR'S DECISION**

LQD NONCOAL RULES: Proposed Chapter 11, Section 21(c)(iv)

Upon a decision by the Division regarding an application for a noncoal, in-situ permit, renewal, major revision, amendment, or transfer the Division shall commence the following:

1. Publish the following notice once in a newspaper of general circulation in the locality of the proposed operation.

**PUBLICATION
SAMPLE FORMAT FOR MINING PERMIT DECISION**

The Land Quality Division of the Wyoming Department of Environmental Quality has (approved/denied) the noncoal, in situ mine permit (application/renewal/major revision*/amendment/transfer) submitted by (company name)(permit no.). **If approved with conditions use the following:** The application was approved with conditions. For information concerning the conditions please contact the Land Quality Division District office located _____, phone no. _____ or the Cheyenne office at _____, phone no. _____. **If disapproved use the following:** The application was disapproved because _____.

* Public notice for a major revision should briefly describe the reasons for the revision. This information can be found in the four week public notice previously published for the major revision.

NOTE: DO NOT MODIFY THIS FORM. Use typewriter or print neatly in blue ink. Submit three (3) completed copies, one of which must be an original Form 1-UIC as supplied by the Department of Environmental Quality, Land Quality Division.

STATE OF WYOMING
DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISIONS
APPLICATION FOR
IN SITU PERMIT TO MINE
OR
AMENDMENT TO AN IN SITU PERMIT TO MINE

1. (a) Name, mailing address and telephone number of applicant: _____

(b) If the applicant is a partnership, association or corporation, (circle one) the names and addresses of all managers, partners and executives directly responsible for operations in this State:

Name: _____ Address: _____
Title: _____ Phone No. _____

Name: _____ Address: _____
Title: _____ Phone No. _____

Name: _____ Address: _____
Title: _____ Phone No. _____

Name: _____ Address: _____
Title: _____ Phone No. _____

2. Name, address, and telephone number of the agent or person to whom any notice under the provisions of Wyoming Environmental Quality Act or Rules and Regulations adopted thereunder may be sent: _____

3. Attach the following information as part of the specific appendices:

(a) APPENDIX "A"

Names and addresses of surface and mineral owners of record within the proposed permit (amendment) area.

(b) APPENDIX "B"

(i) Names and last known addresses of the owners of record of the surface rights of the lands immediately adjacent to the proposed permit (amendment) area.

(ii) Names and last known addresses of any other persons within one-half (½) mile having a valid legal estate of record.

(iii) For surface coal mining operations, the names and last known addresses of coal ownership immediately adjacent to the proposed permit (amendment) area.

NOTE: Appendices "A" and "B" shall each be accompanied by maps showing the ownership locations required by the respective appendices. Mapping of (b)(ii) is not required.

(c) APPENDIX "C"

(i) All lands to be included in the proposed permit (amendment) area shall be tabulated by legal subdivision, section, township, range, county, and municipal corporation, if any, and the number of acres for each subdivision listed.

(ii) Lands which are to be part of the proposed permit (amendment) area, for which no right to mine is claimed shall be identified in item (c)(i) above as such and tabulated separately listing the number of acres for each legal subdivision.

(iii) Lands which are located within other permit or license areas shall be identified and a copy of the agreement with the other permittee(s) shall be attached as part of this application.

(iv) An original USGS topographic map, clearly outlining and identifying the lands to be within the proposed permit areas, shall be provided. Photo copies or other similar copies are not acceptable unless prior approval is obtained from the Land Quality Division.

(d) APPENDIX "D"

This appendix shall include a description of the land which shall include: Soils, vegetation, wildlife, and surface hydrologic information consistent with the extent and nature of the proposed surface disturbance including descriptions of the soil, indigenous wildlife, natural gamma radiation background for lands to be impacted by radioactive materials, the vegetative cover, meteorological information and a description of any surface water and adjudicated water rights within the proposed permit area or on adjacent lands; a description of the general geology including geochemistry and lithology of the permit area; a characterization of the production zone and aquifers that may be affected including applicable hydrologic and water chemistry data to describe the projected effects of the mining activities.

(e) APPENDIX "E"

A map or maps with the boundary of the proposed permit (amendment) area clearly outlined and identified showing:

- (i) The lands to be affected by the mining;
- (ii) The drainage area within and surrounding the proposed permit (amendment) area;
- (iii) The location and names, where known, of all roads, railroads, public or private rights-of-way and easements, utility lines, lakes, streams, creeks, springs, and other surface water courses, oil wells, gas wells, and water wells;
- (iv) An outline of the probable limits of all areas previously disturbed or to be disturbed by underground or subsurface mining, whether active or inactive, on or immediately adjacent to the proposed permit (amendment) area;
- (v) The names, last known addresses and boundary lines of the present surface landowners and occupants on the adjacent land to be affected;
- (vi) The location, ownership, and uses of all buildings on, or on lands adjacent to, the land to be affected;
- (vii) Information presented as part of APPENDIX "D" when necessary for clarification.

4. (a) Mineral(s) to be mined: _____ (b) SIC Code(s): _____

5. Estimated dates of commencement and termination of the proposed operation:
Start of Operation: _____ Termination of Operation: _____

6. The total number of acres in the proposed permit (amendment) area and an estimate of the total number of acres to be affected by the operation.

Permit Acres	Approved Acreage to Affect
Original Permit _____	Original Permit _____
Approved Amendments _____	Approved Amendments _____
This Application _____	This Application _____
Total Acres _____	Total Acres _____

7. The name, if any, by which the permit (amendment) lands or any part thereof are known: _____

8. The nearest town or city: _____

9. A filing fee of \$100.00 (\$200.00 for amendments) plus \$10.00 for each acre in the request permit (amendment) area. For any single permit (amendment) the maximum fee shall not exceed \$2,000.00.

10. For coal mining operations:
- (a) Each application shall contain the additional information as required in Chapter 3, Section 3 of the Land Quality Division Coal Rules and Regulations;
 - (b) A certification that the applicant has a public liability insurance policy in force for the proposed mining and reclamation, as required by W.S. §35-11-406(a)(xiii) and Land Quality Division Coal Rules and Regulations Chapter 12, Section 2.(i) and (j);
 - (c) Right of entry to or inspection of any operation, premises, records or equipment shall not require advance notice;

(d) A sworn statement that the applicant has paid the reclamation fee for this and all coal mining operations under the jurisdiction of P.L. 95-87 as required by Title IV of that law;

(e) A listing of all notices of violations required by W.S. §35-11-406(a)(xiv).

11. Plan or plans of the applicant, including maps, for the proposed mining operation and the reclamation of all affected lands as required by W.S. §35-11-428 and Chapter XI of the Land Quality Division Noncoal Rules and Regulations and Chapter 18 of the Land Quality Division Coal Rules and Regulations.

12. The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit, to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

FINAL SWORN STATEMENT OF APPLICANT

State of _____)
County of _____) ss

I _____ being duly sworn on my oath that I am the applicant (or President or Vice President if the applicant is a corporation) for the foregoing mining permit update; that I have read the said application and fully know the contents thereof; that I further agree to be bound by all of the terms and conditions of the original permit and any amendments, revisions, or renewals thereof and accept all unfulfilled reclamation liabilities of the permit; that all statements contained in the permit update application are true and correct to my best knowledge and belief; by execution of this statement I certify that _____, applicant, or entities controlled by or under common control with the applicant has the right and power by legal estate owned to mine from the land for which this permit update is desired; that applicant or entities controlled by or under common control with the applicant has not forfeited, or is not involved in forfeiture proceedings for, a bond posted for reclamation purposes; and if a surface coal mining application, that applicant or entities controlled by or under common control with the applicant has paid the reclamation fees for this and all coal mining operations under the jurisdiction of P.L. 95-87 as required by Title IV of that law; and that applicant or entities controlled by or under common control with the applicant has not had any Federal or State coal mining permits suspended or revoked in the five years preceding the date of this application; and by completion and submission of this application, hereby give consent to allow the Director, the Administrator and/or his authorized representatives, at reasonable times and upon presentation of appropriate credentials, to enter upon and have access to any and all lands covered by this permit and amendments thereto and to inspect and copy any records or documents, obtain or monitor any samples or sampling, for any activities associated with the operation and permit.

Dated this _____ day of _____, 20____.

Signature _____

(Corporate Seal)

Name _____

(Printed or typed)

Title _____

The foregoing instrument was acknowledged before me by _____
this _____ day of _____, 20____.

Witness my hand and official seal.

(Notary Public or Secretary if a Corporation)

(Name printed or typed)

(Notary Seal)

My Commission Expires: _____

This is to certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This permit/amendment grants only the right to affect the lands described in Appendix "C" of the application.

~~For purposes of Wyoming's UIC Program:~~

- a. ~~All reports required by this permit and other requested information shall be signed by the person who signed the Final Sworn Statement or his duly authorized representative. A person is a duly authorized representative only if:~~
 - (1) ~~The authorization is made in writing by the person who signed the Final Sworn Statement,~~
 - (2) ~~The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity, and~~
 - (3) ~~The written authorization is submitted to the Administrator. If an authorization is no longer accurate because a different individual has responsibility for the overall operation of the facility, a new authorization must be submitted to the Administrator prior to, or together with any reports or information to be signed by an authorized representative.~~
- b. ~~In addition to the requirements of W.S. §35-11-430(b), the permittee shall retain copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the report or application.~~
- c. ~~The permittee is required to conduct operations in accordance with terms and conditions of the approved permit. The permittee is required at all times to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used to achieve permit compliance. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls, including appropriate quality assurance procedures.~~
- d. ~~The permittee shall monitor the operation in accordance with the plan approved in the permit. Results of the monitoring program shall be reported quarterly to the administrators. Results of mechanical integrity and other periodic tests required by the Administrator shall be reported with the first quarterly report following the completion of the test.~~

Additional special conditions and limitations are as follows:

APPROVED: _____
Administrator
Land Quality Division
Department of Environmental Quality

APPROVED: _____
Director
Department of Environmental Quality

Effective Date: _____

NOTE:

DO NOT MODIFY THIS FORM. Use typewriter or print neatly with blue ink. Submit six (6) completed copies, one of which must be an original Form 5 as supplied by the Department of Environmental Quality.

STATE OF WYOMING

DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY AND WATER QUALITY DIVISIONS
APPLICATION FOR
IN SITU RESEARCH AND DEVELOPMENT TESTING LICENSE

1. (a) Name, mailing address and telephone number of applicant: _____

(b) County where testing will occur: _____ (c) SIC Code(s) _____

(ed) If the applicant is a partnership, association or corporation, the names and addresses of all managers, partners and executives directly responsible for operations in this state:

Name: _____ Address: _____
Title: _____ Phone No. _____

Name: _____ Address: _____
Title: _____ Phone No. _____

Name: _____ Address: _____
Title: _____ Phone No. _____

Name: _____ Address: _____
Title: _____ Phone No. _____

2. Name, mailing address, and telephone number of the agent or person to whom any notice under the provisions of Wyoming Environmental Quality Act or Rules and Regulations adopted thereunder may be sent: _____

3. Attach the following information as part of the specific appendices:

(a) APPENDIX "A"

Names and addresses of surface and mineral owners of record within the proposed license area.

(b) APPENDIX "B"

(i) Names and last known addresses of the owners of record of the surface rights of the lands immediately adjacent to the proposed license area.

(ii) Names and last known addresses of any other persons within one-half (1/2) mile having a valid legal estate of record.

NOTE: Appendices "A" and "B" shall each be accompanied by maps showing the ownership locations required by the respective appendices. Mapping of (b)(ii) is not required.

(c) APPENDIX "C"

(i) All lands to be included in the proposed license area shall be tabulated by legal subdivision, section, township, range, county, and municipal corporation, if any, and the number of acres for each subdivision listed.

(ii) Lands which are to be part of the proposed license area, for which no right to mine is claimed shall be identified in item (c)(i) above as such and tabulated separately listing the number of acres for each legal subdivision.

(iii) Lands which are located within other permit or license areas shall be identified and a copy of the agreement with the other permittee(s) or licensee(s) shall be attached as part of this application.

(iv) An original USGS topographic map, clearly outlining and identifying the lands to be within the proposed license area, shall be provided. Photo copies or other similar copies are not acceptable unless prior approval is obtained from the Land Quality Division.

(d) APPENDIX "D"

- (i) The present and proposed post-reclamation land uses, vegetation and topsoil characteristics of the lands.
- (ii) Location and name of surface waters and adjudicated water rights inside and within one-half (1/2) mile of the license area.
- (iii) Locations and present owners of all wells inside and within one-half (1/2) mile of the license area to include information concerning plugging of well completion and producing interval(s) to the extent such information is available in the public record or by a reasonable inspection of the property.
- (iv) Groundwater quality data and potentiometric surface elevations for aquifers that may be affected by the proposed operation.

4. (a) Mineral(s) to be extracted: _____

(b) Testing method to be used: _____

5. Estimated dates of commencement and termination of the proposed research and development testing:

Start of Testing: _____ Termination of Restoration: _____

6. The total number of acres in the proposed license area and an estimate of the total number of acres to be affected by the research and development testing.

Total License Acres: _____ Estimate of Affected Acres: _____

7. The nearest town or city: _____

8. A filing fee of \$25.00 is enclosed.

9. A testing plan is required including a description of the nature and scope of the testing activity, the groundwater hydrology, the general geology, maps showing the surface facilities, access roads, communication lines, the sequence of the operation, and descriptions of the expected impacts on natural resources, mitigating measures, and operational procedures. The testing plan must show that the test will:

- (a) Evaluate mineability or workability of a mineral deposit using in-situ mining techniques.
- (b) Affect the land surface, surface waters and groundwater of the State to the minimum extent necessary.
- (c) Provide pre-mining, operational and post-mining data, information and experience that will be used for developing reclamation techniques for in situ mining.

10. A reclamation plan is required including descriptions of the methods to be used in groundwater restoration, surface restoration, the type of revegetation and practices to be used to achieve revegetation, and an estimate of the cost of restoration.

11. Proof of notice and mailing to all persons within one-half (1/2) mile of the license area having a valid legal estate of record including but not limited to surface ownership, mineral ownership, grazing leases, pipeline rights of way, road rights of way, utility rights of way, water right appropriations, etc.

12. A reclamation bond is required by W.S. §35-11-433(a) prior to approval.

13. The name, if any by which such lands listed in Appendix "C" are known: _____

14. Under the provisions of W.S. §35-11-1101, certain trade secret portions of the application and supporting information may be maintained by the department as confidential. Except for data determined to be confidential, all reports prepared in accordance with the terms of this license shall be available for public inspection at the office of the applicant. Water quality data from monitoring wells shall not be considered confidential.

15. Monitoring and Analytical Procedures:

(a) Procedures for the analysis of pollutants shall conform to provisions of the Wyoming Water Quality Rules and Regulations, Chapter VIII.

(b) For each sample or measurement taken pursuant to the requirements of this license, the licensee shall record the following information:

- (i) The exact place, date, and time of sampling;
- (ii) The dates the analyses were performed;
- (iii) The person(s) who performed the analyses;
- (iv) The analytical techniques or methods used; and

This is to certify that I have examined the foregoing application and do hereby grant the same subject to the following limitations and conditions:

This license grants only the right to affect the lands described in Appendix "C" of the application.

Acceptance of the license obligates the operator to abide by the standard conditions specified in Item No. 19. of this application form. Any condition and/or special condition attached to approval of this license shall supersede and/or replace any conflicts with the original license or any revision.

[Large area of horizontal lines for handwritten notes or conditions]

APPROVED: _____

Administrator
Land Quality Division
Department of Environmental Quality

APPROVED: _____

Administrator
Water Quality Division
Department of Environmental Quality

Effective Date: _____

STATE OF WYOMING
Department of Environmental Quality
Land Quality Division
122 West 25th Street
Cheyenne, Wyoming 82002
(307)777-7756

RECLAMATION PERFORMANCE BONDS FOR PERMITS, LICENSES AND NOTIFICATIONS

RE: Wyoming Environmental Quality Act - Form and Execution Requirements of Bonds

These statements refer to all surety bonds. Surety bonds must be executed by an insurance company holding surety license with the Department of Insurance, State of Wyoming.

1. **Bonds submitted on the forms supplied by the department and from the Web Page are acceptable (legal size, preferably). IF THE FORM SUBMITTED IS NOT BACK-TO-BACK, PAGE 1 MUST BE INITIALED AND DATED.** Forms are updated periodically; please contact the Land Quality Division to ensure you have current forms.
2. Please ensure that all corporate, surety, and notary seals are affixed and legible. Please use the darkest ink possible for stamped seals. If the notary statement is on a separate sheet of paper, on the attachment please state "Attachment A to (insurance company name) bond no. _____ dated _____," and cite on the bond "see attachment A."
3. **NO ALTERATIONS CAN BE MADE TO THE BOND. CORRECTIONS, CROSS-OVERS, USE OF CORRECTION FLUID, ETC. ARE NOT ACCEPTABLE.**
4. The legal capacity of the principal must be stated in the caption of the bond (i.e., corporation, partnership, sole proprietorship, limited liability co., etc.).
5. If the proposed operator is a corporation, the person who signs on behalf of the corporation must identify his/her title or office. Also, please attach to the bond written evidence of his/her authority to sign the bond. This is necessary even if the signatory is the president of the corporation. Such evidence must include a certified copy of the bylaw or resolution which clearly recites the signatory's authority to sign the bond, or grant a power of attorney to sign the bond. If the signatory is relying on a power of attorney, the executed power of attorney must be attached. Please ensure the certificate is dated the same day the signatory signed the bond or later, so we have evidence the authority was valid on the day the bond was signed. We will provide a sample certificate upon request.
6. If the principal is a partnership or joint venture, the proper name must appear in the caption of the bond.
 - a. Limited partnerships- must be signed by the managing general partner.
 - i. provide a copy of that part of the partnership agreement which identifies general partner authority.

STATE OF WYOMING
Department of Environmental Quality
Land Quality Division
122 West 25th Street
Cheyenne, WY 82002
(307)777-7756

MEMORANDUM

RE: GENERAL BONDING INSTRUCTIONS

The following bonding methods are presently accepted by the Land Quality Division to meet bonding requirements. Please contact the Land Quality Division for further information.

1. Corporate Surety Bonds must be executed by an insurance company holding a Wyoming surety license. **Bonds and riders executed on forms supplied by the Division and found on the Web Page will be accepted (legal size, preferably). IF THE FORM SUBMITTED IS NOT BACK-TO-BACK, PAGE 1 MUST BE INITIALED AND DATED.**
2. Federally insured Automatically Renewable Certificates of Deposit made payable solely to the **Wyoming Department of Environmental Quality, Land Quality Division**. No other name may appear in the payee section. A certificate made payable to the Department "and/or" the purchaser is not acceptable. Interest is made payable to the purchaser. At the time of the C.D. purchase, the company or individual purchasing the C.D. should arrange with the bank to have the interest earned deposited in their account. Interest checks, statements, and IRS statements should be mailed to the purchaser's address. Submit the certificate to the Land Quality Division for deposit with the State Treasurer. We do not accept C.D.'s which allow the bank to redeem the certificate after giving notice to the Department. The department cannot accept a C.D. in an amount greater than \$100,000 due to the FDIC insurance limitations. If the amount of the bond required exceeds \$100,000, C.D.'s must be purchased from separate banks with each C.D. being in an amount less than \$100,000. **Upon acceptance of the C.D., the bank is required to copy the Cheyenne office on all correspondence relating to the C.D. at the address cited above.**
3. U.S. Treasury Bonds, Bills, or Notes may be sent to the Land Quality Division for deposit with the State Treasurer. Please contact the division for further information.
4. Cash may be sent to the Land Quality Division for deposit with the State Treasurer. No interest is paid on cash deposited with the State Treasurer to meet bonding requirements. Use of a cashier's or certified check will expedite the permitting process.
5. Letters of Credit, payable solely to the **Department of Environmental Quality, Land Quality Division**, must be issued by a bank organized to do business in the U.S. The bank must appoint or maintain an agent in the State of Wyoming, upon whom any process,

STATE OF WYOMING
DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION
CHEYENNE, WY 82002

OTHER MINERALS

RECLAMATION PERFORMANCE BOND

Bond No. _____

Know all men by these presents, that we the undersigned, _____

(State name and form of business organization of the Applicant)

duly authorized to do business in the State of Wyoming, AS PRINCIPAL, and _____

a corporation organized and existing under the laws of the State of _____, and duly authorized to do business in the State of Wyoming, AS SURETY, are held and firmly bound unto the State of Wyoming in the sum of _____ Dollars (\$ _____), lawful money of the United States, to be paid to the State of Wyoming upon order of forfeiture by the Environmental Quality Council, for the payment of which sum, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

Whereas, the Department of Environmental Quality, Land Quality Division, issued _____ number _____ and

(Permit to Mine, Ten Acre Permit, License to Explore by Dozing, Notification of Intent to Explore for Coal by Drilling, Notification of Intent to Explore Non-Coal Minerals by Drilling, In Situ R&D Testing License) dated _____, and permit amendment(s), numbered and dated _____ pursuant to the application of the Principal,

Whereas, Check one of the following:

- (a) ___ This is an original bond,
- (b) ___ This is a bond in addition to previous bond(s) for the above mentioned _____ and which bond(s) remain(s) in full force and effect, (Permit, License or notification)
- (c) ___ This is a replacement bond for:
 - (1) Bond Number _____ Principal _____
Surety _____ Dated _____
 - (2) Bond Number _____ Principal _____
Surety _____ Dated _____
 - (3) Bond Number _____ Principal _____
Surety _____ Dated _____

Whereas, said bond(s) shall cover any and all land affected or to be affected under above mentioned _____, since the date of issuance, upon the following described land (Permit and amendment(s), license, notification) as given within said _____ (Permit and amendment(s), license, notification)

Now, therefore, the conditions of the obligation are such that, this bond shall remain in full force and effect until either released or forfeited pursuant to the provisions of the Wyoming Environmental Quality Act and the rules and regulations adopted pursuant to that Act.

