BEFORE THE

ENVIRONMENTAL QUALITY COUNCIL

STATE OF WYOMING

September 13, 2022

IN THE MATTER OF THE PROPOSED REVISION OF THE LAND QUALITY DIVISION RULES RELATED TO THE REGULATION OF NON COAL MINING	**)**	**STATEMENT OF PRINCIPAL REASONS (SOPR) FOR ADOPTON** **DOCKET #: 22-4102**

Non Coal Rules

Chapter 7, Noncoal Mine Permit or Research and Development Testing License Revisions, Chapter 9, Permit Application Requirements for Small Mining Operations and Chapter 11, In Situ Mining

---

Table of Contents

Introduction to Rule Package

Chapter 7, Noncoal Mine Permit or Research and Development Testing License Revisions

Noncoal Chapter 7 was last revised on May 5, 2005. The proposed revisions to Chapter 7 were drafted in response to legislative changes made Wyoming Statute (W.S.) § 35-11-406 made during the 2020 legislative session. The revisions to W.S. § 35-11-406 details the procedures that the Wyoming Department of Environmental (DEQ), Land Quality Division (LQD), must follow when objections to permitting actions are received from interested parties. The proposed revision to Chapter 7 are intended to bring the chapter into compliance with the revised statutory language. Additional revisions were made in response to Wyoming Attorney General's Office comments

provided during their review for statutory authority. These revisions include grammatical corrections and organizational changes.

Chapter 9, Permit Application Requirements for Small Mining Operations

Noncoal Chapter 9, Permit Application Requirements for Small Mining Operations, was last revised on November 20, 2013. The proposed revisions to Chapter 9 were drafted in response to legislative changes made to W.S. § 35-11-406 made during the 2020 legislative session. The revisions to W.S. § 35-11-406 details the procedures that the LQD, must follow when objections to permitting actions are received from interested parties. The proposed revision to Chapter 9 are intended to bring the chapter into compliance with the revised statutory language. The chapter is also being revised to update the fee amounts for permit application to conform to the 2021 legislative change to § 35-11-406(a)(xii) which increased the permit fee to two hundred dollars.

Chapter 11, In Situ Mining

Chapter 11, In Situ Mining, of the Land Quality Division's (LQD), Noncoal Rules and Regulations was last revised on November 11, 2018. That revision was intended to make the rules more clear and to increase their effectiveness. Prior to this, the last revision was November 20, 2013. That revision was intended to reflect the practices at the time and to clarify or amend the rules to remain as effective as Federal regulations. The proposed changes presented in the 2013 package were also intended to address an Environmental Protection Agency (EPA) concern regarding aquifer exemption boundaries and provide greater consistency with the Federal regulations where possible. The proposed rules in this package are intended to correct an error made in finalizing the rules during the last rule making process, and to incorporate comments from the Legislative Service Office (LSO) during their review of the 2018 rule package. Revisions are also proposed to conform to legislative changes contained in the 2020 Senate File 0044 that revised Wyoming Statute (W.S.) § 35-11-406 to include separate processes for approval of coal and noncoal permitting actions.

Summary of Proposed Amendments

Chapter 7 Amendments

Chapter 7 was revised to incorporate language that is consistent with the statutory changes to W.S. § 35-11-406 contained in the 2020 Senate File (SF) 0044 that updated the decision making process for noncoal permitting actions. Additional revisions were also made based on statutory authority review comments received from the WY Attorney General's Office (AG) which included comments on reorganization of the chapter, grammatical corrections and suggested edits to provide consistency with other LQD noncoal rules.

Chapter 9 Amendments

Amendments to Sections 2(b) and 7(b) were drafted to be consistent with the statutory language in W.S. § 35-11-406 which was revised in SF0044 during the 2020 legislative session. Chapter 9, Section 2(a)(xiv) was revised to address the legislative fee changes contained in HB0049 from the

2021 legislative session. Chapter 9 was revised to include rules revisions based on comments from the WY AG including grammatical corrections, improving consistency with other LQD rules, and improvements to the organization of the chapter.

Chapter 11 Amendments

Amendments for this Chapter are being proposed both due to an error and reccomendations from the LSO. Language within Section 8(j) of this chapter, which was reviewed and approved by the EQC on September 25, 2018, was inadvertently omitted from the version that was filed with the Secretary of State on November 11, 2018. Therefore, LQD is proposing to correct this error by including the language which was approved by the EQC. The LQD received a letter from the LSO, dated October 8, 2018, in which reccomendations were given to either correct perceived errors, or modify references to rules and statues to provide greater clarity. LQD has reviewed the reccomendations and incorporated those which LQD felt were appropriate. These included only reference changes within Section 13(a)(ii), Section 19(a)(i) and (ii), and Section 23(b)(iv).

Noncoal Chapter 11 was also revised to incorporate SF0044 2020 legislative changes in Section 21. Finally, in addition to the revisions described above, Noncoal Chapter 11 was revised to address comments from the Wyoming AG that were provided during their review for statutory authority.

****

The authority to amend these rules is provided by Wyoming Statute (W.S.) §§ 35-11-112(a)(i), 35-11-114(b), 35-11-401(j), 35-11-402(a), 35-11-406. 35-11-427, 35-11-428, 35-11-429 and 35-11-430.

CHAPTER 7

NONCOAL MINE PERMIT OR RESEARCH AND DEVELOPMENT TESTING LICENSE REVISIONS

Section 1. ~~Submittal of Revisions.~~ Permit and License Revision Applications.

(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.~~ Any 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 submitting an application in accordance with this Section, at the noncoal operator's discretion. However, an operator must submit an application for any significant permit revision that would require public notice under Section 2.

~~(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 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 by the operator, and unless notified by the Administrator to delay, the operator may initiate the proposed change. 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.~~

(b ~~e~~) Each application to revise a permit or research and development testing license shall contain:

(i) The name and address of the operator;

(ii) The permit number and date approved;

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

(iv) An outline or index indicating what pages, maps, tables, or other parts of the approved permit or license will be affected by the revision;

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

(A) The precise location of the permit or license ~~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 license ~~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 license ~~Research and Development Testing License~~ area.

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

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

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

(II) The information required in Wyoming Statute (W.S.) § 35-11-406(a)(vii) and (ix) ~~(2003)~~ or, for in situ mining operations, the information required in W.S. § 35-11-428 ~~(2003)~~; ~~and~~

(III) 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.~~; and

(IV) The proposed future use or uses of the affected lands and the plan whereby the operator will reclaim the affected lands to the proposed use or uses.

(B ~~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.

(vii) Any additional information necessary to support or justify the changes; and

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

Section 1 was reorganized for clarity. Current subsections (b), (c) and (d) were deleted from the section because the procedures and application requiremens remain the same except for the notice requirements for revisions. Grammatical revisions were also made to Section 1 to improve readability and consistency with other chapters.

Section 2. Criteria for Public Notice Requirements.

(a) Within ~~90~~ ninety days after receiving a permit or license revision ~~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 the revision is determined to be significant, requiring notice and opportunity for interested person(s) to submit written objections ~~public hearing is required~~. Unless otherwise instructed, an operator may begin implementing a non-significant permit or license revision upon receiving this determination from the Administrator.

(b) Notice and opportunity for submitting written objections is required for revisions to the Class III well portion of an in situ mining permit or research and development testing license when the proposed revision meets one or more of the criteria in Chapter 11, Section 14(d) of these rules. ~~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:~~

(c ~~ii~~) ~~Whenever~~ Notice and opportunity for submitting written objections is required for other revisions to a permit or license 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 plan, and reclamation plan, or research and development testing operation. The following will ~~normally~~ be considered significant deviations unless otherwise determined by the Administrator:

(i ~~A~~) More than a ~~20~~ twenty percent increase in affected land from that which was approved in the original permit or license, with the following exception:

(ii ~~B~~) A change in the approved future land use or uses which affects more than ~~20~~ twenty percent of the land within the permit or ~~Research and Development Testing License~~ 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~~ license process are promptly treated or disposed of during the mining, reclamation, or ~~Research and Development Testing License~~ 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, tailings disposal facilities, or heap leach facilities;

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

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

(vii ~~G~~) Any changes ~~which~~ that propose significant alterations in the approved mining, ~~or~~ reclamation, ~~operation~~ or research and development testing operation as determined by the Administrator.

Section 2 was also reorganized and edited for clarity. Section 2 describes when public notice of a permit revision is necessary. Grammatical edits were also made throughout the section.

Section 3. Permit Decisions, Public Notice, and Opportunity for Filing Objections ~~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.~~

(a) For non-significant revisions, which do not require public notice, the Director shall render a decision of the application within thirty days after the Administrator determines the application is complete.

(b) For significant revisions:

(i) The operator shall publish notice of its permit or license revision application in a newspaper of general circulation in the locality of the operation once a week for four consecutive weeks commencing within fifteen days after receiving notification that publication is required. The notice shall contain the 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);

(ii) Any interested person may file objections in accordance with W.S. § 35-11-406(q);

(iii) The Director shall render a decision on the application in accordance with W. S. § 33-11-406(q); and

(iv) An applicant or objector may appeal the Director's decision to the Environmental Quality Council in accordance with W.S. § 35-11-406(q).

~~**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.~~

Sections 3 and 4 were revised and combined to be in compliance with the 2020 legislative changes to W.S. 35-11-406. New Section 3 now just describes the process for revisions that require public notice and those that do not. For revisions that do not require public notice the Director will approve/deny the revision application within 30 days of being declared complete. For revisions that require public notice the Director will render a decision on the application in accordance with W.S. § 35-11-406(q). Proposed Section 3 is now in line with the

revised statute.

Section ~~5~~ 4. 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 license ~~Research and Development Testing License~~ revision when ~~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 renewal request, ~~for renewal of a Research and Development Testing License~~ or upon inspection of the existing operation, the Administrator finds in writing that the mining plan, reclamation plan, or license revision is necessary to account for actual changes in the operator's mining, reclamation, or research and development testing operations. An operator may appeal the Administrator's decision to the Environmental Quality Council in accordance with W.S. § 35-11-112(a)(iii). ~~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. 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.~~

Section 4 was revised to remove unnecessary language from the paragraph. The section was also renumbered due to the combination of the two preceding sections.

~~DEPARTMENT OF ENVIRONMENTAL QUALITY~~

~~LAND QUALITY DIVISION~~

~~NONCOAL RULES AND REGULATIONS~~

CHAPTER 9

PERMIT APPLICATION REQUIREMENTS FOR SMALL MINING OPERATIONS

Chapter header was revised to conform to the Wyoming Secretary of State's Rules on Rules.

Section 1. General.

(a) Small mine operations are defined pursuant to W.S. § 35-11-401(j) as surface mining operations that remove no more than thirty-five thousand ~~(35,000)~~ cubic yards of overburden, excluding topsoil, and disturb no more than ten ~~(10)~~ acres of land in any one year, excluding roads used to access the mining operation.

Section 1(a) was revised to be consistent with the Rules on Rules which requires that Wyoming Statute be spelled out fully when used in the first instance.

(b) This Chapter sets out the information required for small mine permit applications. The requirements of Chapter 2, Regular Noncoal Mine Permit Applications, shall not apply to small mine operations. The requirements of Chapter 3, Environmental Protection Performance Standards, shall apply to small mine operations, except as specifically noted herein.

(c) The Administrator shall not accept or approve small mine permit applications for coal ~~mines~~, uranium ~~mines~~, underground, ~~mines~~ or in-situ mines.

(d) ~~Prior to the commencement of a~~ No person shall commence small surface mining operations without first receiving a permit under this Chapter. Permit applications ~~an application~~ shall be submitted to the Administrator ~~in duplicate on forms supplied by the Division. Each application shall~~ containing the information ~~as~~ set out in this Chapter and in the ~~a~~ format ~~as~~ required by the Administrator.

Subsections (b), (c), and (d) were revised to incorporate grammatical corrections suggested by the Attorney General's Office.

Section 2. ~~Adjudication Information~~ Application Requirements.

Section header revised to more accurately reflect the content and requirements of this section.

(a) Each application for a small mine permit shall include the following:

…

(vii) An identification of the lands to be included in the permit area to include:

…

(D) The nearest town, village, or city.;

Punctuation corrections.

(viii) A United States Geological Survey topographic map at a scale of 1:24,000 if available, or an equivalent map, clearly identifying the boundaries of the proposed permit area, including access roads, and illustrating the surrounding area at least one-half (1/2) mile in all directions from the permit area;

Edited for consistency with LQD's other chapters of rules.

(ix) A map at an appropriate scale showing the boundaries of the permit area and the lands to be affected, and including the following features within and adjacent to the permit area:

(A) Any surface waters, including lakes, ponds, streams, springs, canals, drainages, irrigation ditches, and water courses within and adjacent to the proposed permit area;

(B) Water wells on and within one-half mile of the permit area, shall be located on a map if the maximum expected depth of the mine pit is within 20 feet of or below the water table;

(C) Buildings, structures, and dwellings;

(D) Roads, railroads, public or private rights-of-way or easements, utility lines, and oil wells and gas wells; and

(E) An outline of all areas previously disturbed by surface or underground mining.;

Subsection (ix) was revised to make grammatical and punctuation corrections.

…

(xii) A written statement from the appropriate city and/or county agency documenting that the proposed mining operation does not conflict with existing city regulations/ or ordinances or county zoning/ or planning provisions;

Edited for formatting consistency.

…

(xiv) A filing fee of ~~one~~ two hundred dollars (~~$100.00~~ 200.00) plus ten dollars ($10.00) for each acre in the requested permit, but the maximum fee for any single permit shall not exceed two thousand dollars ($2,000.00). ~~The permit is amendable without public notice or hearing if the area sought to be included by amendment does not exceed twenty percent (20%) of the total permit acreage, is contiguous to the permit area and if the applicant includes all of the information necessary in the amendment application that is required in this section including a mining and reclamation plan acceptable to the Administrator. The fee for a permit amendment shall be two hundred dollars ($200) plus ten dollars ($10.00) for each acre not to exceed two thousand dollars ($2,000).~~

Section 2(a)(xiv) was revised to update the permit fees to the new statutory requirements promulgated underHB0049 during the 2021 legislative session. The language that is indicated as struck has been moved below to a new subsection (d).

(b) Notification and publication requirements. The procedures contained in W.S. § 35-11-406(d) through (m), ~~and~~ (o), and ~~(p)~~ (q) shall apply.

Section 2(b) was revised to be consistent with the new public notice requirements contained in Wyoming Statutue § 35-11-406 after the passage of SF0044 during the 2020 legislative session.

(c) The applicant shall post a reclamation bond in the amount and in a form acceptable to the Administrator prior to approval of the small mine permit application. Roads used to access a small mining operation shall be included in the permit and bonded for reclamation liability.

(d) The permit may be amended without public notice and opportunity for interested parties to file objections to the proposed amendment if the area sought to be included by amendment does not exceed twenty percent of the total permit acreage and is contiguous to the permit area, and if the amendment applicant provides all of the information required in this Chapter, including mining and reclamation plans acceptable to the Administrator. The fee for a permit amendment shall be two hundred dollars ($200.00) plus ten dollars ($10.00) for each acre not to exceed two thousand dollars ($2,000.00).

Section 3. Environmental Baseline Information.

~~(a)~~ The permit application shall include a general description of the land within the permit area, which shall include the following information:

(a ~~i~~) A description of the present land use(s) within the permit boundary;

(b ~~ii~~) A map of vegetation types, range sites, or ecological response units and a range site-range condition survey, or equivalent, on the proposed permit area, including a list of species and a ranking of their relative abundance in each vegetation type. The applicant shall submit labeled photographs to demonstrate each vegetation type and to document areas of sparse vegetation and any areas containing noxious weeds. Locations photographed shall be shown on the vegetation map~~.~~;

(c ~~iii~~) A description of any surface waters within the proposed permit area including estimated average flow rates, the storage volume of any reservoirs, ~~and~~ associated water rights within the permit area of any stream, reservoir, or lake~~.~~, and ~~D~~depth to ~~the~~ groundwater within the ~~mine~~ permit area ~~shall be stated~~, including a description of how ~~the~~ groundwater depth was determined;

(d ~~iv~~) A soil map which identifies the soil types, sampling locations, and proposed salvage depths;

(e ~~v~~) A report describing the soil types and their suitability for reclamation, ~~and~~ the depths and volume of suitable topsoil present on the proposed affected lands, and~~. Also, a description of~~ the subsoil and/or overburden material existing between the topsoil and mineral seams;

(f ~~vi~~) Correspondence or other documents showing that ~~T~~the applicant ~~shall~~ consulted with both the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service prior to submission of the permit application and ~~shall~~ have addressed their recommendations relative to wildlife surveys, monitoring and mitigation in the mine permit application as required by ~~State~~ state and ~~Federal~~ federal law~~. Copies of all correspondence to and from these agencies shall be included in the permit application. The Administrator shall also consult with both wildlife agencies during the review of the mine permit application to insure that their recommendations are addressed to the extent that they are within the scope of the Act~~; and

(g ~~vii~~) A copy of the appropriate National Wetlands Inventory Map with the permit area and disturbance boundary delineated. If potential wetlands exist that will be disturbed or impacted by mine related activity, then the applicant shall perform a wetland delineation according to Army Corps of Engineers accepted procedures. If the proposed operation will avoid any impact to the potential wetland, either through direct disturbance or by affecting the watershed, then this ~~should~~ shall be clearly stated in the mine plan.

Section 3 was reordered and several grammatical changes were made based on comments received from the Attorney General's Office.

Section 4. Mine Operations Plan.

~~(a)~~ The application shall include a mining plan with ~~which shall include~~ the following information:

(a ~~i~~) A description of the nature and scope of the proposed operation, including roads to be constructed, mining technique, equipment, method of operation ~~to be used~~, and a projected schedule for the operation;

(b ~~ii~~) A map showing the location of all activities associated with the operation including roads, mine pit areas, out-of-pit spoil piles, waste water ponds, temporary drainage diversions, settling ponds, stockpiles for topsoil, overburden, ore, product, and waste, plant sites, and other processing facilities;

(c ~~iii~~) Typical cross sections as appropriate to illustrate the proposed mine area, oriented perpendicular to each other and showing the natural ground surface elevation, the top and bottom of the mineral seam, the maximum expected depth of mining and the approximate elevation of the ~~ground~~water table;

(d ~~iv~~) A description of how topsoil and subsoil will be salvaged, stockpiled, and conserved for reclamation, including an estimate of the depth and volume of topsoil and subsoil to be salvaged on an annual basis;

(e ~~v~~) A plan for ensuring that all acid-forming, or toxic material, or materials constituting a fire, health, or safety hazard uncovered during or created by the mining process are promptly treated or disposed of during the mining process in a manner designed to prevent pollution of surface or subsurface water or threats to human or animal health and safety. ~~Such method may~~ The plan may include methods such as~~, but not limited to~~ covering, burying, impounding, or otherwise containing or disposing of the acid, toxic, radioactive, or otherwise dangerous material;

(f ~~vi~~) A description of all waste materials that may be generated by the operation and plans for their storage and disposal. Only waste materials classified as ~~Clean Fill~~ clean fill shall be disposed within the mine permit area and only with the written permission of the landowner. ~~Written permission from the landowner shall be required.~~ Clean fill, for the purposes of this Chapter, means only uncontaminated natural soil materials, rock, hardened asphalt rubble, brick, and concrete rubble with no protruding rebar. All other waste materials shall be taken off-site for disposal at an authorized disposal site;

(g ~~vii~~) The procedures proposed to avoid constituting a public nuisance, endangering the public safety, human or animal life, property, wildlife and plant life in or adjacent to the permit area. The plan shall include fencing as necessary to prevent unauthorized access of persons, livestock or wildlife and to protect the surface owner's ongoing operations; and

(h ~~viii~~) The methods of diverting surface water around the affected lands where necessary to effectively control pollution or unnecessary erosion.

Section 4 was reordered and several grammatical changes were made based on comments received from the Attorney General's Office.

Section 5. Reclamation Plan.

~~(a)~~ The application shall include a reclamation plan describing ~~the proposed future land use or uses and a plan whereby the~~ how the applicant will reclaim all of the affected lands to the proposed future use or uses. The reclamation plan shall include the following:

(a ~~i~~) A statement of the proposed uses of the land by the landowner after reclamation;

(b ~~ii~~) Plans for grading and contouring suitable for the proposed land uses after reclamation, ~~which shall include statements as to~~ including the maximum slope that will be created and a plan to reestablish the surface drainage;

(c ~~iii~~) A post-mine contour map at an appropriate scale showing the proposed contours of the affected area after completion of ~~proposed~~ reclamation. The Administrator ~~to~~ may waive this requirement if requested by the applicant and the degree of surface disturbance is small. Typical cross sections oriented perpendicular to each other shall be provided to show the original natural ground surface, the maximum depth of mining, the maximum horizontal extent of mining, and the proposed reclamation surfaces and slopes;

(d ~~iv~~) The methods of reclamation for effective control of erosion, siltation, and pollution of affected stream channels and stream banks by the mining operations;

(e ~~v~~) If the reclamation plan proposes a permanent water impoundment~~, the applicant must provide the following information~~:

(i ~~A~~) ~~The~~ Copies of correspondence or permit documents showing the applicant ~~shall~~ has consulted with the Wyoming State Engineer's Office and complied ~~comply~~ with all applicable State Engineer requirements ~~of the Wyoming State Engineer's Office. Copies of correspondence and any permit from the State Engineer shall be provided~~;

(ii ~~B~~) Plans demonstrating that the impoundment has been designed to ensure ~~insure~~ permanent stability and that the slopes and contouring will prevent safety hazards and allow for safe access for all water users, including livestock and wildlife; and

(iii ~~C~~) Documentation that the size of the impoundment and the expected quantity and quality of water will be suitable for the proposed uses. If the applicant is unable to demonstrate to the satisfaction of the Administrator that the water quantity and quality will be suitable for the proposed uses, the applicant shall provide an alternate plan~~; and (D),~~ ~~T~~the applicant may be required to monitor the water in the impoundment following construction to demonstrate that the quantity and quality are suitable for the proposed uses;~~.~~

(f ~~vi~~) Plans for topsoil replacement and seedbed preparation, including the depth of subsoil and topsoil to be applied and the methods for preparing a proper seedbed;

(g ~~vii~~) ~~Species~~ A description of the species to be seeded, seeding rates, seeding methods, description of any other revegetation treatments to be employed, ~~a~~ the schedule for seedbed preparation and seeding, and protective measures against grazing animals;

(h ~~viii~~) Method of disposal of all buildings and structures erected or utilized for the operation and a description of any buildings or ~~and~~ structures that will be left in place at the request of the surface owner;

(i~~x~~) A projected timetable for accomplishment of the reclamation plan; and

(j ~~x~~) An itemized estimate of the cost to reclaim all lands to be affected during the first twelve ~~12~~ months of operation.

Section 5 was reorganized and grammatical errors were corrected based on comments made by the Attorney General's Office.

Section 6. Evaluation of Revegetation Success.

Revegetation success shall be evaluated by the Administrator utilizing qualitative methods, no sooner than the fifth growing season following completion of reclamation. In consultation with the landowner, revegetation shall be deemed successful when:

(a) ~~1) t~~The established vegetation species are self-renewing;

(b) ~~2) t~~The total vegetative cover of perennial species, excluding noxious weeds, and any species in the approved seed mix is at least equal to the total vegetative cover of perennial species, excluding noxious weeds, on the area before mining; and

(c) ~~3) t~~The species diversity and composition are suitable for the approved post-mining land uses.

Section 6 was revised to conform with the Secretary of State's Rules on Rules. The original paragraph contained the numbered list in a single paragraph. The numbered items were converted to subsections making the section consistent with the formatting of other sections within this chapter.

Section 7. Conversion of Small Mine Permit to Regular Mine Permit.

(a) If an operator, holding a valid ~~mining~~ permit under ~~W.S. § 35-11-401(j)~~ this Chapter for a small mining operation, intends to expand his operation within the approved permit area to remove more than thirty-five thousand ~~(35,000)~~ cubic yards of overburden, excluding topsoil, per year or affect more than ten ~~(10)~~ acres of land per year, excluding roads used to access the mining operation, the operator shall submit an application for a permit revision and obtain approval for the expansion prior to the time when he intends to exceed the established limits. The application shall include the following information:

(i) Application on forms supplied by the Division~~,~~;

(ii) Revised mining and reclamation plans and schedules~~,~~;

(iii) Revised maps, in such detail as required by the Administrator~~,~~;

(iv) Updated environmental baseline information in such detail as required by the Administrator~~,~~; and

(v) An appropriate reclamation bond.

(b) The provisions of W.S. § 35-11-406(d) through (m), (o) and (q) ~~, (j), and (k) (q) will be required~~ shall apply. Objections to the application, and any ~~Any public~~ hearing before the

Environmental Quality Council, shall be limited to the operator's ~~shall apply only to the request of the operator~~ request to expand his operation and shall not~~, and the~~ affect the valid small mining permit already held by the operator ~~will not be affected~~.

Section 7(b) was revised to be consistent with the revised statutory language in W.S. § 35-11-406 due to the legislative changes that were made during the 2020 legislative session. Senate File 0044 (2020) revised language regarding procedures for processing objections to permit applications for mining permits. Subsection (b) is now consistent with those legislative changes.

CHAPTER 11

In Situ Mining

Section 1. Definitions.

(a) "Abandoned well" means a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose or for observation purposes.

~~(b) "Affected Land or Affected Area" means as defined in Wyoming Statute (W.S.) § 35-11-103(e)(xvi).~~

(b ~~c~~) "Annular space" means the space between the well casing and the borehole or the space between two or more strings of well casing.

(c ~~d~~) "Area Permit" means that, for the purposes of this Chapter, the Administrator may issue a permit on an area basis, rather than for each well individually, provided that the permit is for UIC Class III wells:

(i) Described and identified by location in permit application(s) if the wells are existing wells, except that the Administrator may accept a single description of wells with substantially the same characteristics;

(ii) Within the same well field, facility site, reservoir, project, or similar unit in the same state;

(iii) Operated by a single owner or operator; and

(iv) That are not used to inject hazardous waste.

(d e) "Baseline" 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.

~~(f) "Best Practicable Technology" means as defined in W.S. § 35-11-103(f)(i).~~

(e ~~g~~) "Catastrophic collapse" means the sudden and utter failure of overlying strata caused by removal of underlying materials. This can occur in salt solution mining and other processes that remove reservoir material to recover product.

(f ~~h~~) "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 stope 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;

(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.

(g ~~i~~) "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.

(h j) "Confining zone" means a geological formation, group of formations, or part of a formation that is capable of significantly limiting fluid movement above or below an injection zone.

(i ~~k~~) "Contaminant" means any unwanted or unauthorized physical, chemical, biological, or radiological substance or matter in water.

~~(l) "Excursion" means as defined in W.S. § 35-11-103(f)(ii).~~

(j ~~m~~) "Exempted aquifer" means an aquifer or ~~its~~ any portion thereof that meets the criteria in the definition of "Underground Source of Water" but which has been exempted according to the procedures of Section 11 of this Chapter.

(k ~~n~~) "Fact sheet" means a document ~~that for every in situ class III draft permit a fact sheet must be created~~ that briefly sets forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing ~~the~~ a draft in situ class III permit. ~~The Administrator shall send this fact sheet to the applicant and, on request to any other person. The fact sheet shall include, when applicable:~~

~~(i) A brief description of the type of facility or activity which is the subject of the draft permit;~~

~~(ii) 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;~~

~~(iii) Reasons why any requested variances or alternatives to required standards do or do not appear justified;~~

~~(iv) A description of the procedures for reaching a final decision on the draft permit including:~~

~~(A) The beginning and ending dates of the comment period and the address where comments will be received;~~

~~(B) Procedures for requesting a hearing and the nature of that hearing; and~~

~~(C) Any other procedures by which the public may participate in the final decision.~~

~~(v) Name and telephone number of a person to contact for additional information.~~

(l ~~o~~) "Flow rate" means the volume per time unit given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel.

(m ~~p~~) "Fluid" means material or substance which flows or moves whether in a semisolid, liquid, sludge, gas, or any other form or state.

(n ~~q~~) "Formation" means a body of rock characterized by a degree of lithologic homogeneity which is prevailingly, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.

(o ~~r~~) "Formation fluid" means "fluid" present in a "formation" under natural conditions as opposed to introduced fluids.

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

(q ~~t~~) "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 a use other than injection, per the requirements of Section 10 of this Chapter.

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

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

(s ~~w~~) "Mechanical integrity" means, an injection well, a production well, or monitor well where there is no significant leak in the casing, tubing or packer, and there is no significant fluid movement into an unauthorized zone through vertical channels adjacent to the injection or

recovery well bore.

(t ~~x~~) "Mechanical integrity testing ~~Integrity Testing~~" ~~(MIT)~~ means the testing used to determine that a well has mechanical integrity as required in Section 9 of this Chapter. ~~A schedule and methods for Mechanical Integrity Testing shall be approved by the Administrator and included in the permit or Research and Development License application (per Section 5(a)(xvi) of this Chapter) and shall constitute requirements of the permit.~~

~~(y) "Mining permit or permit" means as defined in W.S. § 35-11-103(e)(xi).~~

(u ~~z~~) "Monitor well" means a well constructed or utilized to measure static water levels or to obtain liquid, solid, or gaseous analytical samples or other physical data that would be used for controlling the operations or to indicate potential circumstances that could affect the environment.

(v ~~aa~~) "Monitor well ring" means the series of monitor wells surrounding a wellfield used to assess possible chemical and physical changes in groundwater due to ISR development.

(w ~~ab~~) "Production well" or "Recovery well" means a well through which a recovery fluid or soluble mineral is produced or recovered 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 adequately demonstrates to the Wyoming Department of Environmental Quality (Department) that the well has been converted to use as a Production or Recovery Well.

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

~~(ad) "Public water supply" means as defined in W.S. § 35-11-103(c)(viii).~~

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

(y ~~af~~) "Recovery fluid" means any material which flows or moves, whether semi-solid, liquid, sludge, gas or other form or state, used to dissolve, leach, gasify or extract a mineral. This may also include restoration fluid.

(z ~~ag~~) "Research and Development 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).

(aa ~~ah~~) "Sealing" means the operation whereby a cement slurry or other approved material is pumped into a drilled hole and/or forced into a well's annulus between the borehole and the casing. ~~"Sealant materials" are materials that are stable, have very low to no permeability and possesses minimum shrinking properties such that they are optimal sealing materials for well plugging and drill hole abandonment.~~

(ab ~~ai~~) "Target Restoration Values" means the numerical groundwater protection

standards, developed on a parameter-by-parameter basis for water quality constituents, used to assess the success of groundwater restoration within the production zone.

(ac ~~aj~~) "The Division" means the Land Quality Division of the ~~Wyoming~~ Department ~~of~~ ~~Environmental Quality~~.

~~(ak) "Topsoil" means as defined in W.S. § 35-11-103(c)(xiv).~~

(ad ~~al~~) "Underground Injection Control" (UIC) means the Underground Injection Control program under Part C of the Safe Drinking Water Act (42 USC 300h *et seq.* (2005)), including an "approved State program."

(ae ~~am~~) "Underground Source of Water" (USW) means:

(i) Those aquifers or portions thereof which have a total dissolved solids content of less than 10,000 milligrams per liter (mg/l) and which contain a sufficient quantity of water to supply a public water supply as defined in W.S. § 35-11-103(c)(viii);

(ii) Those that can be 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.

(af ~~an~~) "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 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.

~~(ao) "Waters of the State" means as defined in W.S. § 35-11-103(c)(vi).~~

(ag ~~ap~~) "Well" means a bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; or, a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole, or a subsurface fluid distribution system, as codified in the UIC regulations at 40 CFR 144.3.

(ah ~~aq~~) "Wellfield 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.

(ai ~~ar~~) "Well Stimulation" means a well mediation performed on an ISR well to increase production by improving the flow of injection fluids from the injection wells into the production well bore.

Numerous definitions above are proposed for deletion because those terms are already defined in statute based on comments from the Attorney General's Office.

Section identifiers were revised as necessary as result of the deletions.

Section 2. General Requirements.

(a) ~~It is the operator's responsibility for the submission of an application to obtain a permit in accordance with these regulations.~~ All applications for mining permits and amendments must be submitted in a format satisfactory to the Administrator. The applicant shall provide information that is complete, current, presented clearly and concisely, and supported by appropriate references to technical and other written material. The Administrator may require the applicant to supplement the application with information beyond that specifically required by these rules if the Administrator believes that additional information is necessary to make an informed decision.

Section above was designated as Subsection (a) and the opening sentence was removed since that requirement is already contained in statute.

(b ~~a~~) In addition to the requirements of this Chapter, Chapter 7~~,~~ of the Land Quality Noncoal Rules ~~and Regulations,~~ shall apply to in situ mining and ~~or~~ Research and Development License operations.

Subsection (b) was revised for consistency with other noncoal chapters and to correct the grammatical error.

(c ~~b~~) Applicable sections of Chapters 8 and 27 of the Water Quality ~~Division~~ Rules ~~and Regulations~~, regarding groundwater use classification, quality standards, and testing procedures, and, outside the aquifer exemption boundary, applicable Maximum Contaminant Levels from the U.S. Environmental Protection Agency Rules (40 CFR 141 ~~as amended May 22, 2001~~), shall also apply to in situ mining or Research and Development License operations.

(d ~~c~~) ~~No in situ mining shall commence or be conducted unless a valid permit or Research and Development License has been issued to the operator from the Department.~~ Applications for a permit or Research and Development License shall be filed with the Administrator. The applicant shall file two copies of the application to the Administrator ~~in a format required by the Administrator~~.

Subsection (d) was revised to remove language already contained in statute. The final sentence was revised to remove redundant language.

~~(d) The Administrator shall review the permit or Research and Development License application and determine its suitability for publication in accordance with W.S. § 35-11-406. A permit or Research and Development License shall be issued by the Director upon the recommendation of the Administrator. In meeting the requirements of W.S. 35-11-406(a)(ix) the map should extend a minimum of one mile beyond the permit boundary.~~

Former Subsection (d) was deleted to remove language already in statute and the final sentence was moved to a new subsection later within the chapter.

(e) The Division shall prepare a fact sheet for each in situ Class III permit application.

(i) The fact sheet shall include, where applicable:

(A) A brief description of the type of facility or activity which is the subject of the draft permit;

(B) 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;

(C) Reasons why any requested variances or alternatives to required standards do or do not appear justified;

(D) A description of the procedures for reaching a final decision on the draft permit including:

(I) The beginning and ending dates of the comment period 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 the public may participate in the final decision.

(E) The name and telephone number of a person to contact for additional information.

(ii) The Administrator shall send the fact sheet to the applicant and, on request, to any other person.

New Subsection (e) was created with language that was struck from the definitions in Section 1.

(f ~~e~~) Area permits shall specify the area within which underground injections are authorized and the requirements for construction, monitoring, reporting, operation and abandonment for all wells authorized. The area permit may authorize the permittee to construct and operate, convert, or plug and abandon wells within the area permit provided the permittee notifies the Administrator at such times as the permit requires, the additional well meets the requirements under the definition of "area permit" and this section and the cumulative effects of drilling and operation of additional injection wells are considered by the Administrator during evaluation of the permit application and are acceptable to the Administrator. The area permit does not allow for the construction of non-bonded infrastructure.

(g ~~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).

(h ~~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" shall be ~~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 the U.S. Environmental Protection Agency (EPA)).

(ii) "Duly authorized representative" shall be ~~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 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 Division ~~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 Sections 2(h ~~g~~)(ii)(A) and (C) 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.

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

The reference to Chapter 1 was removed because Chapter 1 contains definitions and may be confusing to say that permit applications must contain those definitions. Subsection (a) was also revised for consistency and to correct a grammatical error.

(i) A description of the activities conducted by the applicant for which permits are required under: the Resource Conservation and Recovery Act (RCRA), the UIC 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) Aquifer exemption from the EPA;

(D) NPDES program under the Clean Water Act (CWA);

(E) Prevention of Significant Deterioration (PSD) program under the Clean Air Act (CAA);

(F) Nonattainment program under the CAA;

(G) National Emission Standards for Hazardous Pollutants preconstruction approval under the CAA;

(H) Dredge and fill permits under Section 404 of the CWA;

(I) U.S. Nuclear Regulatory Commission, or Wyoming Uranium Recovery Program, Source Material License; or

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

(b) The map required in W.S. 35-11-406(a)(ix) must extend a minimum of one mile beyond the permit boundary.

Subsection (a) was created using language that was struck in a previous subsection and organizationally fit better here.

Section 4. Application Content Requirements - Baseline Information.

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

(i) 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.

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

(iii) 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.

(iv) 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 periphyton. 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.

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

(vi) 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 License area; and

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

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

(viii) 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 rights.

(ix) For groundwater 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 production zone. 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;~~.~~

(C ~~x~~) 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;~~.~~

(D ~~xi~~) 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.

(E ~~xii~~) 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 8(d) of this Chapter shall also be provided;~~.~~ and

(F ~~xiii~~) Tabulated water quality analyses for samples collected from all groundwater which may be affected by the proposed operation. Sampling to characterize the pre-mining groundwater quality and its variability shall be conducted in accordance with established Department guidelines. All baseline groundwater quantity and quality information must be provided in an electronic format prescribed by and/or acceptable to the Administrator.

Section 4 was reorganized for clarity.

Section 5. Application Content Requirements - Mine (Operations) Plan

(a) All applications for a mine permit and amendments must include, at a minimum, the information and materials related to mine plans required in: W.S. §§ 35-11-428 and 35-11-429~~;~~, ~~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 6(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 16 of this Chapter.

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

(A) A list of the proposed wellfields;

(B) ~~A m~~Map(s)~~, which shows~~ showing the proposed sequence for mining of the wellfields;

(C) A proposed time schedule for mining each wellfield; and

(D) 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 dimensions for all proposed impoundments, as defined by the State Engineer's Office ~~(SEO)~~. A leak detection plan may be required for impoundments that are not regulated by the Nuclear Regulatory Commission ~~NRC~~. For impoundments holding toxic or acid forming material, contingency plans to control unanticipated leakage shall be provided.

Acronyms above were revised as necessary. State Engineer's Office is not used later in the chapter so acronym is not required. NRC was defined and is not used elsewhere in the chapter.

(v) A description of all temporary and permanent surface water diversions in accordance with the requirements of Chapter 3, Section 2(e) and (f).

(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).

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

(x) 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 8 of this Chapter;

(C) Proposed stimulation program;

(D) Type of injection/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.

(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.

(xii) 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.

(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.

(xiv) Descriptions of:

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

(B) A detailed description of the typical proposed well completion for monitoring, injection and recovery wells, as required by Section 8 of this Chapter.

(xv) Details of a monitoring program and reporting schedule as required by Sections 15 and 16 ~~16 and 15~~ of this Chapter~~, respectively~~.

(xvi) A schedule for and description of the procedures to demonstrate and maintain mechanical integrity of all monitoring, recovery, and Class III injection wells as required by Section 9 of this Chapter. Monitor wells need only be tested upon completion.

(xvii) A corrective action plan, for any 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 20 of this Chapter.

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

(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.

(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 19 and 20 of this Chapter.

(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.

(xxii) A maintenance plan to ensure:

(A) Wells are sufficiently covered to protect against entrance of undesirable material into the well;

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

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

(D) Monitoring equipment is appropriately serviced and maintained so the monitoring requirements in Section 16(a)(i) of this Chapter can be met; and

(E) Effective spill response and reporting ~~Spill Response and Reporting plan~~.

Section 6. Application Content Requirements - Reclamation Plan.

(a) 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 35-11-429~~;~~, ~~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 6(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 m~~ Map(s) which showing ~~s~~ 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 ~~achieve the standard of~~ return~~ing~~ all affected groundwater to the pre-mining class of use or better using Best Practicable Technology, in accordance with the following provisions:

(A) In deciding whether a demonstration has been made by the operator that Best Practicable Technology has been applied, the Administrator shall, at a minimum, take the following factors into consideration:

(I) The pre-mining background baseline water quality;

(II) The character and degree of injury or interference with the health and well-being of the people, livestock, ~~animals,~~ wildlife, aquatic life ~~like~~ and plant life affected:

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

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

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

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

(VII) The effect upon the environment; and

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

(B) The evaluation of restoration of the groundwater within the production zone shall be based on the target restoration values;

(C) The evaluation of groundwater restoration success ~~is~~ shall be

conducted on a parameter by parameter basis; and

(D) Regardless of the restored groundwater quality in the production zone, the adjacent aquifers and other waters within the same aquifers must be fully protected to their class of use and, outside the aquifer exemption boundary, to applicable Maximum Contaminant Levels from the U.S. Environmental Protection Agency Rules (40 CFR 141 ~~as amended May 22, 2001~~). If the restored groundwater in the production zone poses a threat to groundwater outside the production zone, then flow and/or fate and transport models shall be used to assist in determining what action, including monitoring sufficient to verify the model, needs to be taken. A monitoring program sufficient to verify the model may be required.

(E) If the operator demonstrates the application of Best Practicable Technology to the satisfaction of the Administrator, but is unable to achieve the pre-mining class of use, then the operator can~~:~~ can request that the Director recommend the Environmental Quality Council modify the water quality criteria used for groud water restoration, in accordance with W.S. § 35-11-429(a)(iii), provided the operator can demonstrate the requirements of Section 6(a)(ii)(D) will be met.

The language above was added to Subsection (E) was using the language below proposed for deletion.

~~(I) Request that the Director recommend the Environmental Quality Council modify the water quality criteria used for ground water restoration, in accordance with W.S. 35-11-429(a)(iii);~~

~~(II) Provided the operator can demonstrate the requirements of Section 6(a)(ii)(D) will be met~~.

(F) A minimum of ~~1~~ one year of quarterly monitoring data for a full suite of parameters, except those shown to be unaffected by the mining and restoration process, must be provided to demonstrate groundwater stability during the evaluation of restoration.

(iii) A plan for well repair, plugging, and conversion as required by Section 10 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 post-reclamation surface contours for affected lands and the immediate surrounding areas if the operation will substantially alter the pre-mining 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 post-mining 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 topsoil restoration and reseeding 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 7. Research and Development License Application.

(a) All applications for a Research and Development License shall include, at a minimum, the information and materials related to reclamation required ~~In addition to the information required by this Section, an application for a Research and Development License shall contain all information required~~ by W.S. § 35-11-431 and Sections 8 through 12 and 15 through 20 of this Chapter, and shall:

Subsection (a) was revised to make grammatical corrections and provide consistency with other sections.

(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 pre-mining, 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 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 License area;

(C) Locations and present owners of all wells inside and within one-half mile of the Research and Development 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 8. Well Construction Requirements.

Construction requirements listed in Sections 8(a) through 8(f) of this Chapter are applicable to all wells installed for activities related to in situ mining, including pre-mining aquifer groundwater sampling and pumping tests. Additional requirements for Class III injection wells are included in Section 8(g). Additional requirements for monitoring wells are included in Section 8(h). The Administrator may grant a deviation from the requirements of this Section, except those in Section 8(g), provided the operator can supply documentation of reliability, mechanical integrity, design and construction to protect ground water of the state.

The language in the introductory paragraph was placed here because it applies to the whole section and does not include any methods of well construction. The language was taken from previous Subsections (iii) and (iv) below.

(a) Methods for well construction shall:

(i) Be approved by the Administrator and included in the permit or Research and Development License application (per Section 5(a)(xiv) of this Chapter);

(ii) Constitute a condition of the permit;

~~(iii) Construction requirements listed in Sections 8(a) through 8(f) of this Chapter are applicable to all wells installed for activities related to in situ mining, including pre-mining aquifer groundwater sampling and pumping tests. Additional requirements for Class III injection wells are included in Section 8(g). Additional requirements for monitoring wells are included in Section 8(h); and~~

~~(iv) The Administrator may grant a deviation from the requirements, except those in Section 8(g), provided the operator can supply documentation of reliability, mechanical integrity, design and construction to protect groundwater of the state.~~

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

(i) The top of the casing shall end above grade. Where possible, the top of the casing shall end above any known high-water conditions of flooding from runoff or ponded water, and the immediate area around the collar of the well shall slope away from the well to direct surface runoff away from the well. Installation of wells in the channels and flood plains of perennial drainages is prohibited. If a well must be located in an ephemeral or intermittent drainage:

(A) The well shall not be located in the streambed (i.e., the channel) of the drainage; and

(B) During well construction and use, steps shall be taken to minimize the potential for damage to the channel, such as from erosion and sedimentation, and to protect the well from damage due to erosion and to prevent surface water runoff from entering the well~~;~~.

(ii) The well opening shall be closed with a cover to prevent the introduction of undesirable material into the well.

(c) Annular seals shall be installed to: protect the casing against corrosion; assure structural integrity of the casing; stabilize the upper formations; protect against contamination or pollution of the well from the surface; and prevent migration of ground 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 any given depth, at least three inches greater in nominal diameter than the diameter of the outer casing at that depth;

(ii) Before placing the annular seal, all loose drill cuttings, rock chips, or other obstructions shall be removed from the annular space by circulating the borehole with water or drilling mud slurry;

(iii) The annular sealing material shall be placed from the bottom to the top of

the well casing. The displacement fluid used to force the final sealing material through the casing shall remain shut-in, to prevent back flow, until the sealing material is set. If settling occurs during setting of the sealing material, additional material must be placed into the annular space, to bring the level of the sealing material to the ground surface. If, during cementing, the cement does not return to the surface and settling during curing of the cement is more than forty feet, then a tremie pipe must be used to complete the cement to the surface to ensure that bridging does not occur; and

(iv) Annular seals shall be created using one of the approved sealant materials outlined in Chapter 8, Section 2(d), of the of the noncoal rules ~~Division's Noncoal Rules and Regulations~~.

(d) The casing shall be of sufficient strength and diameter to: prevent casing collapse during installation; convey liquid at a specified injection/recovery rate and pressure; and allow for sampling. Casing materials may include steel or polyvinyl chloride (PVC), which meet the relevant standards of ASTM International (formerly American Society for Testing and Materials).

(e) 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 or top of the screen shall be below the bottom of the annular seal. Casing shall be equipped with centralizers placed at a maximum spacing of one per forty feet to ensure even thickness of annular seal and gravel pack.

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

(ii) PVC casing may be glued or mechanically joined (no metal screws), depending on the type of material and its fabrication. Compatibility between injection fluids, formation fluids, process by-products, recovery fluids and the glue shall be demonstrated.

(f) Well development shall 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 water-bearing strata~~;~~.

(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 compiled and maintained by the operator and made available to the Division for inspection. 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 sealed by circulating the sealing material 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 constructed to prevent the migration of fluids to unauthorized zones. The casing and annular 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 annular 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 diameter;

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

(E) Corrosiveness of injected fluids, formation fluids, process by-products, and recovery 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) ~~There~~ 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 unauthorized zone or water-bearing strata 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, formation fluids, process by-products, or recovery fluids. 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 injection fluids, formation fluids, process by-products, or recovery 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 pre-mining conditions, 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 chemical nature and volume of the injection fluids, formation fluids, process by-products, and recovery fluids; and

(F) The injection well density.

(i) No Class III well construction may commence until a permit or Research and Development License has been issued which includes well construction information in accordance with the requirements of Section 8 of this Chapter. Construction of wells needed to obtain the information required in Sections 3 and 4 of this Chapter may be:

(i) Allowed with approval of the Administrator; but

(ii) May not be used for injection until after permit issuance and only if those wells were constructed in accordance with the requirements of Section 8(g).

(j) The operator may not commence injection in a new injection well until construction is complete and the operator has demonstrated mechanical integrity. The operator shall submit notice of completion of construction and demonstrated mechanical integrity in the quarterly monitoring reports. Except for all new wells authorized by an area permit under Subsection 2(e) of this chapter, the operator may not commence injection in a new injection well until:

This above underlined language was reviewed and approved by the EQC on DATE. However, there was a mistake in the process of formalizing the rules, and the language was inadvertently omitted from the version that was finalized. Therefore, LQD is proposing to correct this error.

(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 wells within 13 days of the date of the notice in paragraph (b)(i) of this subjection, in which case prior inspection or review is waived and the operator may commence injection. If notice is given, the Administrator shall include in the notice a reasonable time period in which he or she shall inspect the well.

Section 9. Mechanical Integrity Testing ~~(MIT)~~ of Class III Injection, Production, and Monitor Wells.

(a) A schedule and methods for mechanical integrity testing ~~Mechanical Integrity Testing~~ shall be approved by the Administrator and included in the permit or Research and Development License application (per Section 5(a)(xvi) of this Chapter) and shall constitute requirements of the permit. The schedule and methods shall meet the following requirements:

(i) The operator of a Class III or Production well shall establish mechanical integrity as defined in Section 1 of this Chapter for each well prior to commencing injection.

(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 any unauthorized zone or water-bearing strata through vertical channels adjacent to the injection bore:

(I) The results of a temperature or noise log (e.g., cement bond log); or

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

(III) Where the Administrator elects to rely on sealing 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, if the alternate testing method is approved by the EPA. 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.

(iii) The operator shall demonstrate ~~Maintenance of~~ the mechanical integrity of each Class III and Production well ~~shall be demonstrated~~ at least once every five years, or on a schedule approved by the Administrator.

(iv) Before resuming operation of any 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 under reaming tools, the operator must demonstrate the mechanical integrity of that well, or with the approval of the administrator, demonstrate the ability to prevent the movement of fluid into unauthorized zones or onto the surface.

The word "any" was mistakenly left out of the final version of Chapter 11. The version approved by the board included the word "any."

(v) If the Administrator determines that a 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, or production from 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 or production upon written notification from the Administrator that the operator has demonstrated mechanical integrity.

(vi) The operator shall report the ~~R~~ results of ~~MIT~~ mechanical integrity testing shall be reported quarterly in an electronic format acceptable to the Administrator in accordance with the requirements in Section 15 of this Chapter.

Section 10. Requirements for Plugging of Drill Holes and Repair, Conversion, and Plugging of Wells.

(a) A plan for drill holes 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 6(a)(iii) of this Chapter, and shall constitute a condition of the permit.

(b) All drill holes shall be plugged in accordance with ~~Noncoal Rules and Regulations,~~ Chapter 8 of the noncoal rules and W.S. § 35-11-404.

(c) If a well lacks mechanical integrity, the operator shall repair or plug~~ging 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. Repair or plugging 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 9 of this Chapter must be completed within 120 days after the repair is completed. The operator may resume use of the well upon written notification from the Administrator that the operator has demonstrated mechanical integrity.

(d) The operator shall notify the Administrator, as required by the permit or Research and Development License, before plugging a well or wells within an area permit or converting a well to uses other than those defined in Section 1(d) 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 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 two years, unless the operator submits to the Administrator and receives approval for a non-significant revision under ~~(~~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 is ~~are~~ maintained under ~~(~~Section 7(a)(i) of this Chapter~~)~~ and the well will not endanger any unauthorized zone or water-bearing strata in accordance with the requirements of this Chapter.

(f) A well shall be plugged to meet the requirements below, using an approved sealant material as outlined in Chapter 8, Section 2(d), to assure that plugging of the well will not allow the movement of fluids into or between unauthorized zones or water-bearing strata:

(i) The well shall be plugged using a method which prevents fluid communication and adverse changes in water quality or quantity. Sealant materials shall be emplaced in a manner that provides a water tight seal utilizing one of the approved methods detailed in Chapter 8, Section 2(e) – (g) and shall meet the following requirements:

(A) If specific sections of the casing are to be plugged with cement:

(I) The operator shall log:

(1.) ~~(I)~~ The type and number of plugs to be used;

(2.) ~~(II)~~The placement of each plug including the elevation of the top and the bottom;

(3.) ~~(III)~~ The method of placement of the plugs, in accordance with Section 10(f);

(II ~~IV~~) The operator shall ensure ~~T~~that 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); and

(III ~~V~~) That the placement of the cement plugs shall be accomplished by one of the following:

(1.) The Balance method;

(2.) The Dump Bailer method;

(3.) The Two-Plug method; or

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

a. Includes placement of plugging 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

b. Provides a comparable level of reliable protection to the methods identified in Section 10(f)(i).

Subsection (f) was revised for clarity and better organization.

(B) When the underground pressure head producing flow (i.e. gassy or artesian) is such that a counter-pressure must be applied to force a sealing material into the annular space, this counter-pressure shall be maintained for the length of time required for the plugging mixture to set or fully hydrate~~;~~.

(C) The top of the plugging mixture of any plugged and abandoned well shall be backfilled to the surface with dry non-slurry materials or topped with a concrete cap set at least 2 feet below the ground surface and then backfilled to the surface with native earthen materials to ensure the safety of people, livestock, wildlife, and machinery in the area.

(g) In the case of an ISR operation which underlies or is in an aquifer which has been exempted under Section 11 of this Chapter, the Plugging/Conversion Plan in the permit or Research and Development License shall also demonstrate adequate protection of Underground ~~underground~~ Sources ~~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) To ensure the locations of the abandoned wells are adequately identified the operator shall:

(i) ~~The~~ Record the boundaries of each wellfield and the location of the monitor well ring around each wellfield shall be recorded as a deed notice with the appropriate county; and

(ii) The top of the plugging mixture in each abandoned monitor well in the monitor well ring around each wellfield shall clearly show on a steel plate placed atop the sealing mixture, the permit number, well identification number, and date of plugging. All marking devices shall be installed at a minimum depth of two feet below the land surface.

(j) The operator shall report plugging ~~Plugging~~ and conversion activities ~~shall be reported~~ in accordance with the requirements in Section 15 of this Chapter.

Subsections (g) through (j) were revised to make grammatical corrections.

Section 11. 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~~; ~~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~~ EPA pursuant to Section 11(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 unauthorized zones 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 uses as described in Chapter 8 of the Water Quality Rules ~~and Regulations~~; and

(B) It cannot now and will not in the future serve as a source of drinking water as defined by the EPA by meeting standards listed in 40 CFR 146.4(b) (as amended December 10, 2010);

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

(A) A map and description identifying and describing in geographic and/or geometric terms (such as vertical and lateral limits and gradient) all aquifers or parts thereof which the applicant proposes to exempt;

(B) Information to document that the exemption area is commercially producible as demonstrated by:

(I) The permit boundary;

(II) A description and calculations that support the proposed distance beyond the monitor well ring boundary required to mine and to restore groundwater;

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

(IV) The type of mining technology used to extract the mineral; 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 ~~WQD~~ Water Quality Administrator to the EPA as a state program revision pursuant to 40 CFR 145.32 ~~(as amended December 10, 2010)~~.

The revisions in Section 11 are intended to correct grammar and provide consistency with other sections within this chapter.

Section 12. Permit and Research and Development License Requirements.

(a) ~~The following requirements shall apply to~~ Every permit~~s~~ and Research and Development Testing License~~s. Each requirement shall be incorporated into the permit or Research and Development 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 License.~~ shall include the following provisions, either expressly or by reference:

Subsection (a) was revised to improve organization and correct grammatical errors.

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

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

(B) The filing of a request by the operator for a permit or Research and Development License revision per Chapter 7 or Section 14 of this Chapter does not waive any permit or Research and Development 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 requirements of this permit or Research and Development 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 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 requirements of the permit or Research and Development 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 requirements of the permit or Research and Development License.

(v) The permit or Research and Development 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 License, or to determine compliance with this permit or Research and Development 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 License.

(vii) In compliance with all the provisions of Chapter 7 and Section 14 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 a failure to submit any relevant facts in a permit or Research and Development License application, or the ~~submitted~~ submission of incorrect information in a permit or Research and Development License application or in any report to the Administrator, the operator shall promptly submit a correction of such facts or information to the Administrator.

(viii) Prior to requesting bond reduction for abandonment of a Class III well or wells within a wellfield area 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 of the well or wells within a wellfield area or conversion of the well.

(ix) The following are incorporated into and ~~shall also~~ constitute requirements of the permit:

(A) Plans for corrective action, including injection pressure limitation, as specified in Section 20(a) of this Chapter;

(B) Monitoring requirements as specified in Section 16 of this Chapter;

(C) Schedule and methods to establish and maintain mechanical integrity ~~Mechanical Integrity~~ as specified in Section 9 of this Chapter: and

(D) A plan for well repairs, plugging, and conversion as specified in Section 10 of this Chapter.

(x) The approved permit or Research and Development 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 unauthorized zone; and formation fluids are not displaced into any unauthorized zone. Operating requirements shall, at a minimum, specify that:

(A) 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 unauthorized zone; and

(B) Injection between the outermost casing protecting unauthorized zones and the well bore is prohibited.

(xi) No operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection or 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 License. The operator shall have the burden of showing that the requirements of this paragraph are met.

Section 13. Duration of Permits ~~and Research and Development 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 5(a)(ii)) and reclamation plan (Section 6(a)(i)) as provided in W.S. §§ 35-11-405(a) and (b); and

(ii) With the option for revising the mining and reclamation schedules, as provided in W.S. §§ 35-11-411(a)(iii) and 35-11-429(a)(iv).

The above reference has been changed for greater clarity per the LSO recommendation.

(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 14 of this Chapter; or be revoked in accordance with the requirements of Section 23 of this Chapter.

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

Subsection (c) is proposed for deletion to remove redundant statutory language and requirements.

Section 14. Revisions to Class III Well Portions of an In Situ Mine Permit or Research and Development License.

(a) A permit, license to mine, or Research and Development License may be revised ~~as a significant or non-significant revision as specified in Sections 14(b) and 14(c), respectively, to address one or more of the following considerations, subject to the limitations of Sections 14(d) and 14(e)~~ to address.

~~(i) A revision may be necessary to address:~~

(i ~~A~~) A permit condition per Section 12 of this Chapter;

(ii ~~B~~) An excursion or other aspect of noncompliance per Sections 18 and 19 of this Chapter and W.S. 35-11-429(a)(ii); or

(iii ~~C~~) A corrective action or compliance schedule per Section 20 of this Chapter;

(iv ~~D~~) A concern noted during the five-year review per Section 13 of this Chapter; ~~or~~

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

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

Subsection a was reorganized for clarity.

(b ~~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;~~

Final sentence in (b) was deleted based on comments provided by the Attorney General's Office that stated that nonsubstantive revisions are not subject to notice and comment.

(c ~~iii~~) The operator shall submit a revision upon notice from the Administrator ~~If the Administrator requires the operator~~ to revise any Class III Well portions of a permit or Research and Development License~~, he or she shall prepare a letter to the operator specifying the needed changes and additional information~~.

Subsection (c) was revised to more clearly state the duties of the operator.

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

Subsection (d) was revised for clarity and to improve the grammar.

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

~~(A)~~ any ~~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 License. Such a revision shall include (if not already presented in the permit or Research and Development License) the information required in W.S. § 35-11-428 and the requirements of Sections 5 through 20 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.

Subsection (i) and (A) were combined because there is not a subsection (B).

(ii) The UIC 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 23 of this Chapter, but the Administrator determines that revision is appropriate; or

(v) A determination is made The Administrator determines 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 to any Class III Well portion of a permit or Research and Development License shall meet the requirements of Chapter 7 of these regulations, except that a non-significant revision, with operator consent, 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 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 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 License and would not change its classification;

(vi) To change well construction requirements approved by the Administrator pursuant to Section 8 of this Chapter, provided that any such alteration shall complies with the requirements of Section 8; or

(vii) To amend a well plugging/conversion plan which has been updated under Section 10 of this Chapter; or

(viii) To submit a wellfield data package that conforms to the specifics of the permit document.

(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. ~~In the case that a portion of the permit is in violation of law, that portion of the permit shall be opened for review.~~

Subsection (e) was revised to remove redundant language.

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

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(g) of this Chapter.

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

(i) The results of monitoring required per Sections 16(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, Production, or Monitor 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 20 of this Chapter.

(iv) The results of well repair and plugging required by ~~per~~ Section 10 of this Chapter, including:

(A) A statement that~~:~~ wells were plugged in accordance with the approved permit or Research and Development License or, where different plugging procedures were used, documentation that prior to approval was obtained from the Administrator. This documentation shall be included in the report and contain a description of the procedure used, specifying the difference between the permit or Research and Development License approved method and the alternative method; and

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

~~(II) Documentation that prior approval was obtained from the Administrator where plugging procedures differed from the procedures approved in the permit or Research and Development 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 License approved method and the alternate method; and~~

(B) D~~To assure that the well is filled and there has been no bridging of the sealing material, the operator should provide LQD with d~~ocumentation that the volume of material placed in the well at least equals the volume of the empty hole~~.~~, to ensure that the well is filled and there has been no bridging of the sealing material.

Subsection (iv) was reorganized and revised to make grammatical corrections.

(c) Annual reports shall include, at a minimum:

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

(ii) ~~A map~~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; and

(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 5(a)(xvii) and Section 16 of this Chapter, which have not been previously reported; ~~and~~

(v) ~~An u~~Updated potentiometric surface map(s) for all aquifer(s) that are or may be affected by the mining operation, ~~may be~~ if requested at the Administrator's discretion.; and

(vi) Supporting data sufficient to demonstrate groundwater restoration in accordance with Section 6(a)(xiii) of this Chapter.

(d) During excursions, results from excursion-related monitoring shall be reported in accordance with the requirements of Section 19 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 well, ~~to 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 other well. The report should include the location of the well to the nearest 40-acre legal subdivision (quarter, quarter, section), survey locations utilizing decimal Latitude and Longitude coordinates, the depth of the well, and the facts of the plugging technique.

Section 16. Monitoring Requirements.

(a) A detailed monitoring program shall be approved by the Administrator and included in the permit or Research and Development License application, as required by Section 5(a)(xv) of this Chapter, and shall constitute a requirement of the permit or license. 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; and

(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; and

(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.~~

Subsection (C) was moved to the end of this section.

(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 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 8(h)(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.

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

(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.

Section 17. Maintenance and Retention 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; and

(ii) The name, address, and telephone number of the laboratory performing the analyses, and the laboratory identification number~~; and~~.

(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, 5 and 6 of this Chapter;

(B) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation~~,~~;

(C) C~~c~~opies of all reports required by the permit or Research and Development License~~, and records of all data used to complete the application for the permit or Research and Development License~~;

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

(E ~~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~~ Section 17(b)(i)(A) through ~~17(b)(i)~~(D) at the mine site until termination of the permit or Research and Development License, unless

otherwise authorized by the Administrator. However, ~~the record retention schedule cannot be less than~~ the operator shall maintain these records no 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.

Subsection (ii) was revised to improve clarity and to make clear that the records described above must be retained no less than 3 years.

Section 18. Noncompliance.

(a) The operator shall:

(i) Verbally report to the Administrator any noncompliance 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~~ endanger~~ment to~~ an Underground Source of Water (USW) or unauthorized zone; and

Grammatical correction.

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

(ii) Provide a written report to both the Administrator and the Water Quality Division 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.~~ The written report shall describe:

Grammatical correction.

(A) The noncompliance and its cause;

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

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

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

(E) The procedures for mitigating or controlling the excursion.

(iii) Report all instances of noncompliance, not reported under Sections

18(a)(i) and (iii), at the time monitoring reports are submitted. The reports shall contain the information listed in Sections 18(a)(i) and (ii), as applicable.

The above reference has been corrected.

Section 19. Excursions

(a) "Confirmation" of an excursion means that occurs when 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)(i).

The above reference has been changed for greater clarity, per the LSO reccomendation.

(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)(i).

This above reference has been changed for greater clarity, per the LSO reccomendation.

(b) 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 both the Administrator 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.

(c) 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. The parameters to be analyzed shall be site specific and based on baseline data.

(ii) If an excursion is not controlled within 60 days following confirmation of the excursion, the Administrator may, after consultation with the Director, terminate the mining operation and revoke the permit or Research and Development License or modify the mining operation and require modification of the permit or Research and Development License. Modifying the operation may include: sampling of additional wells for the parameters in Section 19(c)(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~~ shall submit, within 90 days following confirmation of the excursion, a plan and compliance schedule, acceptable to the Department, for bringing the well(s) ~~(or wells)~~ off excursion. The plan and compliance schedule can be submitted as part of the monthly excursion report required in Section 19(d) of this Chapter. The compliance schedule shall meet the requirements of Section 20(b) of this Chapter.

(d) 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; and

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

Section 20. Corrective Actions and Compliance Schedules.

(a) Corrective actions are~~:~~

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

~~(A)~~ ~~O~~operators shall provide the well information, as required in Sections 4(a)(xi) and (xii) of this Chapter, and the corrective action plan as required in Section

5(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~~ may 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~~ b) In determining the adequacy of corrective action proposed by the operator and in determining the additional steps needed to prevent fluid movement into an unauthorized zone, the Administrator shall consider the following criteria and factors ~~shall be considered by the Administrator~~:

(i ~~I~~) Nature and volume of injected fluid;

(ii ~~II~~) Chemical nature and volume of native groundwater;

(iii ~~III~~) Compatibility of injected fluid and native groundwater;

(iv ~~IV~~) Potentially affected population;

(v ~~V~~) Geology;

(vi ~~VI~~) Hydrology;

(vii ~~VII~~) Proposed method of operation as required by Section 5(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 ~~VIII~~) Completion and plugging records;

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

(x ~~X~~) Hydraulic connections with unauthorized zones.

(c ~~ii~~) Corrective action is also required ~~Needed~~ if any water quality monitoring of an Underground Source of Water or unauthorized zone indicates the movement of any contaminant into an Underground Source of Water or unauthorized zone, except as specifically authorized in the approved permit or license ~~Research and Development 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. The~~se~~ Administrator may impose these additional requirements ~~shall be imposed~~ by requiring the operator to revise the permit or license ~~Research and Development License~~, by recommending the revocation of the permit or license ~~Research and Development License may be revoked~~, or by taking other appropriate enforcement action for violations of ~~may be taken if~~ the permit or license ~~Research and Development License has been violated~~.

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

(d ~~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~~ three 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~~ one 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 20 was revised and restructured to improve clarity, address grammatical errors and provide consistency with the remainder of the chapter.

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

Section 21 has been revised to conform to the statutory changes made to W.S. § 35-11-406 made during the 2020 legislative session.

(a) In addition to the requirements of W.S. §§ 35-11-406(g), (j), and (q ~~k~~) and Chapter 7, public notice for actions related to in situ permits or Research and Development 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 23 ~~21~~ 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;

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

(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); 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.

(iii) In addition to mailing a copy of the public notice, the Administrator shall mail or electronically transfer a copy of the fact sheet, permit application or draft permit to the following persons:

(A) The applicant;

(B) 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); 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; and

(C) 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(q ~~k~~).~~, which objections shall list one or more reasons for denying a permit or Research and Development 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(q k) and the requirements of this Chapter. In addition to the hearing notice requirements described in W.S. § 35-11-406(q 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; and~~

~~(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 after reviewing the report and recommendations on the objections received provided by the Administrator. The Director shall issue to the applicant and to any objector a final written decision issuing or denying the permit or license within thirty days of the deadline to file objections.~~:~~

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

~~(ii) If a hearing is requested:~~

(d ~~A~~) The applicant or objector may appeal the Director's written decision to the Environmental Quality Council. If a hearing is held the ~~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 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.~~

(e ~~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.

Section 23. Revocation.

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

(i) Revocation may be necessary to address:

(A) An excursion or other aspect of noncompliance per Sections 18 and 19 of this Chapter; or

(B) One of the items listed in Section 23(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 and operator 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 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, License to Mine, or Research and Development 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) and (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 35-11-110(b);

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

CONCLUSION

The Environmental Quality Council, in accordance with the authority granted to it by W.S. § 35-11-112 As Amended, and having complied with the provisions of the Wyoming Administrative Procedures Act, find as follows:

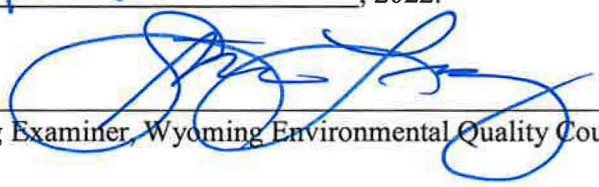
1. These rules provide for the regulation of noncoal mining and reclamation operations in accordance with the requirements of W.S. § 35-11-101 through W.S. § 35-11-1803, As Amended (Wyoming Environmental Quality Act).

2. The Department of Environmental Quality, Land Quality Division, Noncoal Rules and Regulations are necessary and appropriate to preserve and exercise the primary responsibilities and right of the State of Wyoming; to retain for the State the control over its air, land, and water resources and secure cooperation between agencies of the State and Federal Government in carrying out the policy and purposes of the Environmental Quality Act.

3. These Land Quality Division Noncoal Rules and Regulations are reasonable and necessary for the effectuation of the Wyoming Environmental Quality Act, W.S. § 35-11-101 through W.S. § 35-11-1803, As Amended.

4. These Land Quality Division Noncoal Rules and Regulations are necessary and appropriate to protect the public health, safety, welfare, and environment of the State of Wyoming.

Dated this 13th day of September, 2022.



Hearing Examiner, Wyoming Environmental Quality Council