CHAPTER 11

NONCOAL

IN SITU MINING

Section 1. **Definitions.**

(a) "Background" means the constituents or parameters and the concentrations or measurements which describe water quality and water quality variability prior to the injection of recovery fluid.

(b) "Catastrophic collapse" means the sudden and utter failure of overlying strata caused by removal of underlying materials.

(c) "Class III well" means a well used for in situ mining for the injection of recovery fluid for the purpose of extracting minerals, or products, including a well used in:

(i) Mining of sulfur by the Frasch process;

(ii) In situ mining of uranium or other metals; this category includes only in situ production from ore bodies which have not been conventionally mined. Wells used for solution mining (such as stopes leaching) of conventional mines are classified as Class V wells;

(iii) In situ mining of salts, trona, or potash. With the exception that wells, used in reclamation activities, to inject into previously mined areas of underground trona mines will be classified as Class V wells rather than Class III wells (and therefore not regulated under this Chapter), regardless of whether such wells are used for secondary recovery of trona;

(iv) Fossil fuel recovery, including oil shale and tar sands; or

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

(d) "Compliance schedule" means a schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the applicable statutes and regulations.

(e) "Conventional mine" means an open pit or underground excavation for the production of minerals.

(f) "Excursion" means as defined in W.S. § 35-11-103(f)(ii) (2003).

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

(h) "Groundwater restoration" means as defined in W.S. § 35-11-103(f)(iii) (2003).

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

(j) "In situ mining" means as defined in W.S. § 35-11-103(f)(iv) (2003).

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

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

(m) "Permit" means a Mining Permit, as defined in W.S. § 35-11-103(e)(xi) (2003).

(n) "Production zone" means as defined in W.S. § 35-11-103(f)(v) (2003).

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

(p) "Recovery fluid" means as defined in W.S. § 35-11-103(f)(vii) (2003).

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

(r) "Research and Development Testing License" means the permitting vehicle issued by the Administrator, per W.S. § 35-11-431 *et seq.* (2003), approving research and development testing as defined in W.S. § 35-11-103 (f)(viii) (2003).

(s) "State Decision Document" serves as a summary of, or reference to, all terms and

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

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

(u) "UIC" means the Underground Injection Control program under Part C of the Safe Drinking Water Act (42 USC 300h *et seq.* (2003)), including an "approved State program."

(v) "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) (2003);

(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 (as amended March 12, 1993).

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

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

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

Section 2. **General Requirements.**

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

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

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

(d) The Administrator shall review the permit or Research and Development Testing License application and determine its suitability for publication in accordance with W.S. § 35-11-406 (2003). A permit or Research and Development Testing License shall be issued by the Director upon the recommendation of the Administrator.

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

(i) The evidence must be presented by those operators:

(A) Who are mining, restoring, or reclaiming, within one year of the effective date of newly promulgated changes to this Chapter; or

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

(ii) For existing wellfields or wellfields that are in the process of installation, the standards for reclamation and restoration in place at the time of the permit approval for these wellfields will apply.

(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) (2003).

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

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

(i) "Responsible corporate officer" means:

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

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

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

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

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

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

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

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

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

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

(iii) If the responsible corporate officer or duly authorized representative is no longer correctly listed with the Administrator, a new name must be submitted, with required written authorization as required by Sections 2(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 and Baseline Information.**

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

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

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

(A) Hazardous Waste Management program under RCRA;

(B) UIC program under the Safe Drinking Water Act (as it pertains to wells other than Class III wells);

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

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

(E) Nonattainment program under the CAA;

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

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

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

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

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

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

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

(vi) A list of the indigenous vertebrate species by common and scientific names observed within the proposed permit area. Surface waters supporting fish that may be affected by the operation shall be sampled for benthic invertebrates and 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.

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

(viii) A description of the geology, including:

(A) Discussion, supported by maps, cross-sections and geologist's, driller's, and geophysical logs, which identifies: formations and aquifers; geologic features that could influence aquifer

properties; and the areal and stratigraphic position of the production zone in relation to other geologic features within the proposed permit or Research and Development Testing License area; and

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

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

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

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

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

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

(A) The names (or numbers), descriptions, and a map of all wells installed for water supply or monitoring and all wells which penetrate the 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.

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

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

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

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

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

(a) All applications for a permit shall include, at a minimum, the information and materials related to mine plans required in: W.S. §§ 35-11-428 and 429 (2003); Chapter 1, Chapter 2, Section 1, and Chapter 3, Section 2 (excepting Subsections (b)(ii) and (iii), (c)(iv), and (h) and, with respect to subsection (k)(i), as modified in Section 5(a)(iv) of this Chapter); and

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

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

(A) A list of the proposed wellfields;

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

(C) A proposed time schedule for mining each wellfield; 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 design plan for all impoundments and, for impoundments containing wastes, a leak detection plan. For impoundments holding toxic or acid-forming material, contingency plans to control unanticipated leakage shall be provided.

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

(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 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 11 of this Chapter;

(C) Proposed stimulation program;

(D) Type of recovery fluid to be used;

(E) Proposed injection procedure; and

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

(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 injection and recovery wells, as required by Section 6 of this Chapter.

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

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

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

(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 12 and 13 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; and

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

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

Section 5. **Application Content Requirements - Reclamation Plan.**

(a) All applications for a permit shall include, at a minimum, the information and materials related to reclamation required in: W.S. §§ 35-11-428 and 429 (2003); Chapter 1, Chapter 2, Section 1, and Chapter 3, Section 2 (excepting Subsections (b)(ii) and (iii), (c)(iv), and (h) and with respect to subsection (k)(i), as modified in Section 5(a)(iv) of this Chapter); and

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

(A) A list of the proposed wellfields;

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

(C) A proposed time schedule for each wellfield;

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

(ii) The information necessary to demonstrate that the operation will achieve the standard of returning 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 water quality;

(II) The character and degree of injury or interference with the health and well being of the people, animals, wildlife, aquatic 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 average quality over the production zone. For groundwater affected outside the production zone, the restoration shall be evaluated separately for each well;

(C) The evaluation is 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 July 1, 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:

(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(iii) (2003);

(II) Provided the operator can demonstrate the requirements of Section 5(a)(ii)(D) will be met.

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

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

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

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

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

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

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

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

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

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

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

(A) Cost of removing and disposing of structures;

(B) Cost of topsoiling and 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 6. **Well Construction Requirements.**

(a) Methods for well construction shall:

(i) Be approved by the Administrator and included in the permit or Research and Development Testing License application (per Section 4(a)(xiv) of this Chapter);

(ii) Constitute a condition of the permit;

(iii) Construction requirements listed in Sections 6(a) through 6(f) of this Chapter are applicable to all wells installed for activities related to in situ mining. Additional requirements for Class III injection wells are included in Section 6(g). Additional requirements for monitoring wells are included in Section 6(h); and

(iv) The Administrator may grant a deviation from the requirements, except those in Section 6(g), provided the operator can supply documentation of reliability, mechanical integrity, design and construction to protect groundwaters of the state in accordance with the water quality standards contained in Chapter 8, Wyoming Water Quality Rules and Regulations.

(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;

(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.

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

(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.

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

(A) Neat cement slurry shall be composed of Portland Cement) and clean water in a proportion to yield a slurry weight of approximately 15 pounds per gallon.

(B) Sand-cement grout is a mixture of one sack of Portland Cement (94 pounds), sand, and clean water in a proportion of not more than one part by volume sand to one part by volume cement. No more than 6½ gallons of water per sack of Portland Cement (94 pounds) shall be used in the mixture.

(C) A bentonite clay slurry shall be composed of bentonite clay and clean water in a proportion to yield a slurry consisting of approximately 25% solids by weight of the slurry.

(D) The sealing material shall be thoroughly mixed before placement so there are no balls, clods, or other features that could reduce the effectiveness of the seal.

(E) Special quick-setting cement, retardants to setting, cement accelerators, retarders, fluid-loss additives, dispersants, extenders, loss-of-circulation materials and other additives, including hydrated lime to make the mix more fluid or bentonite to make the mix more fluid and reduce shrinkage, may be used, if approved by the Administrator.

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

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

(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 may be mechanically joined, 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 submitted to the Administrator. The logs and tests appropriate to each type of Class III well shall be determined based on the intended function, depth, construction and other characteristics of the well, availability of similar data in the area of the drilling site and the need for additional information that may arise from time to time as the construction of the well progresses. Deviation checks shall be conducted on all holes where pilot holes and reaming are used, unless the hole will be cased and 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:

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

(i) Where injection is into a receiving strata which contains water with less than 10,000 milligrams per liter (mg/l) Total Dissolved Solids (TDS), monitoring wells shall be completed into the production zone and any 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

premining conditions, as determined from Chapter 8, Water Quality Division Rules and Regulations (as amended March 12, 1993), in any aquifer affected or potentially affected by the injection operation;

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

(C) The local geology and hydrology;

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

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

(F) The injection well density.

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

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

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

(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 14 of this Chapter shall be designed to verify the absence of significant fluid movement.

(C) The Administrator may allow the operator to use a test to demonstrate mechanical integrity other than those listed in subsection (A) above, 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) Maintenance of the mechanical integrity of each Class III well, which has not been plugged or converted as required by Section 8 of this Chapter, shall be demonstrated at least once every five years, or on a schedule determined by the Administrator.

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

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

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

Section 8. **Requirements for Plugging of Drill Holes and Repair, 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 5(a)(iii) of this Chapter, and shall constitute a condition of the permit.

(b) All drill holes shall be plugged in accordance with Chapter 8 and W.S. § 35-11-404 (2003).

(c) If a well lacks mechanical integrity, repair or plugging 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 7(a)(ii) of this Chapter must be completed within 120 days after the repair is completed. The operator may resume injection 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 Testing License, before plugging a well or wells within a wellfield area or converting a well to uses other than those defined in Section 1(c) of this Chapter.

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

(A) Neat cement slurry, sand-cement grout, concrete, or bentonite chips, which when properly placed, will not allow the movement of fluids into or between unauthorized zones or water bearing strata; or

(B) Other plugging materials if such materials, when properly placed, will prevent movement of fluids into or between unauthorized zones or water-bearing strata and the Administrator approves the use of such materials.

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

(A) How the entire casing is to be filled with the plugging materials required per Section 8(f)(i); or

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

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

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

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

(IV) The procedure to be used to meet the requirements of Section 8(f)(iv);

(V) 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

(VI) 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

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

(I) 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

(II) Provides a comparable level of reliable protection to the methods identified in Section 8(f)(iii)(A)-(C).

(iii) 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;

(iv) The top of the plugging mixture of any plugged and abandoned well shall be a minimum depth of two feet below land surface. The hole above the top of the plugging mixture shall be backfilled surrounding land surface.

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

(h) To ensure the locations of the abandoned wells are adequately identified:

(i) 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;

(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.

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

Section 9. **Permit and Research and Development Testing License Conditions**

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

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

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

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

(ii) It shall not be a defense for an operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit or Research and Development Testing License.

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

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

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

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

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

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

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

(viii) Prior to requesting bond reduction for abandonment of a Class III well or 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 shall also constitute conditions of the permit:

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

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

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

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

Section 10. **Aquifer Classification and Exemption.**

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

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

(ii) Have concentrations of Total Dissolved Solids:

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

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

(iii) Are located in a geologic and hydrologic setting in which movement of fluid, containing any contaminant, into 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 Class I, II, III, Special (A) or Class IVA uses as described in Chapter 8 of the Water Quality Rules and Regulations (as amended March 12, 1993), and

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

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

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

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

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

(V) The total dissolved solids content of the groundwater is less than 10,000 mg/l and it is not reasonably expected to supply a public water system as defined by W.S. § 35-11-103(c)(viii) (2003); and

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

(A) A map and general 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) The right to mine; but no more than the area within the monitor well ring plus a distance to the next quarter quarter (¼ ¼) section boundary that is at least one quarter (¼) mile

from the monitor well ring;

(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 Administrator to the EPA as a state program revision pursuant to Code of Federal Regulations, Title 40, Part 145, Section 32 (40 CFR § 145.32 as amended July 1, 2001).

Section 11. **Prohibitions.**

(a) No Class III well construction may commence until a permit or Research and Development Testing License has been issued which includes well construction information in accordance with the requirements of Section 6 of this Chapter. Construction of wells needed to obtain the information required in Section 3 of this Chapter may be:

(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 6(g).

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

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

(ii) With respect to inspection and review:

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

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

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

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

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

(d) 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 Testing License. The operator shall have the burden of showing that the requirements of this paragraph are met.

Section 12. **Noncompliance and Excursions.**

(a) The operator shall:

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

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

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

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

(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; and

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

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

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

(i) The second sampling event shall be conducted within 24 hours of the receipt of the results from the first sampling event in which the excursion was initially detected. If the results from the first and second sampling event both indicate an excursion has occurred, then the excursion will be considered confirmed for the purpose of meeting the reporting requirements of W.S. § 35-11-429(a) (2003).

(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) (2003).

(c) The operator shall:

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

(ii) Submit a written report to the Administrator within five days of the confirmation of the

excursion detailing the procedures for mitigating or controlling the excursion. The Administrator of the Land Quality Division will forward one copy to the Administrator of the Water Quality Division.

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

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

(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 Testing License or modify the mining operation and require modification of the permit or Research and Development Testing License. Modifying the operation may include: sampling of additional wells for the parameters listed in Section 12(d)(i); installation of additional monitor wells; termination of injection in the portion of the well field in which the excursion originated; or a combination of approaches to assure control within the necessary time frames.

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

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

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

(ii) Such information deemed necessary by the Administrator to show that the excursion

is being controlled and that the bond amount for groundwater restoration remains sufficient;

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

Section 13. **Corrective Actions and Compliance Schedules.**

(a) Corrective actions are:

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

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

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

(I) Nature and volume of injected fluid;

(II) Nature and volume of native groundwater;

(III) Compatibility of injected fluid and native groundwater;

(IV) Potentially affected population;

(V) Geology;

(VI) Hydrology;

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

(VIII) Completion and plugging records;

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

(X) Hydraulic connections with unauthorized zones.

(ii) 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 Research and Development Testing License, in which case, the Administrator shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well and limitation of injection pressure) as are necessary to prevent such movement. These additional requirements shall be imposed by requiring the operator to revise the permit or Research and Development Testing License, the permit or Research and Development Testing License may be revoked, or appropriate enforcement action may be taken if the permit or Research and Development Testing License has been violated.

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

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

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

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

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

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

Section 14. **Monitoring Requirements.**

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

(i) Requirements for:

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

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

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

(ii) Monitoring of:

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

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

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

(iii) Requirements for:

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

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

(C) Quarterly monitoring of the water levels and parameters chosen to detect any movement of injected fluids, process by-products, or formation fluids in the monitoring wells where the injection wells penetrate an Underground Source of Water in an area subject to subsidence or catastrophic collapse (Section 6(g)(iii) of this Chapter); and

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

(iv) A description of procedures and schedules used to:

(A) Detect and confirm excursions; and

(B) Monitor excursions and excursion control efforts.

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

Section 15. **Reporting Requirements.**

(a) All chemical analyses submitted to the Administrator in accordance with a valid permit or Research and Development License shall include:

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

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

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

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

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

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

(A) Date of mechanical integrity testing;

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

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

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

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

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

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

(A) A statement that:

(I) Wells were plugged in accordance with the approved permit or Research and Development Testing 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 Testing License. This documentation shall be included in the report, and contain a description of the procedures used specifying the differences between the permit or Research and Development Testing License approved method and the alternate method; and

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

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

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

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

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

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

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

(iv) Monitoring program results pursuant to Section 4(a)(xvii) and Section 14 of this Chapter, which have not been previously reported; and

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

(vi) Supporting data sufficient to demonstrate groundwater restoration in accordance with Section 5(a)(xiii) of this Chapter.

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

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

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

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

Section 16. **Maintenance and Retention of Records.**

(a) The operator shall maintain records at the mine site in accordance with W.S. § 35-11-430(b) (2003), including, for any laboratory analyses that an operator is allowed to retain on site for inspection rather than submit to the Administrator: :

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

(ii) The name, address, and telephone number of the laboratory performing the analyses, and the laboratory identification number; 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 and 5 of this Chapter;

(B) Calibration and maintenance records and all original strip chart recordings for

continuous monitoring instrumentation, copies of all reports required by the permit or Research and Development Testing License, and records of all data used to complete the application for the permit or Research and Development Testing License;

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

(D) Information requested by the Administrator for inclusion in the Annual Report as required by W.S. § 35-11-411 (2003).

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

Section 17. **Research and Development Testing License Application.**

(a) In addition to the information required by this Section, an application for a Research and Development Testing License shall contain all information required by W.S. § 35-11-431 (2003) and Sections 6 through 16 of this Chapter and shall:

(i) Demonstrate that the operation is designed to:

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

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

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

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

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

(B) Location and name of surface waters and adjudicated water rights inside and

within one-half mile of the Research and Development Testing License area;

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

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

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

(a) Permits shall be issued:

(i) For a period coinciding with the estimated schedules for termination of all mining and reclamation activities in conformance with the approved mining plan (Section 4(a)(ii)) and reclamation plan (Section 5(a)(i)) as provided in W.S. §§ 35-11-405(a) and (b) (2003); and

(ii) With the option for revising the mining and reclamation schedules, as provided in W.S. §§ 35-11-411(a)(iii) and 429(a)(iv) (2003).

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

(c) As specified in W.S. § 35-11-431(a) (2003), a Research and Development Testing License is issued for up to one year and may be renewed annually.

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

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

(i) A revision may be necessary to address:

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

(B) An excursion or other aspect of noncompliance per Section 12 of this Chapter and W.S. 35-11-429(a)(ii) (2003); or

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

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

(E) An objection by the Administrator to a part of the Annual Report per W.S. § 35-11-411(b) (2003);

(F) A change that could jeopardize reclamation or protection of any waters of the state per W.S. 35-11-429(a)(iv) (2003);

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

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

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

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

(A) Any increase in the amount of land related to installation or operation of additional Class III wells, from that which was approved in the original in situ mining permit or Research and Development Testing License. Such a revision shall include (if not already presented in the permit or Research and Development Testing License) the information required in W.S. § 35-11-428 (2003) and the requirements of Sections 4 through 19 this Chapter. However, if the increase in the amount of land is for purposes unrelated to installation or operation of Class III wells, then the provisions of Section 2(b)(ii) of Chapter 7 apply.

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

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

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

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

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

(i) To correct typographical errors;

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

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

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

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

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

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

of this Chapter.

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

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

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

Section 20. **Revocation.**

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

(i) Revocation may be necessary to address:

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

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

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

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

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

(i) If an excursion cannot be controlled or mitigated per W.S. § 35-11-429(a) (2003);

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

and (c) (2003);

(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) (2003); and

(iv) Per the provisions of W.S. §§ 35-11-109(a)(xiii) and 110(b) (2003);

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

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

(a) In addition to the requirements of W.S. §§ 35-11-406(g), (j), and (k) (2003) and Chapter 7, public notice for actions related to in situ permits or Research and Development Testing Licenses, except permit or license revocation, shall be given by the following methods. Public notice for permit or license revocation shall be given by the methods in Section 21(d) of this Chapter.

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

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

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

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

(D) Name, address and telephone number of a person from whom interested persons may obtain further information;

(E) A brief description of the comment procedures, including a statement of procedures to request a hearing or, if a hearing has already been scheduled, the time and place of that hearing, and other procedures by which the public may participate in the final permit decision; and

(F) Any additional information considered necessary or proper.

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

(A) Any other agency (including EPA when the draft permit is prepared by the

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

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

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

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

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

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

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

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

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

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

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

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

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

(b) Objections may be filed in accordance with W.S. § 35-11-406(k) (2003), 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) (2003). If such written objections are filed, a public hearing shall be held in accordance with W.S. § 35-11-406(k) (2003) and the requirements of this Chapter. In addition to the hearing notice requirements described in W.S. § 35-11-406(k) (2003), the public notice of a hearing shall contain the following information:

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

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

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

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

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

(ii) If a hearing is requested:

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

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

(iii) In addition to the requirements of W.S. § 35-11-406(p) (2003), at the time that any permit or Research and Development Testing License is issued, the Director shall issue a response to objections. This response shall:

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

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

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

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

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

Section 22. **Confidential Records.**

(a) Information submitted to satisfy the requirements of this Chapter may be held confidential pursuant to W.S. § 35-11-1101 (2003).